WISCONSIN
ECONOMIC DEVELOPMENT

MANUFACTURING EXCELLENCE

Wisconsin supports diverse industries with a stable and resilient supply chain.

LOOK FORWARD

MANUFACTURING EXCELLENCE

Wisconsin supports diverse industries with a stable and resilient supply chain.

WISCONSIN'S ADVANCED MANUFACTURING WORKFORCE POSSESSES SKILLS AND EXPERTISE THAT SERVE ALL OF THE STATE'S KEY INDUSTRIES, INCLUDING

- BIOHEALTH
- ENERGY, POWER, AND CONTROLS
- FOOD AND BEVERAGE PROCESSING
- WATER TECHNOLOGY

#2 IN THE U.S.

for manufacturing jobs as a percent of total workforce

0.4%

effective tax rate on income from manufacturing

A technical college system with

287,365 STUDENTS
16 COLLEGES
52 CAMPUSES

FIRST IN THE NATION

to develop a technical college system

97%

of Wisconsin employers are satisfied with technical college graduates' education

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Workforce Innovation Grants are providing

$128 MILLION

to 27 organizations across Wisconsin to address barriers to workforce participation such as:

- **child care**
- **transportation**
- **housing**

481,964

Wisconsin manufacturing jobs

Access to a talent pool of

65,736 ENGINEERING GRADUATES

from across the Midwest (including **4,670** from Wisconsin)

MANUFACTURING EXCELLENCE

INDUSTRY STRONG. TECHNOLOGY SMART. FUTURE READY.

8,897

Wisconsin manufacturing companies

Lightcast 2024 Q4 Dataset

481,964

Wisconsin manufacturing jobs

Lightcast 2024 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 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.

#2 IN THE U.S.

for manufacturing jobs as a percent of total workforce

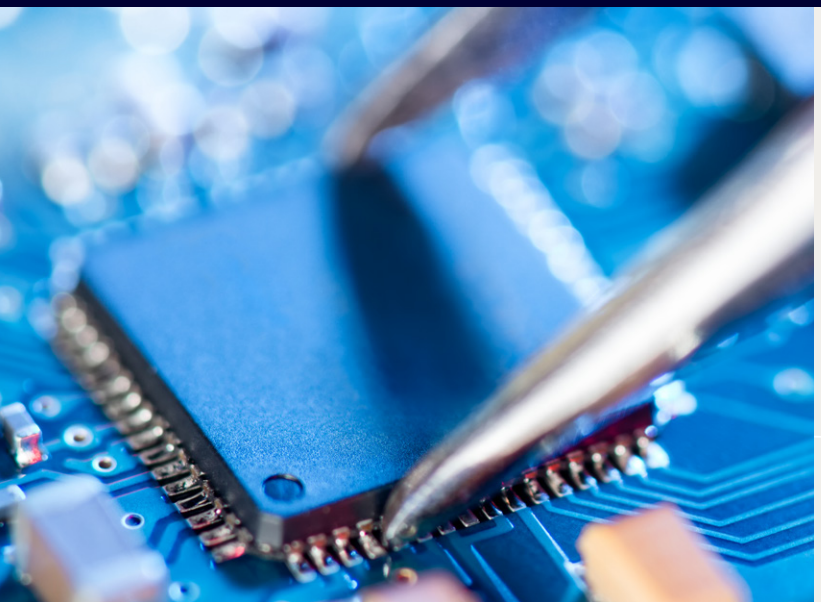
Business Facilities magazine, July/August 2024

