

# Strategic Acquisition Framework for Manned-Unmanned Teaming in Naval Aviation

## Abstract

Unmanned Aerial Systems (UAS) are at the cutting edge of the United States military development efforts. The U.S. Navy looks to integrate UAS into Carrier Air Wings (CVW), leveraging Manned-Unmanned Teaming (MUMT) to extend and increase its operational capabilities. Programs of record for past systems, such as the MQ-8, MQ-4C, and MQ-25, have had significant challenges in scope creep, cost overruns, and unsustainable integration. MUMT must overcome technical, operational, and logistical challenges while coordinating with existing CVW operations.

## Methods

To assess these challenges:

- Conducted literature review into the current state and direction of MUMT development and programs of record
- Modified Capabilities Based Assessment (CBA) was used to determine current capability gaps and call-to-actions for remediation
- Doctrine, Organization, Training, Materiel, Leadership and education, Personnel, Facilities (DOTmLPF) analysis to propose potential non-materiel solutions to identified gaps



## Results & Impact

- The study revealed a definitive need for UAS to be integrated into carrier air wings (CVWs) and incorporate MUMT
- Single-role, attritable UAS must be expanded to mature technology and demonstrate that MUMT can perform in contested environments
- The Navy needs to pivot to a more open and capability-centric module of sustainment for these systems.
- Shortcomings in many nonmaterial areas that require additional support for MUMT integration were discovered. Collaboration with allies to adopt these systems rapidly will help close the capability gaps in the CVWs and push Naval Aviation into the future.



## Future Research

- At a classified level, analyze financial distribution of MUMT R&D funds for the Navy and Air Force and suggest needed budget for developing UAS's and integrating infrastructure
- Analyze step-by-step integration of MUMT into carrier flight operations and required infrastructure, including squadron responsibilities and CVW structure

