

Autonomous Systems & UAS Industry Profile



Destination for Targeted Sector Growth


North Dakota has been at the forefront of the Autonomous Systems and Unmanned (Uncrewed) Aircraft Systems (UAS) industries since 2005 when the Grand Forks Air Force Base was realigned from a KC-135 tanker mission to a UAS mission. The state has invested heavily in infrastructure, education, and capabilities to position the state as the premier global destination for UAS research, testing, and technology development.

North Dakota's Northern Plains UAS Test Site is one of only seven FAA-approved UAS test sites in the country and one of only eight participants in the FAA's BEYOND Program focused on UAS integration into the national airspace. This makes the region a very attractive destination for national and international firms looking to cement their market footing or to commercialize their products in an environment that requires access to valuable airspace.

Defining Autonomous Systems and UAS

Autonomous Systems and UAS are high-tech, intelligent machines capable of traveling by air, land, or sea without a human crew on board and often without the need for direct human input. They may operate by following preprogrammed waypoints, or use more complex capabilities such as machine learning, computer vision and artificial intelligence to make decisions and navigate through diverse, and sometimes dangerous, environments.

Ecosystem Companies

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- Airtonomy
 - Appareo
 - Botlink/Packet Digital
 - Field of View
 - iSight Drone Services
 - Microsoft
 - SkySkopes
 - Vigilant Aerospace
 - Northrop Grumman
 - General Atomics
 - Collins Aerospace
 - L3 Harris Technologies
 - Thales USA
 - Aerial Robotics
 - Boson Motors

Building a robust AUS industry has ripple effects and supports new market opportunities for existing suppliers and manufacturers with upstream capabilities. All of the following upstream supplier clusters maintain a strong presence within the FM market and stand to benefit from a growing and vibrant local AUS industry..

- Industrial Machinery Manufacturing
- Fluid Power Valve and Hose Fitting Manufacturing
- Software Publishers
- Electronic Computer Manufacturing
- Audio & Video Equipment Manufacturing
- Plastics Pipe and Pipe Fitting Manufacturing
- Motor Vehicle Electrical and Electronic Equipment Manufacturing
- Motor Vehicle Gasoline Engine and Engine Parts Manufacturing
- Motor Vehicle Transmission and Power Train Parts Manufacturing

Ecosystem Partners

Vantis

North Dakota's statewide unmanned aircraft systems (UAS) beyond visual line of sight (BVLOS) network, the first of its kind in the nation. Created by North Dakota with an initial investment in 2019, Vantis provides turnkey support to commercial and public UAS operators through infrastructure and regulatory approvals allowing applications and usability over a variety of industries. Visit VantisUAS.com for more information.



The Northern Plains UAS Test Site

One of seven Federal Aviation Administration (FAA) unmanned aircraft system (UAS) test sites in the nation. The mission of the NPUASTS is to collaborate with FAA and industry partners to develop systems, rules, and procedures to safely integrate unmanned aircraft into the National Airspace System without negatively impacting existing general or commercial aviation. NPUASTS is administering Vantis.

North Dakota State College of Science (NDSCS) Robotics, Automation and Mechatronics Technology (RAMT) program

RAMT is designed to provide students with the knowledge, skills, and abilities necessary to succeed in industries utilizing robotics and automated systems. This program combines disciplines such as electronics, networking, computers, mechanics, and fluid power utilized in manufacturing and production facilities.

Research Institute for Autonomous Systems (RIAS)

The institute integrates the resources of the North Dakota University System to advance efforts in unmanned and autonomous systems. RIAS encompasses all research activities in unmanned and autonomous systems at UND and provides significant opportunities for collaboration across the North Dakota University System and the private sector. RIAS engages researchers across a broad spectrum of disciplines to catalyze and support research and technology development across the unmanned and autonomous systems enterprise.

RAIS's focus areas include (but are not limited to) the following areas:

- Autonomous Platforms
- Application
- Data Supply Chain
- Cyber Security
- Policy

Ecosystem Data

The global Autonomous / Self-driving Cars Market size is projected to grow from 20.3 million units in 2021 to 62.4 million units by 2030, at a CAGR of 13.3%, according to Markets and Markets.

According to a report by venture capitalist at Phystech Ventures, there has been \$5 billion of investment in drone technology in the past two years, leading to the development of no fewer than 170 different air taxi, cargo, and vertical take-off-or-landing craft by almost 130 different companies.

According to Verified Market Research, the Global Drones Market size was valued at USD 19.23 Billion in 2020 and is projected to reach USD 63.05 Billion by 2028, growing at a CAGR of 16.01% from 2021 to 2028.

Gross Regional Product

\$162.5M

Earnings (2021)

\$213.9M

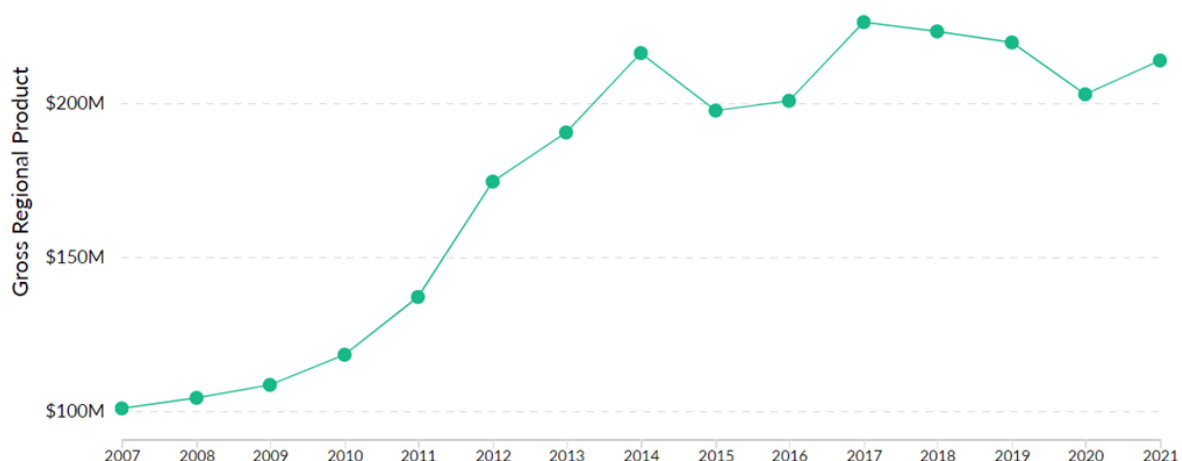
Total GRP (2021)

1,820

Supply (Jobs)

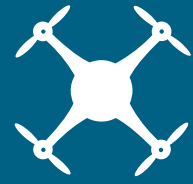
\$86,852

Earnings Per Job





**FARGO
MOORHEAD**
ECONOMIC DEVELOPMENT



GFMEDC Goals



The GFMEDC's five-year strategic plan establishes key goals and measurements driving our activities to support the growth of the Autonomous Systems/UAS (AUS) Sector.

Advancement of the goals below include continued and enhanced partnership and alignment with ecosystem partners, targeted outreach to AUS talent and companies, participation at key industry conference and events.

GFMEDC Sector Metrics

- Increase the number of companies in the market from 16 to 21 by 2025
- Increase new jobs from 1,820 in 2022 to 2,500 by 2025
- Support the growth of the Gross Regional Product (GRP) from \$214 million (2021) to \$350 million by 2025

Strengthen Workforce

Increase Amount of Region's Risk Capital

