

C3 AI Readiness

Optimize Sustainment Operations to Maximize Fleet Availability

C3 AI® Readiness is an AI-enabled application that provides maintenance and logistics organizations with a comprehensive set of diagnostic and prognostic tools for monitoring overall asset health and enabling higher availability and mission capability for fleets of assets.

Using C3 AI Readiness, maintenance and supply users can:

- Track the near real-time health of systems, subsystems, and components
- Improve supply chain efficiency by monitoring supply network risks and implementing AI-enabled inventory recommendations
- Accelerate decision-making through AI-driven troubleshooting and on-time fault isolation technical actions
- Optimize time-based scheduled maintenance with AI-enhanced survival analyses and component remaining useful life calculation methods
- Automate and accelerate manual data cleansing processes with AI-assisted analyst workflow tools
- Automate reporting and benchmarking of fleet reliability metrics

To deliver these functionalities, C3 AI Readiness creates a unified data image by aggregating disparate data from onboard sensors, operational missions, maintenance records, and part inventory sources, among others. To ensure the integrity of this data, C3 AI Readiness uses data adjudication pipelines with pre-integrated natural language processing frameworks to cleanse and prepare data for predictive analytics. C3 AI Readiness then uses advanced AI algorithms to compute failure risks on critical asset components across different operating horizons (e.g., 10-30 operational hours).

Feature Summary

Understand readiness risks across the entire fleet based on actual operating conditions

Apply next-generation failure prediction AI algorithms to proactively quantify the probability and impact of component failures and required maintenance events

Ensure part availability through supply forecasts that dynamically adapt to changing operational conditions

Perform survival analyses and remaining useful life threshold-setting to assess the impact on the supply chain across the entire fleet

Leverage AI-assisted analysis tools to reduce manual investigations and to unlock new modeling insights

Optimize asset assignments and maintenance schedules based on phase flows, at-risk components, mission schedules, and existing parts inventory

Track and assess enterprise data quality trends, including data gaps, entry errors, and compliance rates

Leverage AI-enabled data cleansing and adjudication tools to automate manual processes, increase specificity, and enable downstream analyses

Seamlessly integrate with existing data infrastructure to accelerate access to AI insights without disrupting current processes

Define and launch work orders directly from the C3 AI Readiness application through comprehensive closed-loop integration with work order management systems

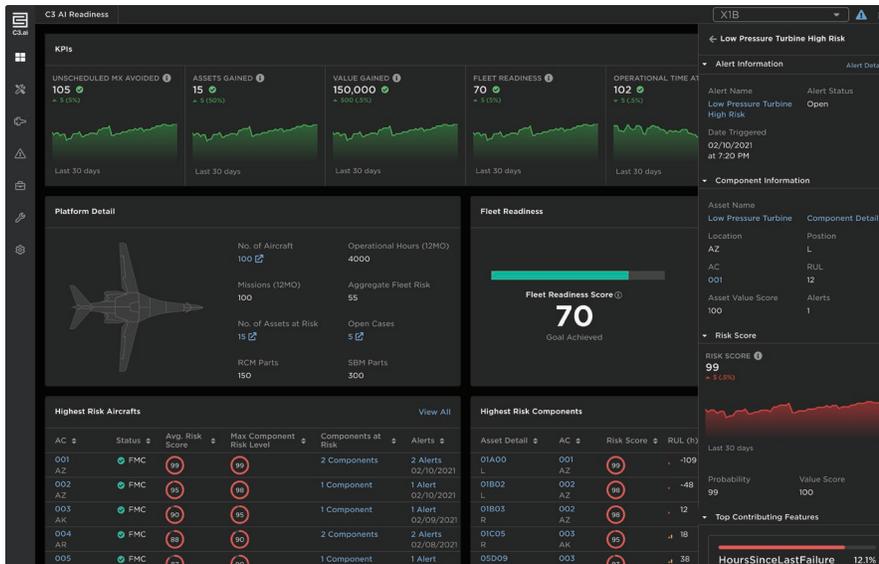


Figure 1. C3 AI Readiness provides highly configurable dashboards, allowing users to monitor the operational metrics most critical and relevant to mission success.

C3 AI Readiness assists sustainment professionals by identifying high-risk components with adequate lead time, allowing teams to resolve impending failure risks through proactive maintenance or parts ordering. The application enhances front-line troubleshooting through interpretable machine learning evidence packages – a prioritized list of contributing factors. C3 AI Readiness also provides supply chain experts with highly accurate part consumption signals to reduce demand uncertainty and improve supply forecasts.

Built on the revolutionary C3 AI Suite – a next-generation platform enabling rapid development of AI, IoT, and Big Data applications – C3 AI Readiness supports custom functionalities specific to unique asset platforms and mission requirements.



Figure 2. C3 AI Readiness provides maintenance experts with component condition and operational history alongside AI-driven predictive maintenance recommendations.

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C3 AI Readiness Benefits

The operational benefits and economic value of the C3 AI Readiness accrue through multiple levels:

- **Increased asset readiness and mission capability** through early detection and troubleshooting of subsystems and components at high risk of failure
- **Improved component reliability** by reducing unnecessary maintenance and optimizing scheduled maintenance periods
- **Reduced inventory and logistics costs** with spare-part forecasts that adapt as operational conditions change
- **Increased workforce efficiency** through prioritization of optimum work scheduling based on asset failure risks
- **Enhanced situational awareness** through the integration of traditionally siloed maintenance and supply databases



Figure 3. C3 AI Readiness provides in-application visualizations to help maintenance professionals quickly drill down to problem components and neutralize risk.

Proven Results in 8-12 Weeks

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