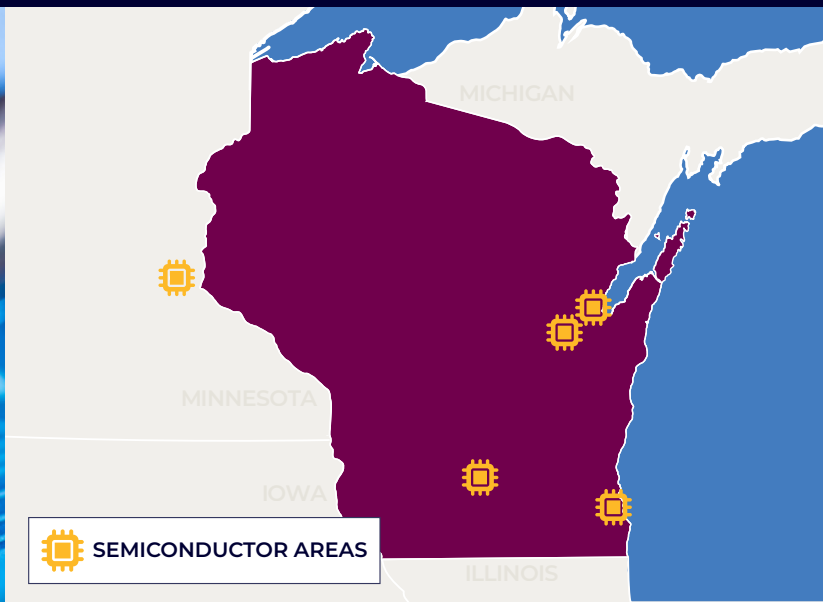
WISCONSIN'S LEADERS IN MANUFACTURING

Harley-Davidson Motor Cycles
Oshkosh
Kohler
3M
Milwaukee
Komatsu
Johnson Controls
ABB
Rockwell Automation
Ashley

MANUFACTURING EXCELLENCE

INDUSTRY STRONG. TECHNOLOGY SMART. FUTURE READY.





MAKING THE CHIPS THAT POWER MODERN LIFE

Despite rapid growth in recent years, U.S. manufacturing of semiconductors is struggling to keep pace with surging demand for the chips that are needed for computers, tablets, and phones, but also medical equipment, manufacturing equipment, and cars. In an effort to reduce reliance on imports, the 2022 CHIPS and Science Act included **$52 billion to strengthen domestic semiconductor manufacturing** ($39 billion for manufacturing incentives, $13 billion for research and development and workforce training, and $500 million for information technology security and semiconductor supply chain activities).

The road that's led to the modern microprocessor runs through Wisconsin. Many pioneers in the development of this technology completed their education or research here. Companies benefit from the presence of the **Grainger Institute of Engineering, Wisconsin Quantum Institute, Wisconsin Centers for Nanoscale Technology,** and the **Ion Beam Laboratory** (all at UW-Madison), as well as the **Blugold Center for High-Performance Computing** (UW-Eau Claire). For multiple reasons—manufacturing legacy and strength, research and technology leadership, skilled workforce, employer partnerships with higher education institutions—Wisconsin is poised to play a key role in the expansion of semiconductor manufacturing.

Wisconsin has five semiconductor-ready Metropolitan Statistical Areas: **Milwaukee, Madison, Green Bay, Appleton,** and the **Bloomington,** Minnesota metro area (which extends across the state line into Wisconsin).[1] Ten more semiconductor-ready MSAs lie within a 500-mile radius, contributing to Wisconsin's supply chain and the availability of qualified talent.

SEMICONDUCTOR MANUFACTURING AND RESEARCH HOTSPOT

The new **Wisconsin Center for Semiconductor Thermal Photonics** at UW-Madison will combine research in photonics, thermal science, and quantum science to elucidate how semiconductors can be used to control the flow of heat. That understanding will be beneficial as researchers seek to develop new types of power generation, energy conversion, refrigeration, advanced sensing, and other next-generation applications.

The **Semiconductor Science Initiative** at UW-Madison College of Engineering is working to establish a community of partners, expand its semiconductor technology research portfolio, and compete for designation as a national center of excellence in semiconductor science.

Companies involved in semiconductors with Wisconsin operations include **Uzelac Industries** (a design-build rotary dryer manufacturer based in Greendale), **SixLine Semiconductor** (a Middleton-based company that focuses on commercializing carbon nanotube arrays for semiconductor applications), and **Foxconn** (based in Taiwan with a presence in Mount Pleasant).

