

# CAPABILITY STATEMENT

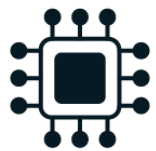
Building America's Dual-Use Future



NDEAVOR™

NDeavor is an **engineering and prototyping foundry** that serves as a catalyst for innovation in North Dakota and beyond. We partner with the defense industrial base and precision agriculture industries to deliver rapid, resilient, and fieldable autonomous technologies and electronics solutions.

## CORE COMPETENCIES



### Artificial Intelligence & Machine Learning

- Algorithm development for perception, prediction, and intelligent autonomy
- Sensor fusion, signal processing, forecasting, and statistical modeling
- Embedded and edge-deployed AI/ML for autonomous systems



### Robotics

- Intelligent autonomy for defense, security, and dual-use ground and aerial platforms
- Multi-sensor integration for situational awareness and mission execution
- Full-stack robotic system design, from navigation to control and behaviors



### Sensing

- 4D imaging radar development and platform integration
- Time-of-Flight (ToF) and depth-perception sensor systems
- Short-Wave Infrared (SWIR) imaging for low-visibility and degraded environments



### Compute

- Embedded electronics design for autonomous, edge, and resilient compute systems
- Custom hardware prototyping to support high-performance onboard processing
- System architectures optimized for low-latency, high-reliability autonomy



### Connectivity

- Multi-channel radio integration and resilient communications for contested environments
- Real-time data transport, synchronization, and interoperability across unmanned systems
- GNSS/INS, RTK, and advanced positioning algorithms for precision mobility



### Advanced Materials & Coatings

- Leverage NDSU's nationally recognized research programs in polymers, coatings, and advanced materials
- Access to engineered materials optimized for extreme durability, corrosion resistance, and harsh-environment performance

## DIFFERENTIATORS



**Mission-driven tech foundry**—not a private company, not a university lab, and not a traditional research institute—with the freedom to move fast, prototype aggressively, and collaborate across defense, public-sector, and commercial partners.



**Located within a region anchored by two legs of the nation's strategic defense triad**, providing unmatched access to mission partners, diverse terrain, and realistic field-testing environments.



**Adjacent to a Tier-1 research university** ecosystem, providing direct access to faculty expertise, advanced lab infrastructure, and a strong pipeline of engineering talent.



**Deep dual-use commercialization experience**, translating defense and public-sector needs into practical technologies ready for commercial and operational adoption.



**Proven ability to accelerate TRL advancement** through rapid prototyping cycles, customer feedback, and integrated field testing.

## EMERGING CAPABILITIES



### LLM & Edge-Agent Autonomy

Large language model-powered agents running on edge compute to provide real-time situational awareness, on-platform information retrieval, and operator decision support in low-connectivity, contested environments.



### Off-Road Autonomy & Perception Systems

Developing sensor stacks and autonomy software for unmanned ground vehicles operating in unstructured terrain and maneuver ranges, with perception supporting remote operation, threat and obstacle detection, and route navigation in GPS-degraded/denied conditions.



## CORPORATE DATA

Type: Independent 501(c)3  
Organization: NDSU Research & Technology Park (DBA NDeavor)  
Address: 1854 NDSU Research Circle N, Fargo, ND 58102  
Phone: +1 701.499.3601  
Website: <https://www.ndeavor.org/>  
CAGE: 62YD0  
DUNS: 199733267  
NAICS Codes: 541511, 541512, 541513, 541715, 334511, 333249, 541420, 517810, 334220, 334419, 334512, 518210, 541519



## PAST PERFORMANCE

*Previous technology developed by key members of our Tech Foundry while working in the private sector.*

**SBIR-Funded Advanced Navigation Solution** – Delivered the first viable dismounted warfighter head-tracking technology by combining ultra-short-baseline GPS with miniaturized INS. Demonstrated sub-degree accuracy and reliable operation in harsh electromagnetic environments, with spin-offs advancing multiple defense navigation systems.

**Ultra-Secure Tactical Communications** – Developed a resilient remote communication unit supporting both satellite and local mesh networks. Integrated cyber-hardened architecture to protect mission-critical assets and ensure continuity of operations in contested domains.

**Airborne Electronics & Communications Platform** – Designed and fielded a lightweight, modular avionics unit capable of multi-band wireless connectivity, onboard GNSS/IMU integration, and secure data handling. Enabled real-time aircraft telemetry, monitoring, and communication across both legacy and modern platforms.

**Dual-Use Sensor and Autonomy Expertise** – Team members have transitioned research into deployed solutions spanning GNSS/INS sensor fusion, radar-based perception, secure navigation, and autonomous systems, supporting both defense and civilian aviation applications.

## NAICS CODES

### Software Development & AI Solutions

541511 – Custom Computer Programming Services  
541512 – Computer Systems Design Services  
541513 – Computer Facilities Management Services  
541715 – Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)

### Robotics & Automation

334511 – Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing  
333249 – Other Industrial Machinery Manufacturing  
541420 – Industrial Design Services

### Communications Technology (Cellular & Satellite)

517810 – All Other Telecommunications  
334220 – Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing

### Sensor & Electronics Manufacturing

334419 – Other Electronic Component Manufacturing  
334512 – Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use

### Edge Computing & Data Services

518210 – Data Processing, Hosting, and Related Services  
541519 – Other Computer Related Services



**NDEAVOR**<sup>TM</sup>  
Barry D. Batcheller Tech Park