
DAFITIC 2026 - AI-Driven Legacy System Modernization
Presented by 'BES TenX Team'
AIR FORCE LIFE CYCLE MANAGEMENT CENTER
ACQUIRE
OPERATE
SUSTAIN
ENABLE
BUSINESS AND ENTERPRISE SYSTEMS
Hours, Not Days.
Reverse Engineering Legacy Business Systems into Modern Applications Using BES Agentic AI.
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Legacy Technical Debt Threatens Pace-Setting AI Innovation.

> “Accelerate America’s military AI dominance by eliminating bureaucratic barriers and unleashing experimentation.”
>
> — Secretary of War’s Memorandum on Pace-Setting Projects

THE BARRIER

Defense Business Systems (DBS) are anchored by decades of legacy technical debt. This burden actively consumes vital human capital and throttles mission execution.



THE OBJECTIVE

Rapidly transform inherited DBS portfolios into secure, cloud-native, Zero Trust-aligned capabilities that execute at the speed of relevance.



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The Modernization Paradigm Shift

STATUS: DIAGNOSTIC RUN COMPLETE
SECURITY CLEARANCE: LEVEL 5
DATA INTEGRITY: VERIFIED

	The Legacy Baseline	The BES Agentic Pipeline
Delivery Timeline	Years to deliver modernized capabilities.	**Months** to deliver secure, cloud-ready applications.
Initial Baseline Capture	Months of manual code review and extraction.	**Hours** via deterministic AI ingestion.
Workforce Burden	100% human labor for reverse-engineering.	**70–90% reduction** in manual analysis labor.
Architecture Quality	Porting over inherited spaghetti code and defects.	**Zero-debt, greenfield application generation.**

















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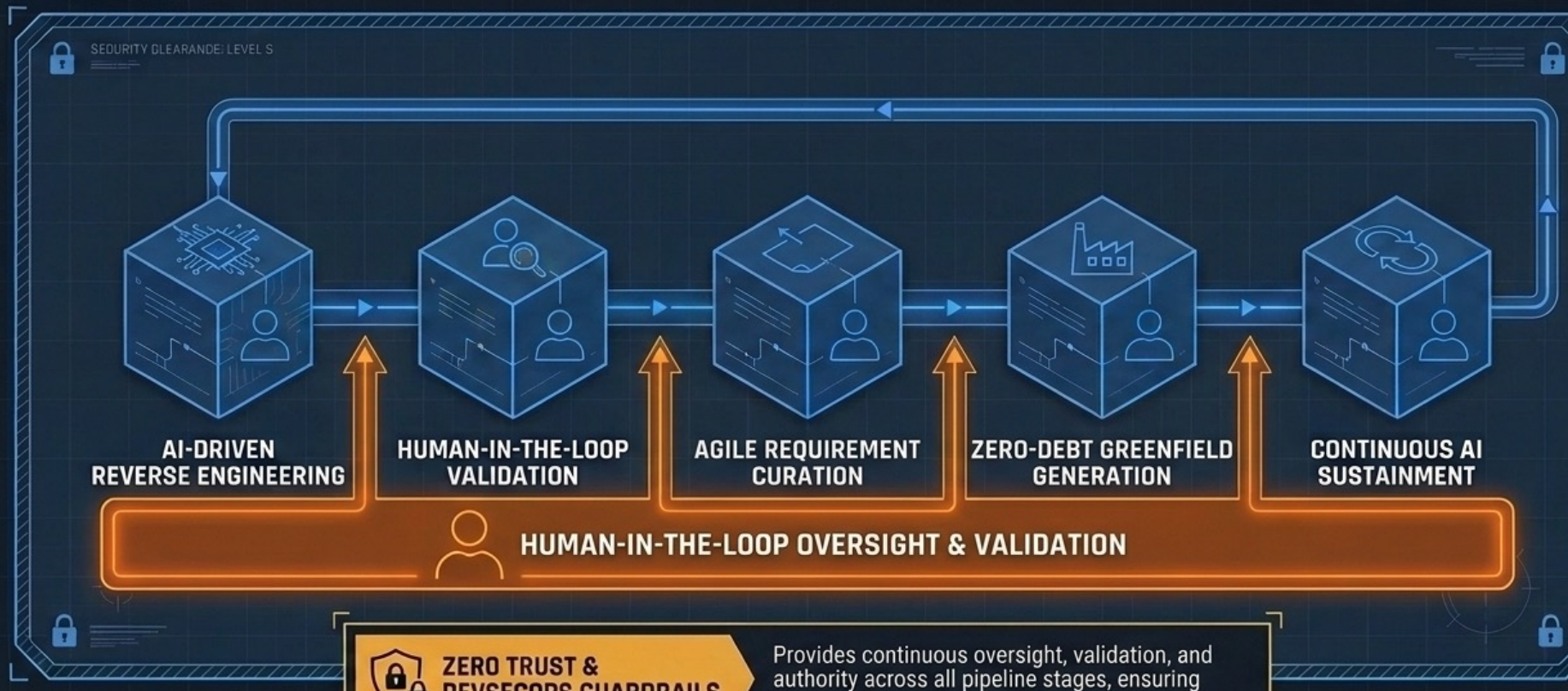
THE BES AGENTIC AI PIPELINE ARCHITECTURE



ZERO TRUST & DEVSECOPS GUARDRAILS

Provides continuous oversight, validation, and authority across all pipeline stages, ensuring mission alignment and technical accuracy.

