

ACTS: Aircraft Component Tracking System

Eliminating Configuration Risk Across Multi-Platform Naval Aviation

Challenge

Naval aviation maintenance organizations operating the H-60 fleet lacked a centralized system of record for component lifecycle data — relying instead on manual logbooks, paper records, and disconnected spreadsheets that left configuration visibility incomplete and readiness decisions data-poor. Without the ability to distinguish repair delays from installation backlogs, program managers could not direct resources to the right constraint.

- Grounded aircraft caused by configuration uncertainty and missing component records
- Lost or reconstructed component histories that introduce safety and compliance risk
- Overfly incidents from inadequate tracking of hours-, landing-, or criteria-based lifecycle limits
- Engineering time consumed answering basic status questions that a proper system should answer automatically

Approach

Technical Data Analysis, Inc. (TDA) developed ACTS — the Aircraft Component Tracking System — as a unified, cloud-based platform that provides a single authoritative source of truth for dynamic component lifecycle management. Every installation, removal, repair event, and usage accumulation is recorded, validated, and made auditable in a single system. ACTS tracks limited-life components against hours flown, landings, or custom criteria, enforces configuration rules at the point of entry, and retains complete lifecycle histories without forced consolidation.

Most systems tell you how many components are out of service. ACTS tells you why they're still out. Pre-configured reports provide instant fleet visibility without

engineering involvement, and the interface mirrors existing paper workflows for rapid adoption across units and services.

Outcome

ACTS is operational across H-60 and V-22 platforms, supporting the Navy, Marine Corps, Air Force, and Foreign Military partners including Australia, Denmark, and Japan. The \$121M+ figure reflects documented H-60 savings as of 2018 — a baseline that has continued to grow over the past eight years.

\$121M+ H-60 cost savings (as of 2018)

3 + 3 U.S. services + allied nations

2 aircraft platforms (H-60, V-22)

8+ years operational with ATO (since 2018)

1 authoritative system of record

With ACTS in place, questions that previously required hours of manual consolidation are answered in seconds. Component histories are complete and auditable. The risk of overfly incidents is directly reduced.

"ACTS is a user-friendly system that has greatly improved accountability and accuracy with SRC, EHR, and ASR cards. Now instead of harassing each squadron for cards it's as easy as typing in a S/N."

— AZ1 Thomas Clemens, Fleet Readiness Center Southwest (FRCSW) · Navy SBIR/STTR Success Story, NAVAIR Public Release 2018-996