Source: (1) Lightcast Regional Labor Force Readiness Score

MANUFACTURING EXCELLENCE

THE WORKFORCE YOU NEED

Wisconsin ranks

#1 IN THE U.S.

for employment concentration in:

- Fabricated metal products manufacturing
- Paper manufacturing
- Printing
- Electrical equipment, appliance, and component manufacturing
- Plastic and rubber product manufacturing

Lightcast 2024 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—$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,[1] we offer you a skilled, experienced workforce that is ready to be productive starting on the day you open your doors.

97%

of Wisconsin employers say they are satisfied with technical college graduates' education[2]

The Wisconsin Technical College System uses feedback from employers to actively tailor its programs and courses to the exact skills companies need. Industry partners fund lab space to ensure that students are learning with the latest equipment, and the colleges work with companies to offer customized trainings for new hires or continuing 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 287,365 students across 16 colleges and 52 campuses throughout the state,[2] 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
- Advisory boards that proactively enlist **members from industry-leading companies** so the schools 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.
- When students at the **University of Wisconsin-Stout** gain hands-on experience in the classroom, they are not just dealing with hypotheticals. The university purposely seeks out real-world problems students can solve for the benefit of local companies. As part of their required internships, students build equipment, develop new products, fine-tune business processes, and more.

MANUFACTURING EXCELLENCE

THE WORKFORCE YOU NEED

Workforce Innovation Grants are providing

$128 MILLION

to 27 organizations across Wisconsin to address barriers to workforce participation such as:

- **child care**
- **transportation**
- **housing**

A WORKFORCE BUILT FOR MANUFACTURING

With a total of 20 campuses, the **Universities of Wisconsin** provide world-class undergraduate and graduate education in many areas relevant to advanced manufacturing. Research and collaboration with industry support manufacturing in a variety of ways:

- Wisconsin has two Tier 1 research universities with strong engineering programs. UW-Madison ranks in the top 3% in the U.S. (and near the top of global rankings) for engineering research expenditures.[1] Meanwhile, **UW-Milwaukee, with its College of Engineering and Applied Science,** ranks among the top 4% of research universities in the U.S.[2]
- The **UW-Madison College of Engineering** offers more than 60 degrees and programs led by award-winning faculty. In the western part of the state, UW-Stout's degree programs in engineering and engineering technology create 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. **UW-Oshkosh** and **UW-Green Bay** also have emerging and promising engineering programs.
- 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; all of its graduates take part in applied learning experiences, and 99.4% of 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.

In 2023, **Wisconsin received the National Science Foundation Innovation Award** for water and energy resilience in its manufacturing supply chain.

Sources: (1) U.S. NCES Higher Education Research and Development Survey; (2) Carnegie Classifications of Institutions of Higher Education