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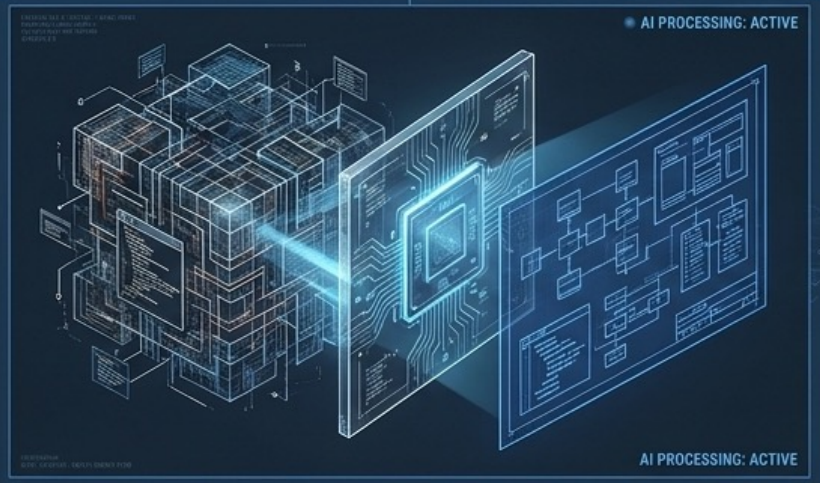
SECURITY CLEARANCE

DATA INTEGRITY

Phases 1 & 2: Deterministic Extraction Meets Human Authority.

1. AI Heavy Lifting (Extraction)



Specialized AI agents rapidly ingest codebases, isolating core functional business logic from obsolete spaghetti code.

2. Human-in-the-Loop (Validation)



PEO BES reviewers utilize explainable dashboards to validate AI-generated artifacts.

The Result: The DAF establishes authoritative, auditable baselines in hours, preventing legacy defects from propagating while retaining total ownership of the technical baseline.

SECURITY CLEARANCE

DATA

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SECURITY CLEARANCE: LEVEL 5

DATA INTEGRITY: VERIFIED

Phase 3: “Clean the Slate” Requirement Curation.



Input Filter: Program offices dynamically refine the captured baseline, actively stripping out outdated requirements and merging new operational capabilities.

ModelOps Discipline: Utilizes version-controlled schemas to ensure strict alignment with the DoD Business Enterprise Architecture and IT Enterprise Architecture.

Output: Pristine, modern greenfield specifications entirely free of inherited technical debt, optimized for automated code generation.

SECURITY CLEARANCE

DATA

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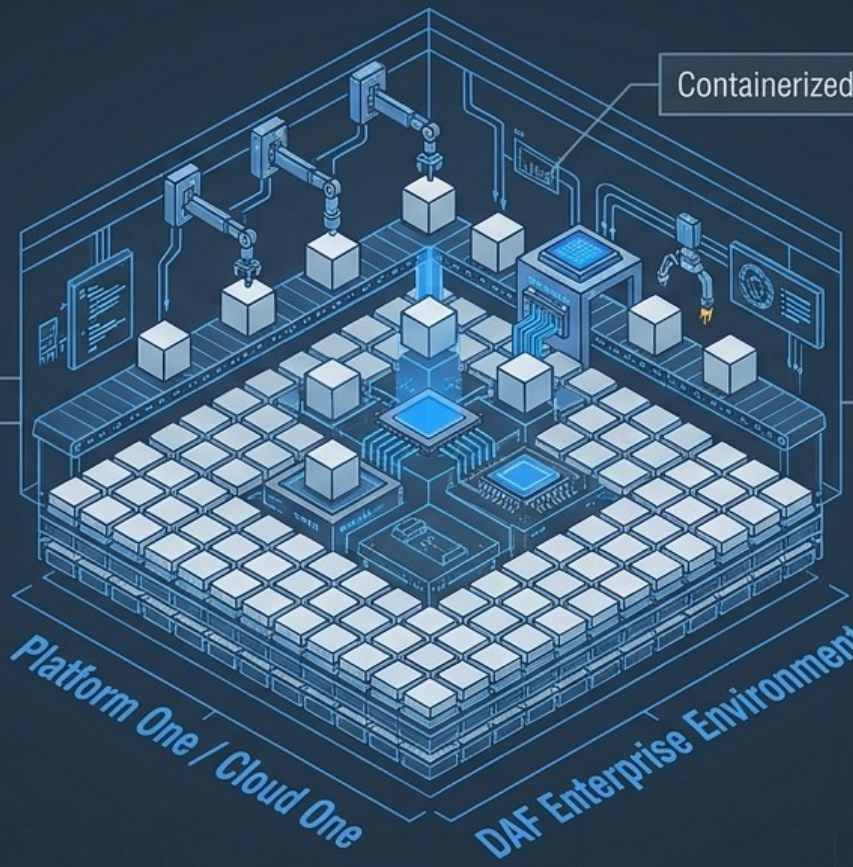
Phase 4: Orchestrating Zero-Debt Greenfield Generation

Multi-Agent Orchestration

A synchronized pipeline generates modern, cloud-native applications directly from validated specifications in days.

