TESTIMONY OF

TREVOR WOODS

EXECUTIVE DIRECTOR, NORTHERN PLAINS UAS TEST SITE

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HOUSE BILL NO. 1038

Good morning, Chairman and members of the committee. My name is Trevor Woods, and I am the Executive Director of the Northern Plains UAS Test Site. I appreciate the opportunity to provide written testimony in support of House Bill No. 1038, which encompasses critical funding allocations for both the Uncrewed Aerial Vehicle (UAV) Replacement Program outlined in Section 1 and the Radar Data Pathfinder Program detailed in Section 2 of the bill.

Introduction House Bill No. 1038 represents a pivotal step in ensuring North Dakota's state agencies can continue their critical missions while maintaining compliance with federal regulations and safeguarding our state's operational and data security. As the Executive Director of the Northern Plains UAS Test Site, I have witnessed firsthand the transformative impact that uncrewed aerial systems have had on public safety, infrastructure inspection, and environmental monitoring. However, the predominance of non-NDAA-compliant drones in our state agencies' fleets poses significant security risks and operational vulnerabilities that must be addressed.

The Challenge of Non-NDAA-Compliant Drones Over 90% of drones operated by North Dakota's state agencies are non-NDAA compliant, primarily manufactured by foreign entities such as DJI. These drones present several critical challenges:

1. **Data Security Risks**: Non-compliant drones can transmit sensitive data to servers located in foreign adversary nations. This poses a significant risk to state infrastructure, as data collected during critical operations could be accessed and exploited by unauthorized entities. Hypothetically, a drone used by our Department of Transportation to inspect critical infrastructure could collect sensitive geospatial data, which might then be accessed by foreign entities. This data could be leveraged for intelligence gathering or, in extreme cases, used to plan disruptions to our infrastructure.
2. **Operational Vulnerabilities**: These drones are susceptible to remote firmware manipulation, geofencing, and other forms of foreign interference, potentially rendering them inoperable during emergencies or critical missions. A fleet of non-NDAA drones used by law enforcement could be rendered inoperable through remote firmware manipulation or geofencing by foreign adversaries. Imagine a critical response scenario, such as a search and rescue operation, where drones suddenly become non-functional due to foreign interference.
3. **Cybersecurity Concerns**: As outlined in the recent National Defense Authorization Act (NDAA) FY25 provisions, the risk of cyber exploitation by these drones is significant. These devices contain critical electronic components that could be compromised, enabling malware injection into state systems.

4. **Regulatory Non-Compliance**: Federal laws such as the National Defense Authorization Act (NDAA) and the American Security Drone Act of 2023 prohibit the use of these drones, risking the loss of federal funding and operational shutdowns.

The Need for NDAA-Compliant Drones Transitioning to NDAA-compliant drones is essential but presents unique challenges:

- **Cost**: NDAA-compliant drones can cost $30,000 to $50,000 per unit, a significant increase over their non-compliant counterparts. For state agencies with limited budgets, scaling up replacements becomes a costly endeavor.
- **Limited Availability**: The domestic drone manufacturing industry is still developing, leading to limited options for specialized applications.
- **Operational Adjustments**: Switching to compliant systems requires retraining personnel and integrating new systems into existing workflows, causing temporary disruptions.

How House Bill No. 1038 Addresses These Challenges House Bill No. 1038 allocates $15 million to ensure North Dakota's state agencies can transition to secure and compliant technology. Key provisions include:

1. **Funding for Replacements**: This appropriation offsets the cost difference between non-compliant and NDAA-compliant drones, enabling agencies to procure secure alternatives without sacrificing other operational needs.
2. **Training and Support**: The bill provides for extensive training programs tailored to state agencies. This ensures that personnel can quickly adapt to new systems and technologies, minimizing disruptions to ongoing operations. It also allows agencies to integrate these drones seamlessly into their workflows, addressing the operational adjustments required for such transitions.
3. **Streamlined Implementation**: The program will offer guidance and expertise in selecting NDAA-compliant drones into state operations. Additionally, the program will oversee the procurement and integration of acquired drones minimizing operational disruptions.
4. **Collaborative Solutions**: The program encourages asset sharing among agencies, maximizing efficiency and minimizing redundancy. For instance, a high-performance drone used periodically by one agency could be shared with others, optimizing resource utilization.

The Northern Plains UAS Test Site (NPUASTS) will administer this program, leveraging its recognized leadership in UAS integration as the nation's leading FAA test site. With a deep understanding of state processes and procedures, NPUASTS is uniquely positioned to support state agencies in navigating the complexities of drone technology implementation, ensuring seamless transitions while maximizing operational efficiency and compliance. NPUASTS is also a proven expert in enabling innovation, balancing the need for cutting-edge technological advancements with the critical necessity of maintaining security, making it the ideal administrator for ensuring both progress and protection in state UAS operations.

