

WHITE PAPER

HARMONIZING MISSILE DEFENSE AND AIRSPACE MANAGEMENT: INTERAGENCY COORDINATION DURING THE DEVELOPMENT OF GOLDEN DOME AND BNATCS

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Golden Dome: The Next Frontier in Defending America's Skies

The United States' *Iron Dome for America* initiative authorized under Presidential Executive Order 14186, now known as *Golden Dome*, represents a transformative step toward an integrated and interoperable approach to national air and missile defense. Envisioned as a multi-layered architecture, *Golden Dome* integrates land, air, and space-based surveillance, interception, and airspace management technologies to safeguard U.S. airspace against rapidly evolving threats from land, sea, air, and space. These threats include aircraft incursions, unmanned aerial systems, and cruise, ballistic, and hypersonic missiles.

Achieving this vision demands unprecedented coordination and collaboration between the Federal Aviation Administration (FAA) and the Department of War (DoW). Together, these agencies must develop a common operating picture that maximizes data fusion and shared domain awareness across multi-layered sensor systems. This level of integration presents both technical and organizational challenges, as each agency operates under distinct mandates, authorities, and acquisition frameworks that must be aligned to ensure effective civil–military operations.

Creating a coordinated capability to detect, identify, classify, track, and engage within the air domain is essential to ensuring safe and effective civil and military operations in an increasingly complex air traffic environment. Establishing interoperable standards, data-sharing protocols, and fail-safe operational linkages will be critical to delivering the robust protection required for the nation's skies and critical infrastructure.

Where Missions Intersect: The FAA–DoW Challenge

The development and deployment of *Golden Dome* will introduce complex challenges that demand a tightly integrated and coordinated approach between the FAA and the DoW. The FAA, as the Title 49 agency responsible for national airspace management, and the DoW, operating under Title 10 authorities, must reconcile operational mandates, technological priorities, procurement processes, and security objectives.

This intersection becomes even more challenging as FAA continues its effort to transform the U.S. air traffic control system to meet the complex airspace of the future through the *Brand New Air Traffic Control System (BNATCS)*. Both *Golden Dome* and *BNATCS* are evolving simultaneously to address the demands of an increasingly complex airspace environment, creating areas of inevitable overlap and potential redundancy.

As *Golden Dome* surveillance, detection, target tracking, and effector/intercept engagement capabilities are developed and programmed for implementation, many of its components will intersect with or duplicate FAA legacy and *BNATCS* aerospace surveillance and management. A central concern is establishing command, control, and communication protocols during *Golden Dome* target tracking and effector, kinetic or non-kinetic, engagement. Surveillance for missile defense and Counter-Unmanned Aircraft Systems (C-UAS) must be sorted between “friendly” civil and military operations from incoming enemy threats.

Furthermore, to ensure safety across the national airspace, a fail-safe capability must have synergistic and holistic FAA engagement on the front end of *Golden Dome*’s development and deployment to ensure safety for participants within the national airspace. Collaborative FAA and DoW approaches to requirements development, sharing of domain awareness data, capabilities delivery synchronization, and critical resource allocation will increase the operational effectiveness of both agencies’ missions. By aligning priorities and eliminating redundancies, this partnership will optimize air traffic safety, strengthen homeland defense, and conserve taxpayer dollars.

Coordinated Solution: An Interagency Approach

To achieve effective shared domain awareness, the development of *BNATCS* and *Golden Dome* will require a heavily integrated approach. This effort must be structured around an interagency task force supported by focused working groups comprised of empowered front-line program and requirements managers and backed by a strong commitment from senior agency and department stakeholders. As in past major program developments spanning multiple authorities and lines of responsibility, the integration of capabilities across all agencies is paramount.

This unified framework establishes clear channels of engagement and alignment at the executive, operational, and programmatic levels across stakeholder departments, agencies, and services. It enables the ability to rapidly engage at the intersection of shared requirements and operational concepts for surveillance and domain awareness capabilities concerning aircraft, UAS, missile defense, and effector/interceptor systems. Early and sustained coordination across these functions will deliver significant benefits in efficiency, safety, and mission assurance, as highlighted below.

Managing Complexity at the Intersection of Civil and Defense Operations

Golden Dome must operate seamlessly within a dynamic and multifaceted aerospace environment while maintaining interoperability with *BNATCS*. *Golden Dome* will employ a multi- and cross-domain approach that uses advanced sensors to detect, track, and discriminate space, air, and missile threats while protecting U.S. critical infrastructure. Threat tracking and potential subsequent effector use, both kinetic and non-kinetic, will depend on dynamic, automated, real-time use of the national airspace, which drives the need for FAA coordination on issues such as real-time surveillance and sensor integration, real-time airspace management and control, integrated training, and related policy and regulatory matters. As the FAA upgrades its surveillance systems under *BNATCS*, including enhanced identification systems for unmanned aerial vehicles, data from these systems must be integrated with *Golden Dome* sensor and domain awareness data, enabling a shared operational picture and synchronized situational awareness.