MANUFACTURING EXCELLENCE

THE WORKFORCE YOU NEED

Access to a talent pool of

65,736

engineering graduates

(including **4,670** from Wisconsin)
from across the Midwest

U.S. NCES IPEDS

0.4%

effective tax rate on income from manufacturing

MANUFACTURING EMPLOYMENT CONCENTRATION

Workforce strength in the areas you need

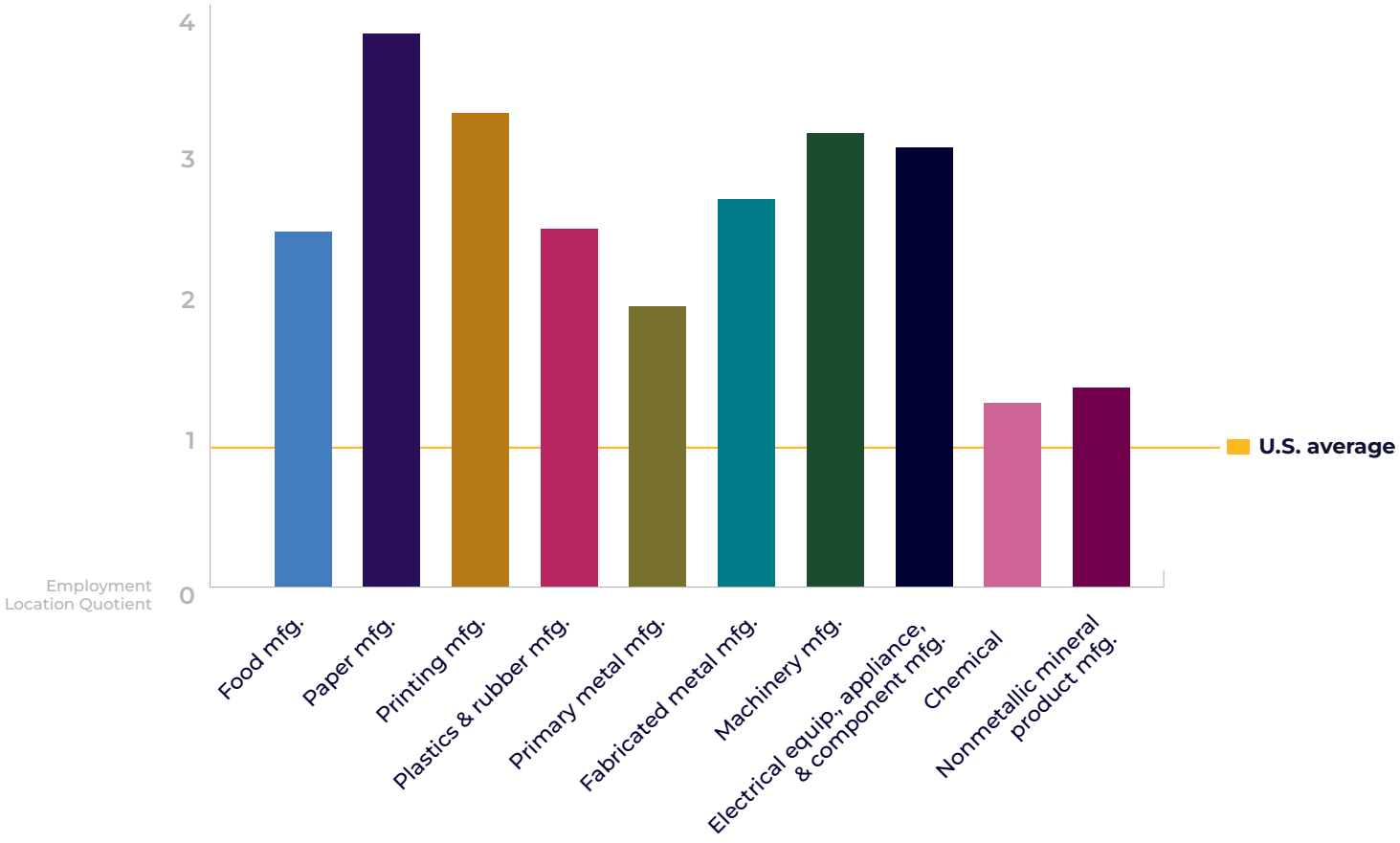


Chart source: Lightcast 2024 Q4 Dataset

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 wedc.org 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.