Zero Trust Architecture

Every generated microservice natively incorporates ICAM-enforced access and enterprise-aligned API structures.



Embedded Modern Practices

Code adheres to SOLID principles and secure coding patterns. Automated DevSecOps inherently handles CI/CD, SAST/DAST, and automated SBOM generation.

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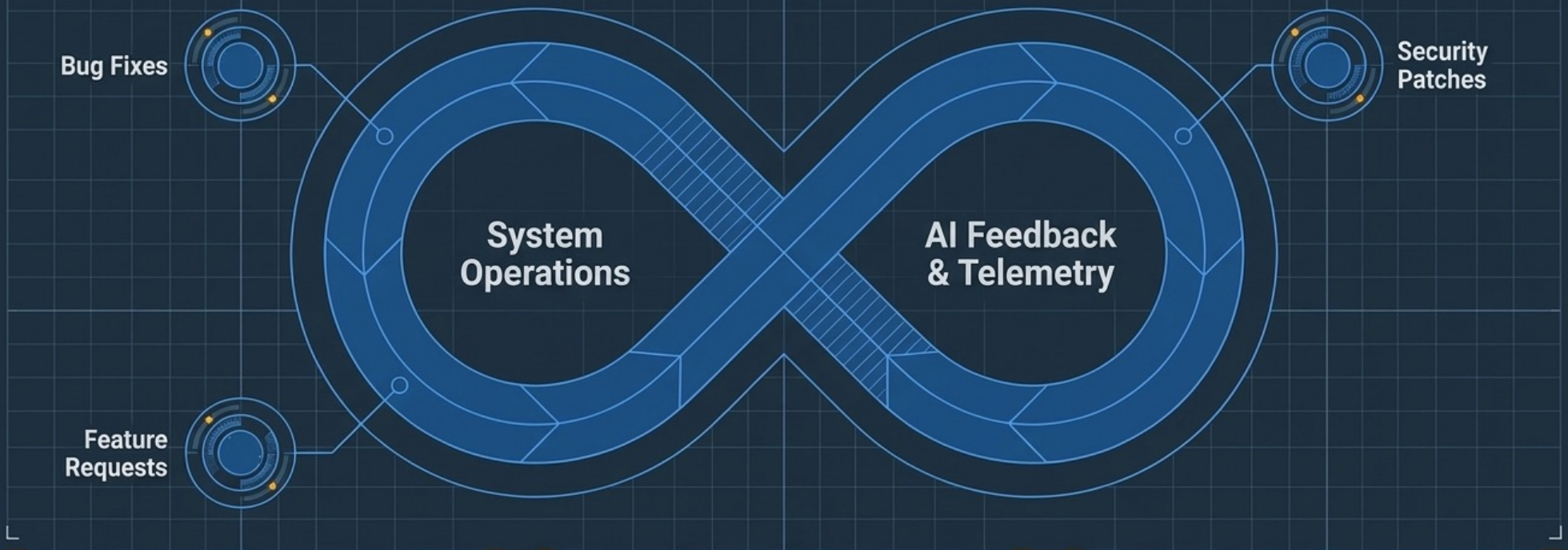
SECURITY CLEARANCE: LEVEL 5

DATA INTEGRITY: VERIFIED

SECURE ACCESS

SECURE ACCESS

Phase 5: Continuous Sustainment and cATO Readiness



The AI Feedback Loop:

AI-assisted updates autonomously monitor system drift and continuously implement bug fixes and security patches.

AI TRiSM Integration:

Active runtime shields and telemetry maintain the modernized system's integrity post-deployment.

The Impact:

Sustainment cycles collapse from weeks to hours, ensuring continuous compliance and fully enabling Continuous ATO (cATO).

SECURITY CLEARANCE

DATA INTEGRITY

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The Enterprise Optimization Payoff



Velocity

Years → Months

Pipeline automation dramatically accelerates the delivery of mission-critical capabilities.

STATUS: OPTIMIZED INTEGRITY: VERIFIED MISSION READY



Security

Inherited Debt → Zero Trust

Automatic generation of RMF-aligned artifacts natively supports cATO.

STATUS: OPTIMIZED INTEGRITY: VERIFIED MISSION READY



Human Capital

Manual Labor → Mission Focus

Hundreds of hours saved per system, freeing Airmen and Guardians for high-value operational tasks.

STATUS: OPTIMIZED INTEGRITY: VERIFIED MISSION READY

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> INITIALIZE BES AGENTIC PIPELINE...

Live Demonstration

Interactive Q&A to follow demonstration.

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Questions?

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