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

✓ **Engineering capabilities paired with purpose-built infrastructure**, including an 8,000 sq. ft. Innovation Studio for rapid prototyping and fabrication, a 50,000 sq. ft. startup incubator, and a 55-acre tech park that enables development, testing, and integration of autonomous systems.

✓ **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.

✓ **Proven ability to accelerate TRL advancement** through rapid prototyping cycles, customer feedback, and integrated field testing that supports both defense and commercial transition.

EMERGING CAPABILITIES

LLM & Edge-Agent Autonomy
Edge-deployed LLM agents providing real-time situational awareness and operator decision support in low-connectivity environments.

Off-Road Autonomy & Perception Systems
Autonomy software and sensor stacks for unmanned ground vehicles operating in unstructured terrain and GPS-degraded environments.

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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™
Barry D. Batcheller Tech Park

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