Ensuring Compliance and Security Replacing non-compliant drones ensures that state agencies remain eligible for federal funding while safeguarding their operations against data breaches and cyber exploitation. This transition aligns North Dakota with national security standards, enhancing the state's leadership in UAS technology.

Is $15 Million Enough? With over 90% of state agency drones needing replacement or eligible for replacement, the $15 million appropriation is vital. NDAA-compliant drones often range in price up to $50,000 per unit, and this funding ensures that all state agencies can receive the support they need. Drones are not a luxury—they are a necessity for many critical services, including public safety, infrastructure monitoring, and environmental management. These technologies directly impact the lives of North Dakota citizens and have been integral to our public safety and public service roles for years.

This bill ensures that these critical capabilities can continue, but in a safer and more secure way. By replacing non-compliant drones, North Dakota can maintain its leadership in UAS operations, ensure the safety and security of its data and operations, and uphold the trust of its citizens in the public services they rely on every day.

Operational Details The Northern Plains UAS Test Site will administer the program, ensuring state agencies receive tailored support for their unique needs. Key components include:

- **Guidance on Drone Selection**: NPUASTS will assist agencies in selecting drones compliant with NDAA requirements, ensuring the technology matches their specific operational requirements.
- **Training Programs**: Comprehensive training will be provided to ensure state personnel can efficiently operate and maintain the new systems.
- **Asset Sharing**: The program promotes inter-agency collaboration, allowing state entities to share high-value assets, reducing redundancy, and optimizing budget utilization.

The Critical Role of Collaboration The success of this initiative hinges on collaboration. By working together, state agencies can:

- Maximize the utility of high-value UAS.
- Reduce overall costs through shared resources.
- Ensure compliance with federal regulations, safeguarding future funding opportunities.

While the appropriation of $15 million is significant, it represents a necessary investment to maintain North Dakota's leadership in UAS technology. The cost of NDAA-compliant drones and the associated training programs underscores the critical need for this funding. Drones are integral to public safety, infrastructure monitoring, and environmental management. This funding ensures state agencies can continue their missions effectively and securely.

Additionally, the program will create a centralized system for state agencies to register UASs and operators, integrating them seamlessly into North Dakota's Beyond Visual Line of Sight (BVLOS) network. This integration is critical from a security standpoint, as Vantis has been designed to enable capable and secure drones while excluding operators that pose risks to other

system users. For example, Vantis does not currently support DJI operators due to significant concerns over data security, operational vulnerabilities, and the risks these drones present to shared network integrity. By prioritizing secure and compliant drones, Vantis ensures a robust framework that enhances safety, minimizes cybersecurity threats, and fosters trust among its users. This vision reflects the overarching goal of Vantis: to build a secure, collaborative, and innovative environment that enables advanced UAS operations while safeguarding all stakeholders involved.

The Radar Data Pathfinder Program House Bill No. 1038 also provides $11 million in funding for the Radar Data Pathfinder Program, which represents a groundbreaking opportunity for North Dakota to define the future of UAS operations in the United States.

Shared Use Infrastructure and the Need for Vantis Shared use infrastructure, a concept integral to all modes of transportation, does not currently exist for the UAS industry. Each operator is often left to create their own systems for navigation, communication, and operation—an approach that is inefficient, costly, and limits the broader integration of drones into the National Airspace System (NAS). Vantis seeks to solve this gap by establishing shared use infrastructure for UAS, enabling advanced and complex operations in a scalable and fiscally responsible manner. This infrastructure could not only be leveraged by commercial operations but also by public agencies, streamlining their UAS operations and allowing them to focus on their core missions.

The Vision of Vantis Vantis represents the next evolution of shared-use aviation infrastructure. Its design and operation support more advanced and complex UAS missions and operational needs. By building on established systems, Vantis efficiently expands its capabilities while minimizing costs. The Radar Data Pathfinder Program extends this vision by demonstrating that FAA surveillance data can meaningfully contribute to the integration of UAS into the NAS, making North Dakota the first non-federally sanctioned entity to receive real-time, unfiltered FAA radar data.

Benefits of the Radar Data Pathfinder Program The Radar Data Pathfinder Program is a groundbreaking initiative—the first of its kind. It represents an unprecedented collaboration between the FAA and a state entity to incorporate federal radar data into a BVLOS network like Vantis. While North Dakota has already utilized air traffic radars to support BVLOS UAS operations at a state level, this program aims to establish a federal precedent. This initiative will enable Vantis to expand its current service coverage from 3,000 square miles to an impressive 56,000 square miles—17 times greater. By providing real-time airspace awareness, radar data ensures that UAS operations can coexist safely with manned aviation. This is particularly critical in North Dakota, where agricultural and other low-altitude manned flights are common. Expanding to stable service area of the entire 56,000 square miles is a significant undertaking that will take multiple years to complete. However, this opportunity ensures that North Dakota remains at the forefront of building the standard for UAS integration into the NAS. The program also positions North Dakota as a leader in setting federal policy for UAS operations, creating opportunities for federal partnerships, private investment, and job growth.

