WISCONSIN
ECONOMIC DEVELOPMENT

MANUFACTURING TOMORROW

WISCONSIN'S HISTORIC INDUSTRY STRENGTH AND FUTURE-ORIENTED VISION

LOOK FORWARD ›

WISCONSIN ECONOMIC DEVELOPMENT

MANUFACTURING TOMORROW

WISCONSIN'S HISTORIC INDUSTRY STRENGTH AND FUTURE-ORIENTED VISION

INDUSTRY STRONG. TECHNOLOGY SMART. FUTURE READY.

9,000+

Wisconsin manufacturing companies

Lightcast 2022 Q4 Dataset

470,000+

Wisconsin manufacturing jobs

Lightcast 2022 Q4 Dataset

BUILT FOR INNOVATION

In Wisconsin, our tradition of innovation is legendary. We are the state that **invented the modern apprenticeship** and the **gas-powered tractor,** pioneered lifesaving **bone marrow transplant** technology, and perfected the **ice cream sundae**. Our passion for innovation continues to this day. We're pushing the boundaries of **quantum physics**, and a Wisconsin engineering graduate's breathable and comfortable, yet effective, face mask made Time magazine's list of the **best inventions of 2020**.

We nurture innovation through public-private partnerships that ensure that talent and technology come together to connect systems more efficiently, streamline product life cycles and apply machine learning to improve reliability. From **real-time data analytics** that inform predictive maintenance to automation designed to optimize human interaction, we are **driving progress in IIoT solutions** and we know what manufacturers need today so they can be ready for tomorrow.

In Wisconsin, we are at the epicenter of advanced manufacturing, both in operations and in smart product development. We are home to the global leader in manufacturing automation, Rockwell Automation, itself a model collaborator with academic partners in training the talent and developing the technologies of the future.

WISCONSIN'S LEADERS IN MANUFACTURING

Harley-Davidson Motor Cycles

Oshkosh

Kohler

Trane

Milwaukee

Komatsu

Rockwell Automation

ABB

Johnson Controls

Ashley

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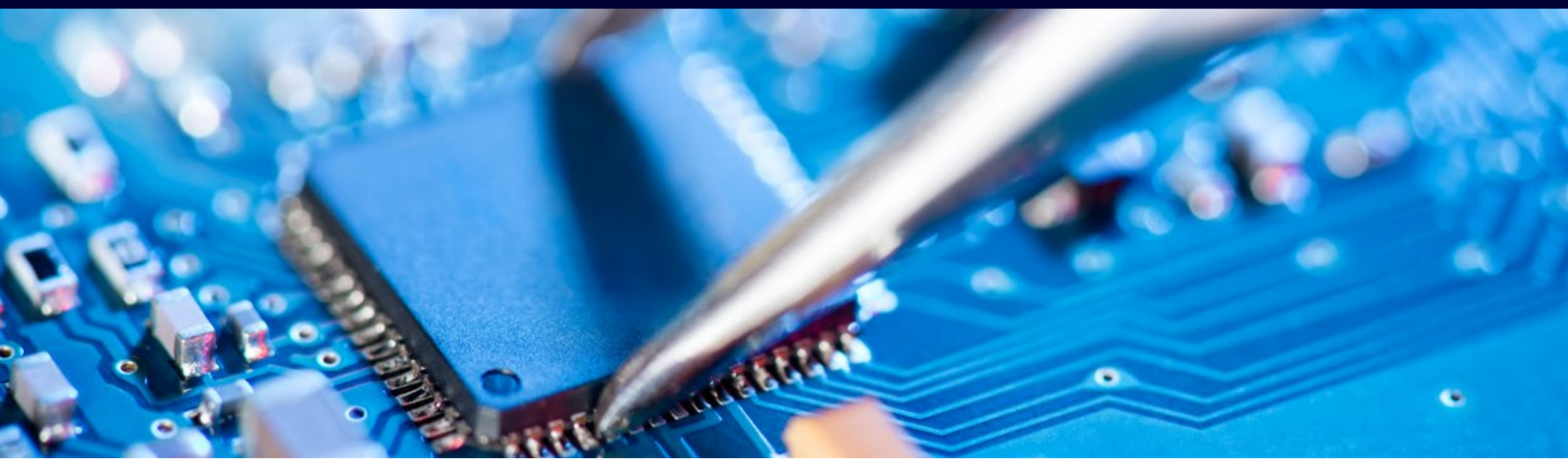


FOCUSED ON THE FUTURE

Throughout our entire history as a state, Wisconsin has been focused on manufacturing. This means that while other states are working to develop a manufacturing sector, we are building on our existing strength and transforming our already vital manufacturing base with widespread adoption of cutting-edge technologies.