A shared situational awareness will greatly enhance operational response timelines for both the DoW and FAA, thereby maximizing mission effectiveness and national airspace safety. Effector use, either kinetic or non-kinetic, also requires real time dynamic airspace management. As a result, *BNATCS* automation and real-time traffic management systems must be designed to accommodate rapid national defense airspace needs as determined by *Golden Dome* capabilities and response protocols. For example, *Golden Dome* engagement of threats, using kinetic or non-kinetic capabilities, will drive the rapid execution of response authorization decision processes. Such engagements may include C-UAS activity around strategic sites, land or space-based interceptor launches and reentries, and defense against conventional, hypersonic, or ballistic missiles, as well as space-based threats. Such actions necessitate predetermined automated and continuously exercised interagency coordination.

During threat scenarios, *BNATCS* airspace control procedures in high-volume air traffic areas must be compatible with *Golden Dome* procedures to enable coordinated, rapid, automation-driven decision-making that ensures the immediate safe separation of air traffic or the clearing of the applicable airspace areas. Operational coordination procedures for rapid response activities must be identified, validated, and routinely exercised to ensure a swift response that safely integrates these activities into the National Airspace System (NAS).

Moreover, threat-response challenges must be addressed at what defense planners call the “speed of missile flight.” The time available to determine and authorize operational responses may not align with existing support and notification processes across multiple federal organizations, thus Emergency Security Control of Air Traffic (ESCAT) procedures may be required. Familiarity with existing and emerging procedures should be incorporated into the interagency framework and validated through realistic threat models and response simulations.

Leveraging Proven Models of Interagency Coordination

As discussed in the previous OAS white paper, [*Interagency Coordination In The Advancement and Deployment of Air Traffic Management Systems*](#), past issues associated with integrating multiple, siloed stakeholder requirements highlight the challenges associated with seamlessly integrating new NAS capabilities such as *BNATCS*. These complex problems have technical, operational, and policy/programmatically related aspects that must be addressed, coordinated, integrated, and implemented simultaneously across all departments and agencies to achieve shared objectives.

Furthermore, linking institutional knowledge and lessons learned from activities such as the NAS Interagency Working Group and the DoW’s Policy Board for Federal Aviation is essential for advancing future capabilities. Doing so establishes lasting mechanisms for FAA, DoW, and DHS to communicate and collaborate on the modernization and lifecycle management of shared infrastructure programs while jointly addressing NAS interoperability and airspace policy issues.

Past interagency coordination efforts have yielded successful outcomes for collaborative FAA and DoW initiatives and have informed cross-agency cooperation on specific communications, navigation, and surveillance improvement programs. Under the last NAS modernization plan, the FAA served as the lead office for the acquisition and fielding of air traffic automation systems and the voice switch, whereas U.S. Air Force (USAF) led procurement and fielding of the ASR-11 terminal radar program. Additionally, the FAA, DoW, and DHS maintain a successful and enduring partnership in the program management and sustainment of DoW Air Defense, and DHS Homeland Security Surveillance radar programs.

OAS Perspective: Delivering Results Through Interagency Integration

Objective Area Solutions (OAS) team members bring decades of experience supporting civil, defense, and homeland security organizations in complex, multi-stakeholder environments. Our team understands the operational realities of interagency coordination and the technical challenges of integrating systems across domains.

Through proven methodologies in stakeholder alignment, requirements development, and program execution, OAS helps agencies like the FAA and DoW translate strategic objectives into actionable plans. The result is faster implementation, reduced risk, and stronger mission outcomes across the national airspace enterprise.

However, the intersection of *Golden Dome* and *BNATCS* represents a far more complex operational challenge, requiring faster, more unified, and continuous coordination than past efforts. A standing interagency framework meets that need.

The Strategic Value of Interagency Coordination

Strategic interagency engagement frameworks yield significant benefits for *Golden Dome* and *BNATCS*. By aligning agreements, requirements, and funding strategies, the FAA and DoW can eliminate program redundancies and efficiently deliver results on long-term appropriations.

A coordinated interagency framework enhances visibility into operational requirements and capability gaps, enabling better-informed decisions and faster adoption of new technologies to strengthen shared domain awareness.

The coordinated approach also improves interoperability by integrating surveillance and sensor data sources to enhance data fusion and dissemination capabilities across DoW and FAA operations. As noted in the OAS white paper [*Interagency Coordination In The Advancement and Deployment of Air Traffic Management Systems*](#), these same principles ensure that *Golden Dome* and *BNATCS* advance from concept to implementation, while reducing risk and optimizing interagency coordination.

Conclusion: Charting a Course for FAA and DoW Cooperation on Golden Dome and BNATCS

A sustained interagency task force-level effort is needed to drive the effective development and implementation of *Golden Dome* and *BNATCS* operational visions. Through this interagency task force approach, the DoW and FAA can integrate shared expertise and align operational and technological objectives to achieve seamless coordination across systems and missions.

By institutionalizing this coordination framework, the DoW and FAA can design systems that provide the level of shared domain awareness that is essential to addressing current and emerging threats while ensuring the safe and efficient management of anticipated increases in air traffic. Sustained commitment to a unified interagency framework for decision-making, capability development, and operational alignment will position *Golden Dome* and *BNATCS* as exemplary models of integrated aerospace defense and air traffic management.

About the Authors

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Scott leads knowledge management and business intelligence activities for Objective Area Solutions. He has more than 30 years of experience in intelligence and operations management and brings extensive expertise in aviation threats and vulnerabilities, global aviation security, and strategy development.

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Other Contributors

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