



Smart Drone Network (SDN)

Securing U.S. Airspace through Intelligent, Trusted, and Scalable Drone Integration



Core Objectives

- **Establish PeAN-powered corridors** for drone delivery, inspection, and public safety across multiple states
- **Deploy PeAN identity nodes** for secure credentialing and airspace entry validation
- **Enable trusted BVLOS operations** with AI-assisted telemetry, geofencing, and emergency response
- **Protect critical airspace** with encrypted mesh communications and anomaly detection
- **Create a scalable national framework** for replication across federal, state, and tribal jurisdictions



Executive Overview

The PeAN-Enabled Drone Network (PNDN) is an initiative to deploy **Perception-Enabled Autonomous Network (PeAN)** technology across federal airspace corridors, drone operation zones, and strategic infrastructure nodes. Anchored in **cybersecurity, digital identity, and AI-powered orchestration**, PNDN supports real-time coordination, beyond visual line of sight (BVLOS) operations, and airspace resilience for commercial, government, and public safety drones.

Led by the PeAN strategic partners and aligned with FAA NextGen, DHS UAS security directives, and the National Drone & AAM R&D Strategy, the network will establish **U.S. global leadership in secure drone infrastructure** and AI-governed unmanned systems.



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Implementation Plan

Phase 1 – Stakeholder Onboarding & Corridor Mapping (Months 1–6)

- Partner with FAA UAS Test Sites, DHS CISA, DoD innovation units, NASA Aeronautics
- Identify strategic corridors near ports, rail hubs, energy infrastructure, and underserved regions
- Launch interagency working group and technical advisory council

Phase 2 – Infrastructure Deployment (Months 7–12)

- Install PeAN ground and airborne devices in pilot corridors
- Launch credentialing system for drone operators and autonomous platforms
- Integrate with FAA LAANC, RID, and ATC protocols

Phase 3 – Operational Pilots & Data Collection (Months 13–20)

- Conduct mission scenarios: logistics delivery, disaster surveillance, infrastructure inspection

- Monitor flight behavior, communication performance, and threat mitigation
- Engage drone manufacturers, public safety agencies, and corridor communities

Phase 4 – Evaluation & National Blueprint (Months 21–24)

- Compile metrics, performance benchmarks, and lessons learned
- Finalize the **PeAN Drone Network Replication Playbook**
- Host interagency briefing and initiate multi-state replication strategy

Impact Metrics (24 months)

- 1,000+ PeAN-authorized drone flights
- 40% improvement in BVLOS efficiency
- 30% reduction in unauthorized airspace breaches
- Credentialed identity ecosystem for drone operators and platforms
- Readiness model for NATO-aligned and global drone corridor expansion



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Next Steps

We welcome the opportunity to present this proposal to our strategic partners and begin collaborative design of the project framework.

A comprehensive executive presentation, technical blueprint, and partner MOU drafts can be prepared upon request.