The 2022 **National Strategy for Advanced Manufacturing** from the U.S. federal government emphasized the vital role the manufacturing sector plays in the national economy and the importance of staying ahead of the curve regarding advanced technology.

Wisconsin is leading the way on several priorities identified in this strategy:

Prioritize sustainability in manufacturing: In 2022, Governor Tony Evers established the Wisconsin Office of Sustainability and Clean Energy and issued the state's first-ever Clean Energy Plan, which charts a course to completely eliminate electricity production from carbon-based sources by 2050. It commits Wisconsin to honoring the 2015 Paris Climate Accord and bringing carbon emissions 26-28% below 2005 levels by 2025.

Accelerate semiconductor manufacturing: Wisconsin's technical schools are leading the charge in specialized training for the semiconductor industry.

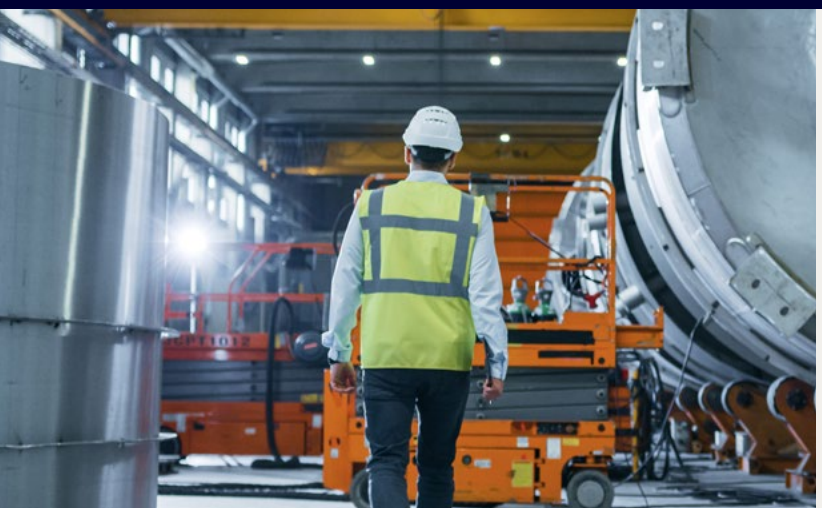
Develop innovative materials: The Advanced Materials Industrial Consortium at the University of Wisconsin-Madison paves the way for rapid adoption of the latest technologies by connecting student and faculty researchers with industry partners. The consortium also offers business-to-business networking events, facilitated access to shared instrumentation, and sponsored research and facilities use agreements.

Lead the future of smart manufacturing: With the help of efforts such as the Transformational Productivity Initiative and the AutomationAdvisor™ assessment, Wisconsin companies are actively working on implementing automation to increase productivity. This makes them stronger supply chain partners and also allows them to create higher-skilled manufacturing jobs, since simple, repetitive tasks have been automated.

Diversify the advanced manufacturing workforce: The Wisconsin Technical College System is highly engaged with helping to diversify the workforce; one in five graduates are people of color, and the system offers child care to reduce obstacles to education and workforce participation.

Strengthen connections between employers and the education system: Our state's technical colleges are exceedingly well integrated into the manufacturing sector, with industry collaborations spanning decades; our technical schools actively seek to provide what employers need in terms of workforce skills.

THE WORKFORCE YOU NEED AWAITS YOU IN WISCONSIN



Wisconsin ranks

#1 IN THE U.S.

for employment concentration in:

Fabricated metal products manufacturing

Paper manufacturing

Printing

Lightcast 2022 Q4 Dataset

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—$3.9 million in state support over the past seven 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 highest concentration of manufacturing employment in the country,[1] we offer you a skilled, experienced workforce that is ready to be productive starting on the day you open your doors.

#1 manufacturing employment concentration in the U.S.