MANUFACTURING EXCELLENCE

THE WORKFORCE YOU NEED

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

2.4 MILLION

for employers to draw from

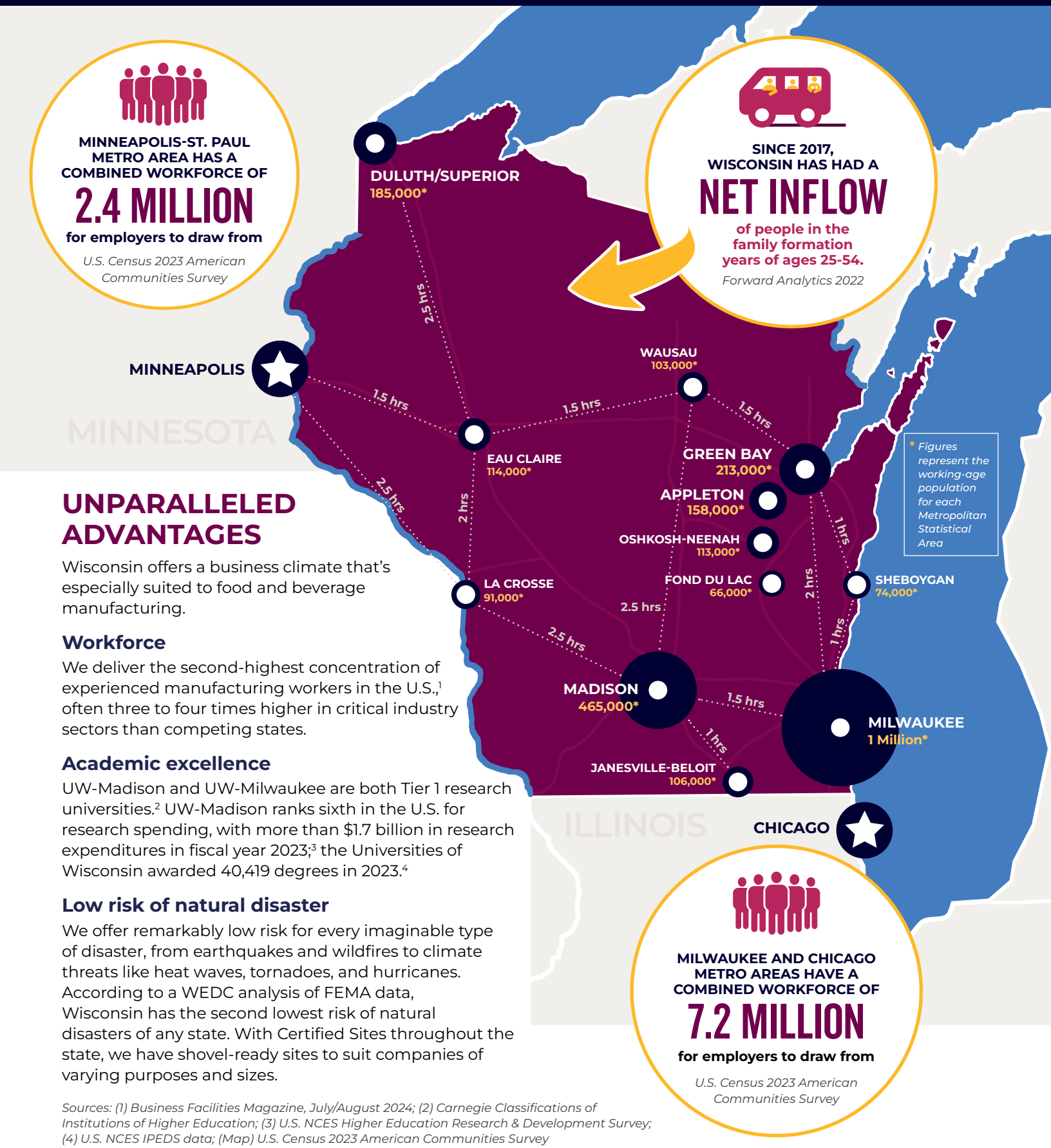
U.S. Census 2023 American Communities Survey

SINCE 2017, WISCONSIN HAS HAD A

NET INFLOW

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

Forward Analytics 2022



UNPARALLELED ADVANTAGES

Wisconsin offers a business climate that's especially suited to food and beverage manufacturing.

Workforce

We deliver the second-highest concentration of experienced manufacturing workers in the U.S.,[1] often three to four times higher in critical industry sectors than competing states.

Academic excellence

UW-Madison and UW-Milwaukee are both Tier 1 research universities.[2] UW-Madison ranks sixth in the U.S. for research spending, with more than $1.7 billion in research expenditures in fiscal year 2023;[3] the Universities of Wisconsin awarded 40,419 degrees in 2023.[4]

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. With Certified Sites throughout the state, we have shovel-ready sites to suit companies of varying purposes and sizes.

