After-Action Reports in Air Force Contracting

Enhancing Operational Insights & Future Mission Performance

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Abstract

- This research explores optimizing After-Action Reports (AARs) in Department of the Air Force (DAF) contracting to systematically capture, analyze, and apply operational insights.
- The study proposes a structured and stakeholder-driven AAR process. Key innovations include a standardized template and AI-driven text analysis, ensuring actionable feedback for enhanced mission readiness.

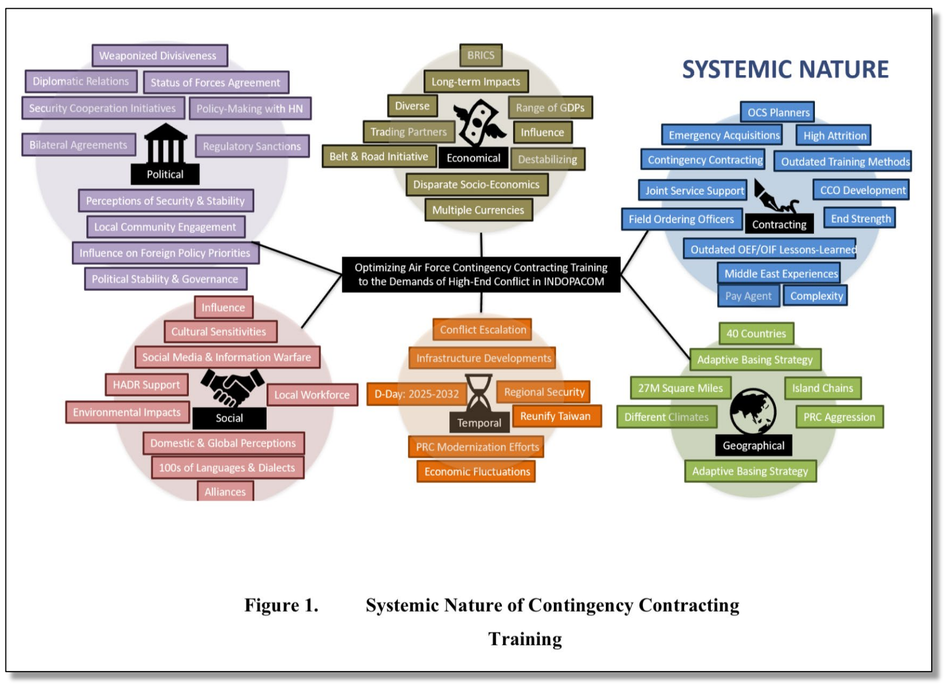

Figure 1. Systemic Nature of Contingency Contracting Training

This graphic demonstrates the interconnectedness of AARs in DAF Contracting

Methods

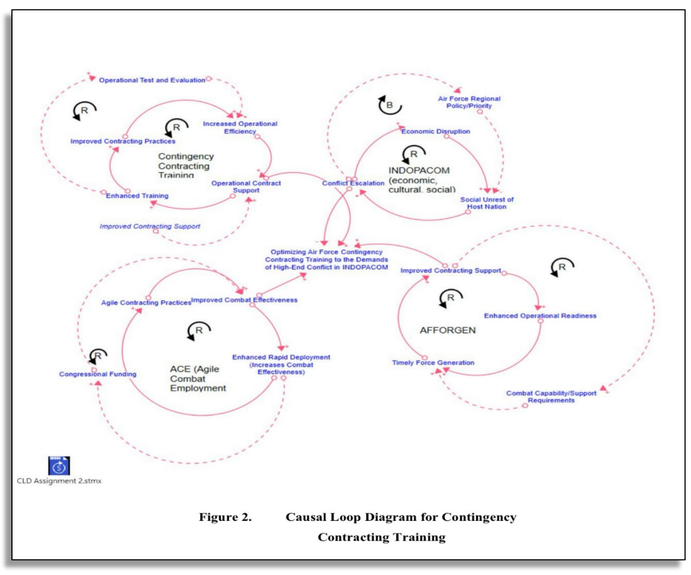

Figure 2. Causal Loop Diagram for Contingency Contracting Training

- **Phase I Approach:** Mapping systemic challenges and refining solutions with stakeholder feedback.
- **Phase II Approach—Lean Launchpad Methodology:** Iterative problem-solving and validation using a Hacking for Defense framework.
- **Tools Used:** Systems thinking, AI text analysis, Beneficiary Discovery, Mission Model Canvas, Value Proposition Canvas.

Results

- **Standardization Matters:** A structured yet adaptable AAR framework bridges gaps and enhances operational readiness.
- **AI Insights:** Text analysis tools provide actionable insights, boosting decision-making and mission planning.
- **Leadership Advocacy:** Strong leadership and collaboration drive effective AAR implementation.

Impacts

- Improved **organizational learning** and **operational readiness**.
- Accelerated **adaptation** to dynamic mission environments.
- Enhanced **data-driven decision-making** through structured feedback.

