Modernizing USCG Aviation Mishap Reporting: Building a Business Case

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About Mishap Reporting
The U.S. Coast Guard employs an Aviation Safety Mishap Reporting program to mitigate the risk involved in aviation operations by sharing lessons learned from mishap events. Mishaps are defined as “unplanned, unexpected or undesirable events causing injury, occupational illness, death, or property damage/loss”. Each year, aggregate mishap statistics are published in an Annual Aviation Safety Report.

Problem Statement
Gaps in the U.S. Coast Guard’s mishap reporting process result in underreporting of mishaps, diminished accuracy of statistics, & decreased knowledge sharing. This undermines the Aviation Safety Program’s goal of preventing mishaps by identifying and eliminating hazards before they cause injury or damage.

Objective
This project illuminates limitations in the mishap reporting process and offers a USCG business case to justify an overhaul of the current reporting procedure. Modernizing mishap reporting can be accomplished by merging two USCG information systems (ALMIS & e-AVIATRS). Major upgrades to existing USCG systems require a four-part business case considering (1) justification, (2) cost/benefit, (3) performance goals, & (4) project risk.

Methodology
- Survey of Flight Safety Officers (FSO)
- In-depth interviews of key program managers
- On-site observation of USCG operations
- Requirements analysis
- Wireframes
- Process modeling

Key Survey Results

Process Reengineering

Wireframe Development

System Integration

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About Mishap Reporting

Mishap Details
Property Details

- Name
- Mission
- Flight Plan
- Flight Time
- Air Speed
- Minutes
- All Types

- Aircraft Class
- Aircraft model
- Aircraft Engine
- Aircraft Gear
- Aircraft Category
- Aircraft MFG.
- Aircraft Type
- Aircraft Designation

- Aircraft Class: Smaller than 20K lbs.
- Aircraft model: Small Cessna
- Aircraft Engine: Single
- Aircraft Gear: Standard
- Aircraft Category: Fixed Wing
- Aircraft MFG.: Cessna
- Aircraft Type: Single Engine Airplane
- Aircraft Designation: N100AB

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Merging Two Information Systems: e-AVIATRS & ALMIS

e-AVIATRS is an information system used by FSOs for reporting, analyzing and publishing the numerous aviation related mishaps that occur as a result of Coast Guard operations each year.

Next Steps
The business case recommendation aligns with the Coast Guard’s five-year strategic IT plan, which aims to deliver mission-focused, interoperable, and innovative solutions to enhance IT capabilities for the enterprise. The project sponsor, LCDR Brian Potter, will use the business case to illustrate this alignment and foster support from various stakeholders. If accepted, the project will receive funding and enter the Coast Guard’s SDLC design phase in the ALMIS product line.