



PURE DEFENSE

Michigan is the birthplace of the automotive industry. During World War II, that expertise was repurposed for defense manufacturing. Today, the state is still the global center of commercial automotive and military vehicle technology. With an unmatched ecosystem for advanced manufacturing, defense companies should consider Michigan first. The state offers exceptional opportunities for your company to connect to the next generation of vehicle innovation, as well as leverage world-class research, manufacturing and technology assets, and a robust defense supply chain.

MICHIGAN MEANS SUCCESS

Michigan is home to the nation's largest ground vehicle defense companies as well as the U.S. Army Tank-automotive and Armaments Command (TACOM) and the U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC)—the nation's top research facilities for the development of ground vehicle technology, robotics and mobility. Nearly 4,000 Michigan companies are engaged in defense and aerospace work with thousands more businesses within the state comprising its vast defense supply chain. Michigan is also home to U.S. DoD major industry, such as General Dynamics Land Systems, BAE Systems, GE Aviation, GM Defense and more.

AEROSPACE

Because of its automotive and advanced manufacturing expertise, Michigan is poised to meet the needs of the 21st century global aerospace industry. With more than 600 businesses in Michigan contributing to the industry,¹ Michigan is the No. 2 state for aerospace manufacturing attractiveness based upon tax climate, operating costs, education and industry representation.²

CYBERSECURITY

Michigan has developed a robust cybersecurity community focused on connecting the interests of the cyber, automotive, defense and aerospace industries. Michigan is at the nation's forefront of R&D for emerging technologies to support intelligent transportation systems and the world's first comprehensive state-level approach to cyber, improving the state's defenses and fostering rapidly growing cyber talent and business environments. In fact, *Business Facilities* ranked Michigan third in the nation for cybersecurity growth potential.³

CONNECTED VEHICLE TECHNOLOGY

With advanced manufacturing, technology and R&D, Michigan is paving the way for future generations through vehicle-to-vehicle and vehicle-to-roadway connectivity. In fact, 76 percent of North American automotive R&D takes place in Michigan⁴ and a total of \$10 billion is spent on R&D each year in the state.⁵ Additionally, as the nation's laboratory for developing advanced military ground vehicle technologies, TARDEC is focused on the testing and integration of connected vehicle technologies relating to defense land systems.

³ *Business Facilities' Rankings Report, 2017* <https://businessfacilities.com/2017/07/business-facilities-13th-annual-rankings-report>

⁴ *Center for Automotive Research, 2015*

⁵ *National Science Foundation*

¹ *Michigan Defense Center, www.arsenalofinnovation.com*

² *PwC, 2017 Aerospace Manufacturing Attractiveness Rankings*



MICHIGAN ECONOMIC
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ACCESS TO TALENT

Employers find that Michigan has one of the most talented, diverse and abundant workforces in the country. Today, the state is home to nearly 123,000 engineers⁶ and has a skilled trades workforce of more than 277,000⁷—creating one of the greatest concentrations of talent in the world. Michigan also ranks first for its concentration of engineers and its engineering-related job growth over the past five years.⁸ The University of Michigan houses the oldest aerospace engineering programs in the country and is ranked No. 2 in the nation for its undergraduate program.⁹ Altogether, Michigan has 17 universities and technical schools with dedicated curriculum for the aerospace and aviation industry.¹⁰

MICHIGAN'S MILITARY INSTALLATIONS

- *Detroit Arsenal Army Base (Warren)*: Home of the U.S. Army TACOM Life Cycle Management Command HQ, the Detroit Arsenal has played a vital role in our nation's defense since the start of World War II. Two missions linked to the Detroit Arsenal are:
 - » TARDEC maximizes the research, development, transition and sustainment of technologies and integration across all Army ground systems.
 - » Army Contracting Command provides acquisition support for the Army's major weapons systems, depot-level maintenance services and foreign military sales customers.

- *Selfridge Air National Guard Base (Harrison Twp.)*: Home to diverse DoD and Department of Homeland Security units; Michigan Air National Guard's 127th Wing provides trained, equipped and motivated tanker, fighter and support resources for the community, state and nation.
- *Battle Creek Air National Guard Base (Battle Creek)*: Home to the 110th Attack Wing that provides aerial support and combat readiness to our nation.
- *Fort Custer Training Center (Augusta)*: Michigan Army National Guard training facility primarily used for small arms, live fire, and unit maneuver training.
- *U.S. Defense Logistics Agency (Battle Creek)*: Delivers superior support for our armed forces.
- *Camp Grayling Joint Maneuver Training Center (Grayling)*: A premier, full-spectrum, four-season joint training center for the Michigan National Guard. It is the largest National Guard training facility in the U.S.
- *Alpena Combat Readiness Training Center (Alpena)*: A year-round training facility with maximum training potential for cold weather scenarios. It is the largest airspace complex east of the Mississippi River.

MICHIGAN DEFENSE CENTER

As part of the Michigan Economic Development Corporation (MEDC), the Michigan Defense Center (MDC) is laser-focused on the support, protection and growth of Michigan's defense and homeland security industry as well as missions and the needs of today's military and the future of defense. The MDC acts as a liaison between the state and defense interests in the federal government, defense agencies, the defense industry, academia and the defense community and supporting organizations. For more information, visit www.arsenalofinnovation.com.

Dedicated to shared economic success, the MEDC promotes the state's assets and opportunities that support business investment and community vitality. The MEDC's business assistance programs and services connect companies with people, resources, partners, and access to capital.



www.michiganbusiness.org

⁶ Emsi, https://e.economicmodeling.com/analyst/?t=2LYQW#h=9Q7rW&page=occupation_table

⁷ Emsi

⁸ Bureau of Labor Statistics

⁹ U.S. News and World Report, Sept. 2017

¹⁰ Integrated Post-secondary Education System 2016, accessed via Emsi