



Fersa Bearings in Northwood, Ohio.



Made in Ohio
Means Made with Excellence

Ohio's Strength is Manufacturing and Innovation

Ingenuity and innovation have always been the backbone of Ohio's manufacturing industry, and it's no different now. Ohio's role as a leader in advanced manufacturing is more vital than ever as companies embrace new ways of making things with additive manufacturing, automation, advanced materials and other new technologies.

The state's manufacturing workforce is the third largest in the country. At \$104.6 billion, Ohio's manufacturing industry is one of the largest in the state. The industry's size, alone, gives manufacturers confidence that everything they need to prosper is in Ohio. All parts of the manufacturing value chain are represented here, from suppliers and customers to academic and industry partners willing to help turn novel ideas into groundbreaking new products and processes. **That's why Ohio is the perfect place to usher in the future of manufacturing.**



Only in Ohio



3rd largest manufacturing workforce in the U.S.



#1 in glass, plastics and rubber manufacturing means companies are close to suppliers



\$12B invested annually in R&D statewide



54 technical centers graduate nearly 7,000 students annually in trade skills



Lowest taxes in the Midwest for capital-intensive manufacturing, protecting the bottom line

The Partnerships and Capabilities You Need to Succeed

Ohio has been a manufacturing powerhouse for generations. This success is a catalyst for the rise of a large, comprehensive manufacturing industry in Ohio. The numerous manufacturing resources in the state include a renowned innovation network, globally leading companies, and strong industry and academic organizations.

Public and private partners across the state are available to drive research, testing, and the commercialization of products and services that keep you competitive. From additive manufacturing opening doors to developing more complex components, to advanced materials that are enabling lightweighting breakthroughs, Ohio's companies and R&D partners collaborate to bring about groundbreaking advancements. You can view many of them on the following page.

Location is about proximity to partners and finding the right site for your needs. Ohio has fully vetted sites ready for immediate development through the SiteOhio program. Ohio's integrated transportation infrastructure — recognized as one of the best in the U.S. — enables Ohio companies to reach customers and suppliers quickly and cost effectively in-state and outside of Ohio.

A Top Manufacturing Workforce

Ohio's manufacturing sector employs nearly 700,000 skilled individuals, the third-largest manufacturing workforce in the U.S. This surplus means there are more dedicated, well-trained workers in Ohio to support you and your growth.

Finding talent can be a challenge for some manufacturers, but Ohio has dozens of trade schools, technical centers, and job training and certification programs, as well as colleges and universities specializing in current and rising manufacturing needs.

These Ohio schools and programs produce thousands of well-qualified workers each year, including more than 13,000 engineers and engineer technicians ready to fill positions at all levels. Even better, talent is available at wages 11% less than the national average because of Ohio's comparatively low cost of living.

You can build talent that's specific to your needs by collaborating with colleges, universities, trade schools, and other training and education programs. Manufacturers already in Ohio have found success.

From 2011 – 2018, Ohio's number of active apprentices increased 91%, bringing Ohio's U.S. rank in active apprentices from No. 10 to No. 4. During the same time, Ohio's number of new apprentices increased by 154%, making Ohio the No. 3 top state in new apprentices.

Ohio is where manufacturing talent and next-generation innovation come together to build the future of industry.



“ *UNITED GRINDING North America has observed and experienced a passion for creating a solid manufacturing base here in Ohio. UNITED GRINDING North America is also growing in Ohio because we have access to an exceptional **workforce** who are culturally dedicated and committed to doing their part in ensuring the company's success. Bottom line, UNITED GRINDING North America is growing because we have made Ohio home!* ”

Rodger Pinney, vice chairman of UNITED GRINDING's board of directors.



Innovation in Action:

JobsOhio is a charter member of the Institute for Advanced Composites Manufacturing Innovation (IACMI), a partnership among industry, academia and government focused on the development of carbon fiber and other advanced materials. America Makes, the nation's leading partner for additive manufacturing and 3D printing research and innovation, also calls Ohio home.

These Manufacturing USA Innovation Institutes benefit companies by collaborating with them and academic partners to spur innovations in new materials, processes and technologies. These public-private partnerships also provide funding support for the development and commercialization of technologies and products in line with their charters.



Ohio's Innovation Infrastructure Drives Success

With its large manufacturing sector, it's no surprise Ohio is home to top organizations that accelerate commercialization, provide access to skilled talent and share research and testing environments with companies across the state. There are several advanced sectors Ohio companies are excelling in, including additive manufacturing, advanced materials and automation. Check out the resources across the state below.