MILWAUKEE AND CHICAGO METRO AREAS HAVE A COMBINED WORKFORCE OF

7.2 MILLION

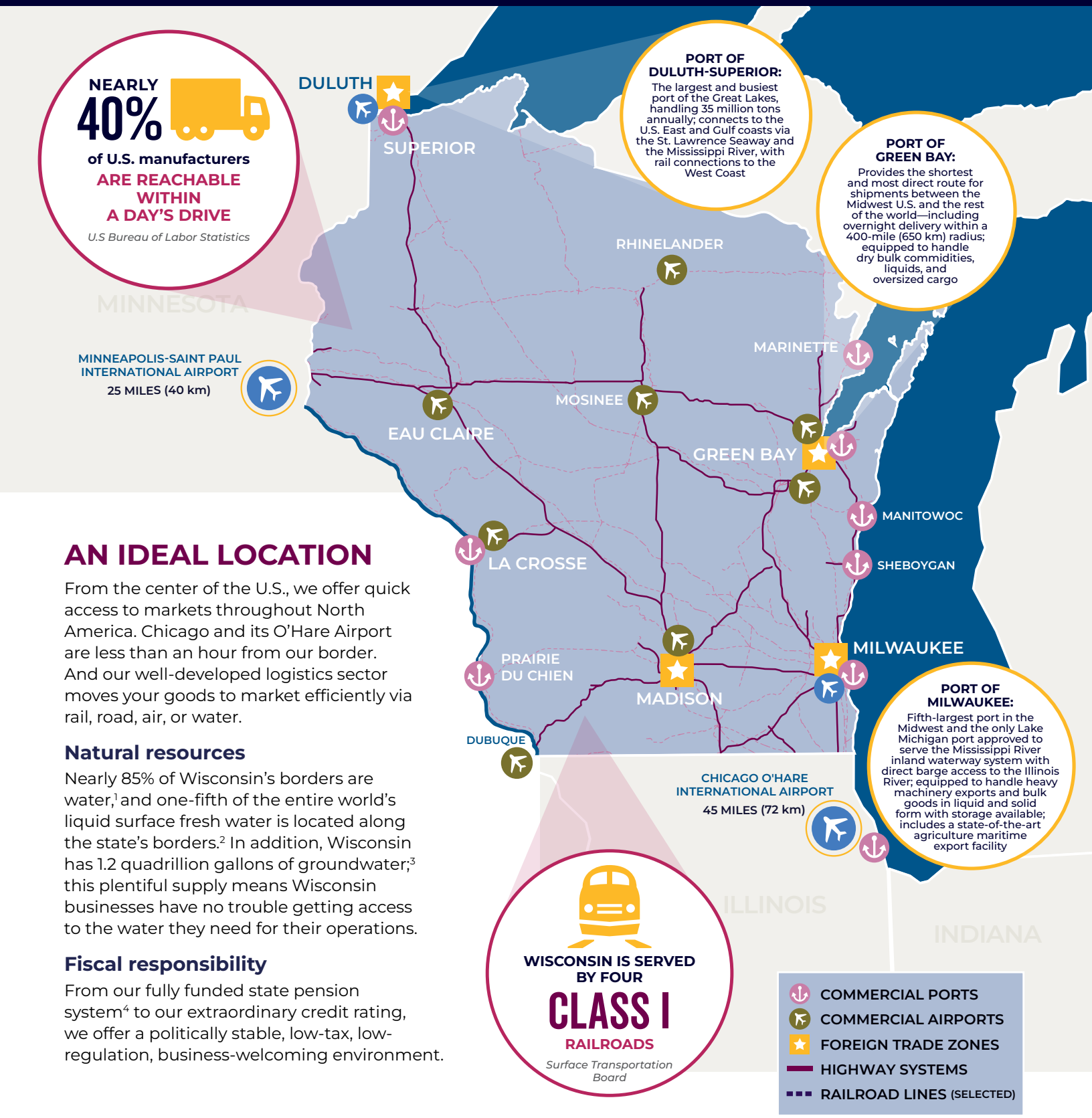
for employers to draw from

U.S. Census 2023 American Communities Survey

Sources: (1) Business Facilities Magazine, July/August 2024; (2) Carnegie Classifications of Institutions of Higher Education; (3) U.S. NCES Higher Education Research & Development Survey; (4) U.S. NCES IPEDS data; (Map) U.S. Census 2023 American Communities Survey

MANUFACTURING EXCELLENCE

UNPARALLELED ADVANTAGES



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 system[4] to our extraordinary credit rating, we offer a politically stable, low-tax, low-regulation, business-welcoming environment.

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

CONTACT US

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Visit wedc.org to learn more.