Business Facilities magazine, July/August 2022

96%

of Wisconsin employers say they are satisfied with technical college graduates' education

Higher ed that's highly integrated with employers

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 STEM 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) Business Facilities magazine, July/August 2022

THE WORKFORCE YOU NEED AWAITS YOU IN WISCONSIN

NEARLY 5,000

engineering degrees and certificates awarded in 2021

Lightcast 2022.4 Dataset using U.S. NCES IPEDS data

33%

of Wisconsin adults have a bachelor's degree or higher

U.S. Census American Communities Survey, 2021

A WORKFORCE BUILT FOR MANUFACTURING

With a total of 26 campuses, the **University of Wisconsin System** provides world-class undergraduate and graduate education in many areas relevant to advanced manufacturing. Research and collaboration with industry are also key priorities for the UW System.

- Wisconsin has two Tier 1 research universities with strong engineering programs. UW-Madison ranks eighth in the U.S. for research spending,[2] with more than $1.3 billion in research expenditures in fiscal year 2021.[2] The Madison campus also ranks in the top 3% in the U.S. (and near the top of global rankings) for engineering research expenditures.[2] Meanwhile, **UW-Milwaukee's College of Engineering and Applied Science** ranks among the top 4% of research universities in the U.S.[3]

- The **UW-Madison College of Engineering** offers more than 60 degrees and programs led by award-winning faculty. Meanwhile, in the western part of the state, with degree programs in engineering and engineering technology, **UW-Stout** is creating graduates who are highly sought after by industry employers. And in Wisconsin's southwest corner, **UW-Platteville** has been educating engineers for more than a century, earning a national reputation as a prestigious institution.

- The degree program in **transportation and logistics management at UW-Superior** is among the most distinctive and highly regarded programs of its kind in the U.S.

- Officially designated as **Wisconsin's Polytechnic University**, UW-Stout integrates applied learning to add a career readiness focus to the liberal arts education it offers. The campus has three times as many labs and studios as classrooms; 100% of its graduates have taken part in applied learning experiences, and 99.4% of its graduates are employed or continuing their education within six months of graduating.

Wisconsin's private colleges and universities also offer programs relevant to advanced manufacturing:

- The **Milwaukee School of Engineering** delivers programs in 12 engineering disciplines across four departments; its undergraduate engineering program consistently ranks among the top in the nation. The school also hosts a Rapid Prototyping Center for additive manufacturing, as well as a supercomputer ("Rosie") that provides opportunities for students and industry partners to test artificial intelligence and machine learning solutions.

- **St. Norbert College** in northeast Wisconsin focuses on advanced manufacturing in its MBA and leadership programs and conducts ongoing research on Industry 4.0 technology adoption.

Sources: (2) U.S. NCES Higher Education Research and Development Survey; (3) Carnegie Classifications of Institutions of Higher Education

THE WORKFORCE YOU NEED AWAITS YOU IN WISCONSIN

NEARLY 490,000

post-secondary students

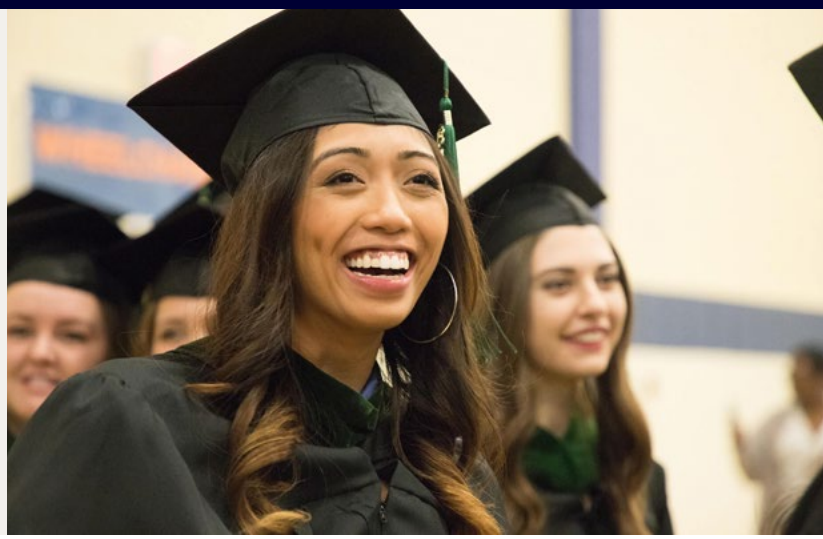
Reporting from the UW System, WAICU, and WTCS

Our technical college system is highly integrated with employers, with

92% OF GRADUATES

staying in Wisconsin.