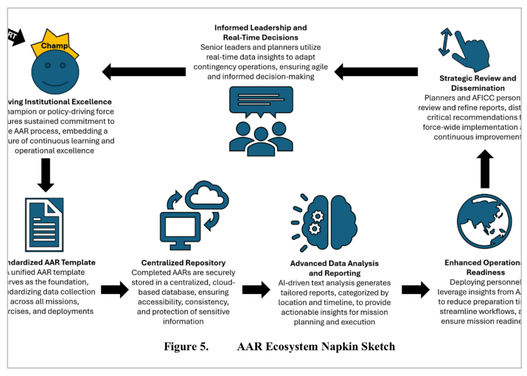

Figure 5. AAR Ecosystem Napkin Sketch

DAF Contracting AAR Ecosystem

Table 9. Evolution of the AAR Template: From Initial Concept to Finalized Framework

Aspect	Initial AAR Template	Final AAR Template
Purpose	Basic proof-of-concept for capturing key operational insights	Comprehensive tool for standardized and adaptable data collection
Structure	Simple fillable fields with minimal guidance	Enhanced structure with detailed prompts and instructions
Guidance	Limited instructions for completing sections	Clear instructions and examples for clarity and consistency
Flexibility	Focused on general use	Adaptable to various mission types and operational contexts
Feedback Integration	Minimal fields for user feedback	Specific fields for detailed feedback to leadership
Alignment with Strategy	General operational alignment	Direct integration with DAF priorities and strategic initiatives
Data Collection Scope	Limited focus on operational challenges and successes	Broader scope including risks, mitigation, and actionable recommendations
Usability	Functional but lacked user-friendly design	Streamlined for ease of use with standardized terminology
Alignment with Research	Addressed basic stakeholder needs identified in initial feedback	Fully aligned with key research findings, including stakeholder "pains" and "gains," leadership advocacy, and centralized data management

Evolution of the DAF Contracting AAR Template

Ask Sage	• Supports multi-document synthesis • Links to Google File Management for collaboration	• Requires multiple prompts to refine synthesized content	• Unclassified Information (CUI) • Provides preliminary aggregated reports	• **related workflows** • Requires additional refinement for consistency before widespread adoption
ChatGPT 4o	• Processes multiple documents into detailed and structured summaries • Customizable to user needs	• Not approved for CUI or classified environments • Requires specific prompts for tailored outputs	• Free to use • Intuitive interface • Delivers actionable summaries aligned with user-defined report formats	• **Recommended for unclassified applications** • Ideal for generating insights and iterative analysis for comprehensive reports
Claude 3.5	• Generates concise summaries • Supports limited file processing	• Supports only five documents at once • Outputs tend to default to high-level bullet points	• Free to use • Easy navigation • Suitable for initial overviews or quick assessments	• **Potentially useful for high-level summaries** • Lacks depth for comprehensive analysis
Co-Pilot	• Summarizes individual documents • Encrypts data and links to repositories like Google Docs	• Not approved for CUI or classified use • Unable to synthesize across multiple documents	• Free to use • Simple interface for standalone document analysis	• **Not recommended for AAR synthesis** • Limited multi-document capabilities restrict its broader application
Azure AI	• Handles bulk uploads and generates high-level summaries • Approved for .gov accounts (non-NIPR)	• Challenging interface • Focused on individual document analysis rather than aggregated insights	• Scalable for large datasets • Offers functionality beyond summarization	• **Not recommended for AAR synthesis tasks** • Does not meet requirements for aggregated insight generation
NIPR GPT	• Processes classified data effectively • Supports bulk uploads and collaborative workflows	• Steep learning curve for new users • Outputs may require refinement to align with user expectations	• Free to use • Approved for CUI environments • Enables centralized collaboration and synthesis	• **Recommended for secure environments** • Requires iterative prompting to refine actionable outputs and improve formatting
Notebook LM	• Aggregates insights across documents • Links references back to sources for traceability	• Limited to PDF inputs • Does not support Word documents • Not approved for CUI or classified use	• Intuitive interface • Provides detailed summaries with reference points for validation	• **Recommended for general use in non-classified settings** • Effective for aggregating data into a consolidated format
	• Processes multiple	• Not approved for CUI	• Free to use	• **Recommended for initial**

AI-Driven Text Analysis

	Basic	Discriminators	Energizers
Positive	**Nonnegotiables:** A standardized template that has been trained on and is utilized by all parties	**Differentiators:** Tailored to contracting, avoiding unnecessary details or irrelevant information	**Exciters:** Provides recent, relevant information to minimize idle time upon arrival in the AOR. Enables data-driven decisions to support operational plans, unit structure, capability gap analysis, and risk reduction
Negative	**Tolerables:** Questions must be easy to answer yet detailed enough to capture important information	**Dissatisfiers:** The template must eliminate extraneous information, such as overly complex AFI-driven examples or local templates inconsistent with current Lessons Learned guidance	**Enragers, Terrifiers, Disgusters:** Requires a quality review mechanism to ensure accuracy and relevancy before submission. The output should facilitate better decision-making and actionable insights
Neutral	**So-Whats:** The template format (e.g., PDF, Microsoft Word, or Forms) does not impact its effectiveness	**Parallel Differentiators:** Must be user-friendly and straightforward, ensuring all parties can effectively complete the AAR with valuable feedback	**N/A**

In line with the iterative processes central to the Lean Launchpad method, the attribute map provides a roadmap for refining an AAR GPT tool (University of Pennsylvania, 2012):

- **Simplifying Complexity:** The tool identifies and flags low-quality or missing data
- **Tailoring Outputs:** It highlights actionable recommendations that align with

Attribute Map for the DAF Contracting AAR Template

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