Projected Federal Radar Data Coverage   Existing Vantis Coverage
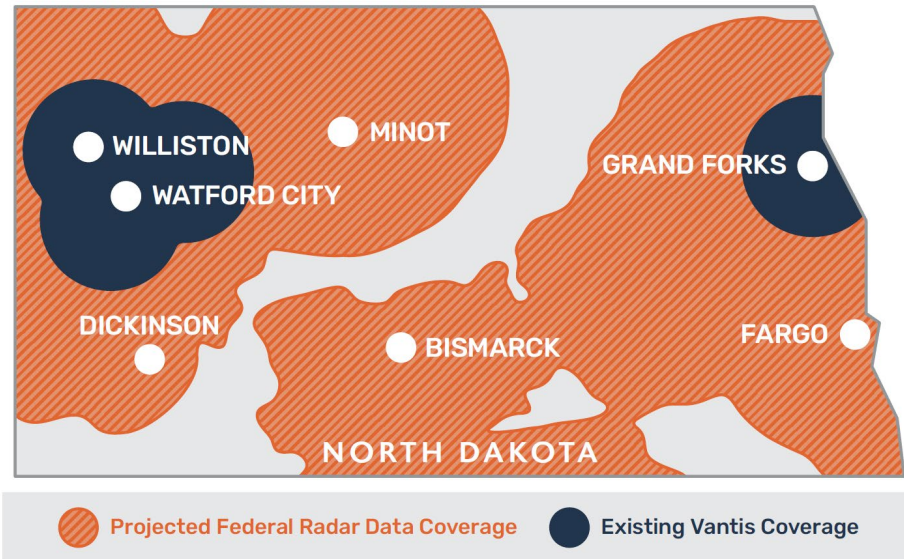
Economic Impact and National Leadership The economic benefits of the Radar Data Pathfinder Program are profound. By leading the nation in FAA radar data integration, North Dakota solidifies its reputation as the premier location for UAS operations. This attracts companies, talent, and investment to our state, driving job creation and economic growth. Additionally, our leadership in this area positions us as a trusted partner for federal initiatives, opening doors to future funding and collaboration.

Enhancing Safety and Operational Excellence Through our collaboration with the FAA, Vantis will establish rigorous safety standards for integrating UAS into the NAS. By providing real-time radar data, we enhance situational awareness and operational safety for both manned and unmanned aviation. For example, during a recent agricultural mission, the Vantis network detected unplanned aerial applicator traffic through radar data, allowing for a delay in drone operations and preventing a potential mid-air conflict.

Supporting State Agencies and Industry State agencies such as the Department of Transportation and Emergency Services will gain access to real-time radar data, improving their efficiency and safety in missions such as bridge inspections and disaster response. Additionally, private industry using Vantis will benefit from unparalleled safety and compliance standards, giving them a competitive edge in their markets.

What the $11 Million Will Support and Why It Is a Special Request The $11 million allocated for this program represents the cost of this one-year effort, but it sets a firm foundation to reap the benefits of the full 56,000 square miles of coverage. It also positions Vantis to transition from a test program to a stable and scalable service that serves the public and private sectors alike, with opportunity to expand beyond North Dakota.

The $11 million allocation in this bill is crucial. This funding will support Vantis' groundbreaking partnership with the Federal Aviation Administration (FAA) as part of the FAA Radar Data Pathfinder Program. The primary objectives include defining FAA radar data security control requirements, validating the suitability of FAA radar data for UAS operations,

and demonstrating how FAA radar data can enhance safety and facilitate UAS integration into the National Airspace System (NAS).

These objectives represent non-budgeted costs, making this request a necessary step for achieving this critical milestone. The funding will enable the completion of essential work items, including:

- **Program Management**: Overseeing all aspects of the initiative to ensure seamless execution.
- **System Design Changes**: Enhancing current systems to accommodate new FAA radar data.
- **Cybersecurity Improvements**: Developing training and documentation to bolster enclave cybersecurity and meet stringent FAA standards.
- **Third-Party Assessment**: Conducting an independent audit to validate compliance and system integrity.
- **Integration and Testing**: Performing functional integration and rigorous testing of radar data within Vantis.
- **Operational and Flight Test Campaigns**: Demonstrating real-world applications and benefits of radar data.
- **System Administration**: Managing network, system, and cyber operations to ensure ongoing functionality.
- **Safety Assessments**: Conducting comprehensive safety evaluations to meet federal requirements.

These activities are all needed within the 1-year test program.

Conclusion House Bill No. 1038 is a strategic investment in North Dakota's future. By ensuring state agencies have access to secure, compliant, and effective UAS technology, and by advancing the Radar Data Pathfinder Program, this bill safeguards our state's operational capabilities and leadership in UAS innovation. I strongly encourage the committee to support this critical legislation. Thank you for your time and consideration. I am happy to address any questions you may have.