Wisconsin Technical College System



MANUFACTURING EMPLOYMENT CONCENTRATION

Workforce strength in the areas you need

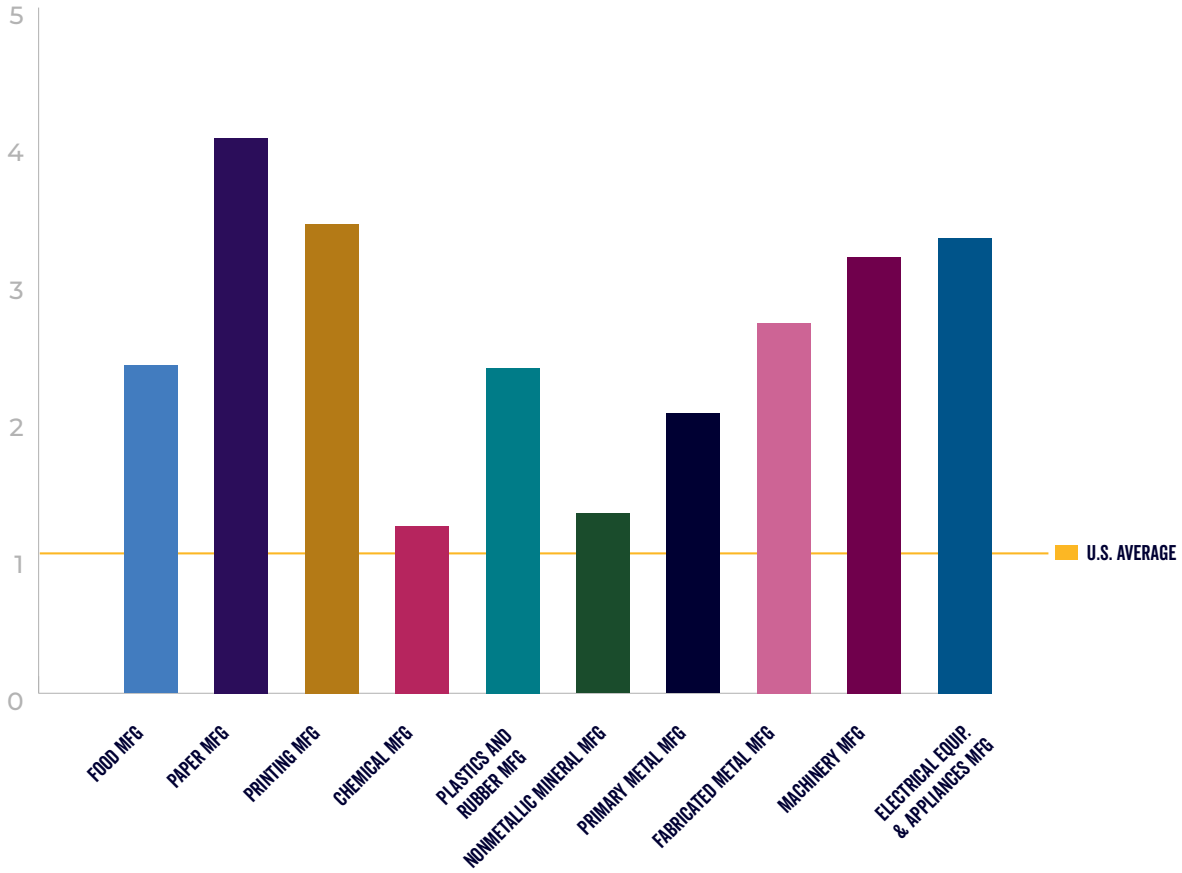


Chart source: Lightcast Q4 2022 Dataset

UNPARALLELED ADVANTAGES

> "We couldn't be more pleased to commit to keeping the headquarters of Komatsu Mining right here in Milwaukee."
>
> **JEFFREY DAWES**
> CEO, Komatsu Mining Corp.

AN IDEAL LOCATION

In 2021, manufacturing contributed over $72 billion to Wisconsin's economy—more than 20% of GDP.[4] In Wisconsin, we offer unparalleled advantages that are especially suited to advanced manufacturing.

