Palantir

Distributed Maritime Operations: Decision Support

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→ palantir.com



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The Challenge ↘

Alarming advances in the technology and tactics of our adversaries have required the Navy to deploy assets over broader geographic regions to credibly deter, engage, and win. To retain decision superiority in this environment, strategists and commanders need capability to effectively manage a wide range of distributed systems in real-time, large-scale campaigns. Central to this capability will be full visibility into every available asset across the distributed fleet, as well as operationalization of the high-scale supporting data required for strategic collaboration, analysis, and coordinated decision-making. Interpreting and actioning data on this scale is beyond the capability of human intelligence acting alone and requires effective software-based solutions which aid and enhance the decision-making ability of human operators. This software must deliver effective response planning in peace time and gray zone conflict as well as reliable, tactical decision support in kinetic engagement.

While weighing options in the complex maritime environment, strategists are confronted with difficult questions, including:

- Which course of action ("COA") would have the greatest probability of de-escalating tense situations without exposing high value assets?
- Which vessels and assets can or should be deployed against an incoming threat, considering the diverse range of friendly resources and capabilities available, current force positioning, munition inventory, other ongoing operations, and additional potential targets in theater?
- Which forces should be selected for a given mission to maximize effectiveness without compromising survivability?
- How can operators mask tactics and assets in a way that allows friendly forces to maintain advantage even when facing a superior threat?

When answering each of these questions and more, Navy planners must consider their full range of distributed systems and balance a wide set of considerations, ranging from relative distance between targets and available assets, advantages and drawbacks of offensive and defensive strategies, capabilities and limitations of friendly and hostile forces, ordinance capacity and availability, risk tolerance, contingency planning, and more. Maritime dominance for tomorrow's distributed operations requires advanced, AI-enabled decision-making tools to allow sailors to respond better and at a speed greater than the adversary can adapt to.

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The Solution ↘

Palantir's solutions help overextended planners and warfighters leverage data to better understand, compare, and select from COAs finely tuned to distributed operations across the changing battlespace. Provided with access to all-source data at scale, our solutions can be used torapidly ingest, cleanse, and transform inputs pulled from across echelons and clearance levels within a single environment for secure user inspection, analysis, and discovery, surfacing actionable insights for commanders and planners. Using this data, our solutions can power workflows such as the following to aid decision-making:

- ## Geospatial Visualization, Force Tracking, and Constant Custody:

Palantir's software can integrate red force and blue force common operating picture (COP) intelligence within a single, near real-time geospatial depiction of the battlespace that is continuously updated. Within this resource, cross-echelon users can receive an up-to-date view of all known targets, friendly assets, and ongoing operations to support better decision-making. Warfighters and strategists can drill down on individual vessels and systems to better understand their capabilities and tasking.

- ## AI-Enabled Decision-Making:

Palantir's software is fully interoperable with cutting edge AI algorithm development, whether those algorithms are developed by Palantir, third-party vendors, or the US Navy itself. These AI models support faster, more effective human-in-the-loop decision-making. Any assortment of models can be loaded into our solutions to help planners generate, assess, and compare potential COAs for evolving battlespace conditions. The result is a substantial increase in the quality and quantity of decisions each human analyst can make per hour, as well as optimal allocation of all available systems. Decisions made are automatically captured and written back to better hone models and improve future recommendations.

- ## Mission Execution:

Our solutions can be configured to include dashboards for mission execution. Once COAs are assessed and confirmed within platform, they can be pushed to distributed vessels and teams within theater for tactical execution. Palantir's open, interoperable construction supports links with numerous tactical digital information links and will remain flexible to integrate with Communications-as-a-Service (CaaS) solutions as they become available in the future.

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Common Benefits ↘

All Palantir solutions, including those configured for Decision Support, are based upon the same core principles:

Interoperability, Modularity, and Extensibility

All Palantir solutions are constructed using modular architecture and industry-standard open APIs (e.g., REST, JDBC, etc.) to ensure interoperability with the Navy's existing applications, as well as future solutions that have not yet been developed. Our solutions prioritize highly configurable workflows to deliver value to the greatest number of use cases — from tactical to operational to strategic. We enable users to model, explore, prepare, transform, and interact with their data regardless of where it is stored, and make that data easily discoverable to scattered external applications and tooling already in operation across the fleet. Leveraging an open, modular, microservice architecture, our solutions

Information Security and Coalition Support

Palantir has years of experience implementing highly complex classification-, role-, and attribute-based security controls for U.S. defense and intelligence stakeholders. Our highly secure solutions protect information granularly, down to the individual data point. Furthermore, our comprehensive access control frameworks have enabled US forces to securely push intelligence to coalition partners without oversharing.

Accreditation and Network Deployability

The Defense Information Systems Agency (DISA) has awarded Palantir Department of Defense Impact Level 6 (IL6), Impact Level 5 (IL5), and FedRAMP Moderate authorization. Our solutions have gained Risk Management Framework Authority to Operate on major DoD and IC domains and security enclaves, including NIPRNET, SIPRNET, JWICS, BICES, and more.

Agile and DevSecOps

Our solutions leverage the best practices of Agile and DevSecOps, including Continuous Integration and Continuous Delivery, unified configuration environments, code and data branching, and management systems with enterprise health checks. As a result, a wide range of users — from data scientists to analysts to software developers — can collaborate securely in a DevSecOps environment that is extensible across the enterprise.

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