Additive Manufacturing

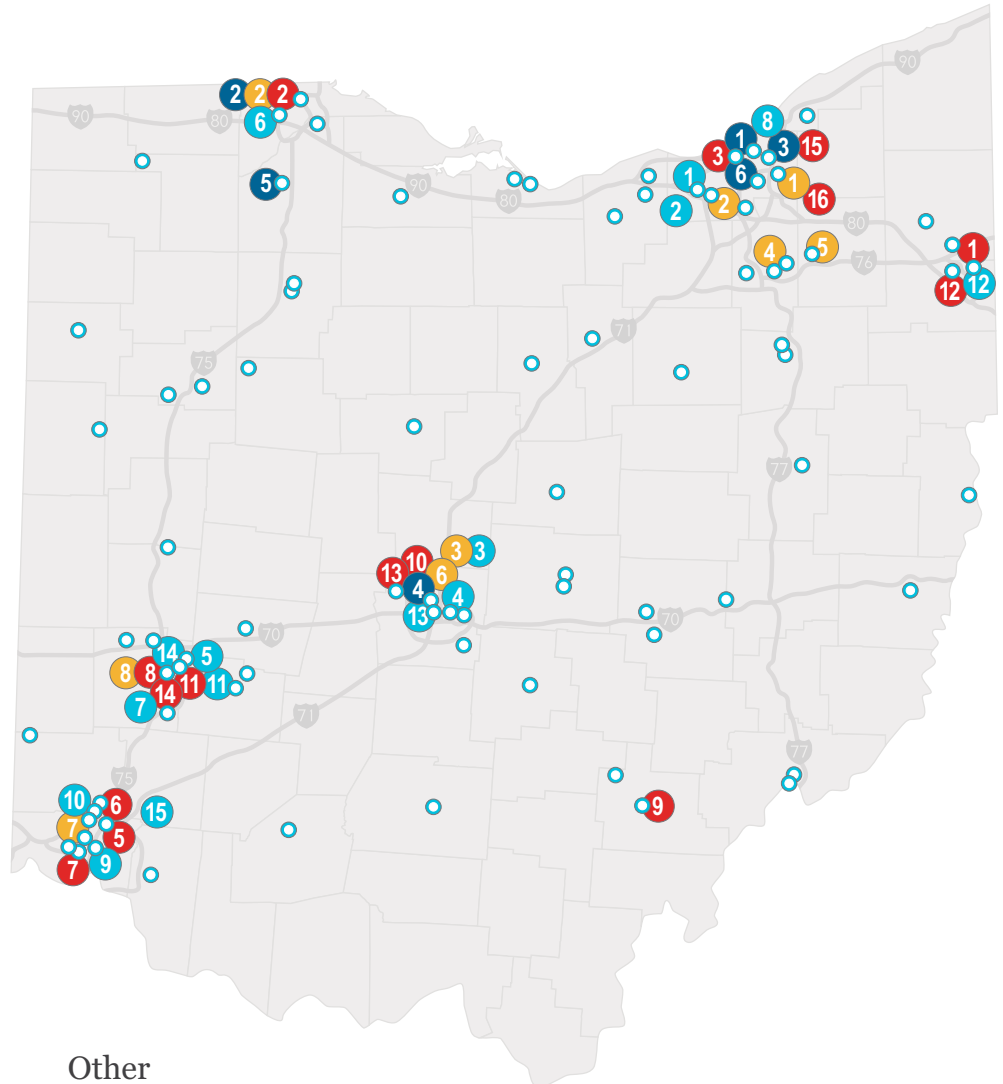
- 1 America Makes
- 2 University of Toledo Dynamic and Smart Systems Lab
- 3 NEO Additive Mfg Cluster
- 4 Mahoning Valley Innovation & Commercialization Center
- 5 Xavier University MakerBot 3D Printing Innovation Center
- 6 GE Additive Technology Center
- 7 Cincinnati State Technical & Community College Additive program
- 8 University of Dayton Research Institute
- 9 Ohio University Innovation Center
- 10 Edison Welding Institute
- 11 Sinclair Community College Additive Design Specialist program
- 12 Youngstown Business Incubator
- 13 The Ohio State University Center for Design & Manufacturing Excellence (CDME)
- 14 Air Force Research Lab (AFRL)
- 15 Case Western Reserve University Sears think[box]
- 16 Parker Hannifin Corporate Technology Ventures

Advanced Materials

- 1 ASM International
- 2 University of Toledo Dynamic and Smart Systems Lab
- 3 PolymerOhio
- 4 The University of Akron National Polymer Innovation Center
- 5 Kent State Liquid Crystal Institute
- 6 The Ohio State University Center for Electron Microscopy and Analysis (CEMAS)
- 7 University of Cincinnati 1819 Innovation Hub
- 8 University of Dayton Research Institute

Automation

- 1 Cleveland State University: IoT Collaborative
- 2 University of Toledo Dynamic and Smart Systems Lab
- 3 Case Western Reserve University: IoT Collaborative
- 4 The Ohio State University Automation and Optimization Laboratory
- 5 Bowling Green State University Mechatronics Engineering Technology program
- 6 NEO Smart Devices and Systems (IoT) Innovation Cluster



Other

- 1 NASA Glenn Research Center
 - 2 Battelle Memorial Institute
 - 3 PolymerOhio
 - 4 Ohio Manufacturers' Association
 - 5 Air Force Research Laboratory
 - 6 Center for Innovative Food Technology
 - 7 FASTLANE-MEP
 - 8 The Manufacturing Advocacy and Growth Network (MAGNET)
 - 9 TechSolve
 - 10 Southwest Research Institute
 - 11 Sinclair Community College
 - 12 Youngstown Business Incubator
 - 13 Ohio Supercomputer Center
 - 14 Emerson Helix Center
 - 15 Festo Didactic
- Colleges/Universities with engineering programs

To learn about the partnerships and resources available in Ohio, visit JobsOhio.com or reach out to our team:



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