Workforce

We deliver the highest concentration of experienced manufacturing workers in the U.S.,[5] often three to four times higher in critical industry sectors than competing states.

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.

Advancing knowledge

We push the boundaries of theoretical and applied science—and prepare talent for the future. At more than $1.3 billion annually,[6] our flagship University of Wisconsin-Madison ranks #8 in the U.S. for research spending;[8] the University of Wisconsin System awards more than 41,000 degrees annually.[7]

Fiscal responsibility

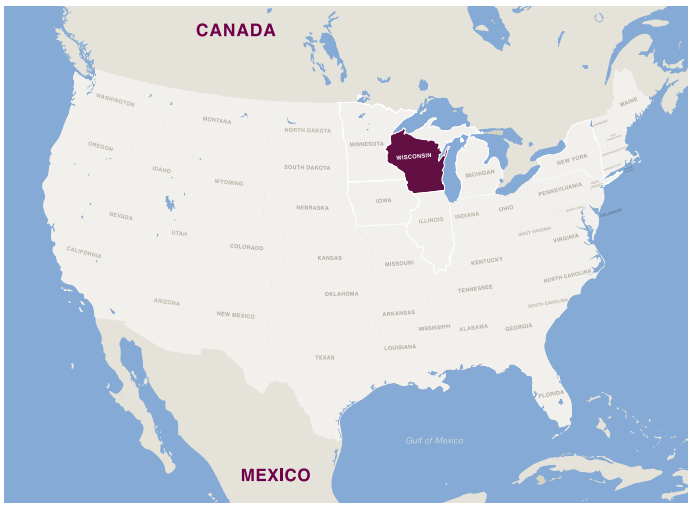
From our fully funded state pension system—one of only two in the U.S.[8]—to our extraordinary credit rating, we offer a politically stable, low-tax, low-regulation, business-welcoming environment.

Central 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

More than two-thirds of Wisconsin's borders are water,[9] and 21% of the entire world's fresh water is located along the state's borders.[10] In addition, Wisconsin has 1.2 quadrillion gallons of groundwater;[11] this plentiful supply means Wisconsin businesses have no trouble getting access to the water they need for their operations.



Sources: (4) Lightcast 2022 Q4 Dataset; (5) Business Facilities magazine, July/August 2022; (6) U.S. NCES Higher Education Research and Development Survey; (7) Lightcast Q4 2022 Dataset; (8) Pew Charitable Trusts; (9) Wisconsin State Cartographer's Office and U.S. Census Bureau; (10) Wisconsin Water Facts, Wisconsin Water Library, UW-Madison; (11) Wisconsin Department of Natural Resources

SUPPLY CHAIN

Wisconsin's high concentration of manufacturing across key industry sectors means companies that decide to locate here can get up and running quickly.

Wisconsin's manufacturing supply chain is:

RELIABLE & RESILIENT

Wisconsin is a leader in manufacturing and has been for more than a century. Our manufacturing capabilities are time-tested, and are also evolving as technology changes.

EFFICIENT & COMPETITIVE

Our **Transformational Productivity Initiative** (TPI), a program of the Wisconsin Manufacturing Extension Partnership Network, is a statewide public-private collaboration that improves the efficiency of participating companies by more than 30%. TPI helps manufacturers in Wisconsin do more through advancements that respond to market needs.

CONNECTED & INNOVATIVE

The University of Wisconsin-Milwaukee is home to the **Connected Systems Institute**, a center of excellence that develops manufacturing domain specialists. At the institute, industry collaborates with academia on research to support the development of advanced manufacturing processes in areas including IIoT, factory automation, and the implementation of Industry 4.0 solutions.

Wisconsin provides the ideal business environment and all the necessary elements you need to grow your business: talent, technology, supply chain, location, and infrastructure.

Visit InWisconsin.com to learn more.

SUSTAINABLE & STRONG

Wisconsin's multifaceted approach to sustainability is unmatched in the U.S. Programs such as the **Profitable Sustainability Initiative**, **Focus on Energy**, the **Green Masters**, **Green Tier**, and **21st Century Pathways** provide right-sized sustainability approaches that save money, improve competitiveness, and reduce environmental impact.

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