

C3 AI Readiness

Optimize Sustainment Operations to Maximize Fleet Availability

C3 AI® Readiness equips maintenance and logistics organizations with a comprehensive set of AI-driven diagnostic and prognostic tools to monitor overall asset health and achieve higher availability and mission capability for critical assets.



28-50%

reduction in unscheduled maintenance



3-6%

increase in mission readiness across fleets of assets



40%

increase in early detection of system failures



3,600+

U.S. Air Force aircraft active on the platform

C3 AI Readiness is an enterprise AI application that optimizes mission capability with predictive maintenance insights, proactive maintenance scheduling, and part availability optimization. Using C3 AI Readiness, maintenance and supply chain professionals can:

- Monitor system, subsystem, and component-level operational health in near real-time
- 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 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 TM 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

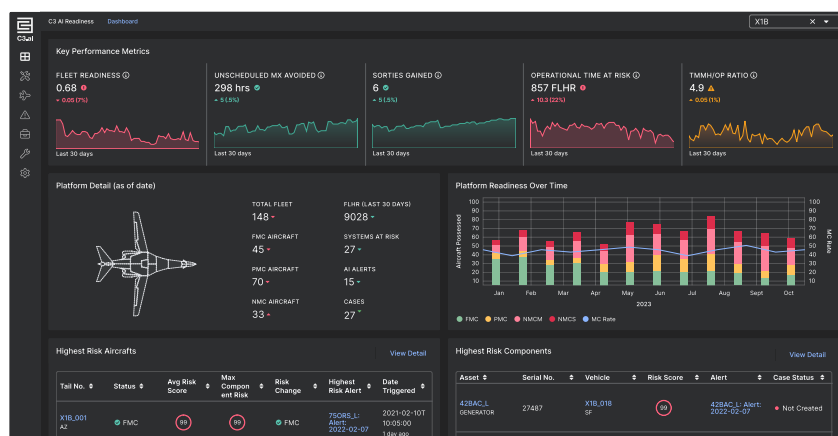
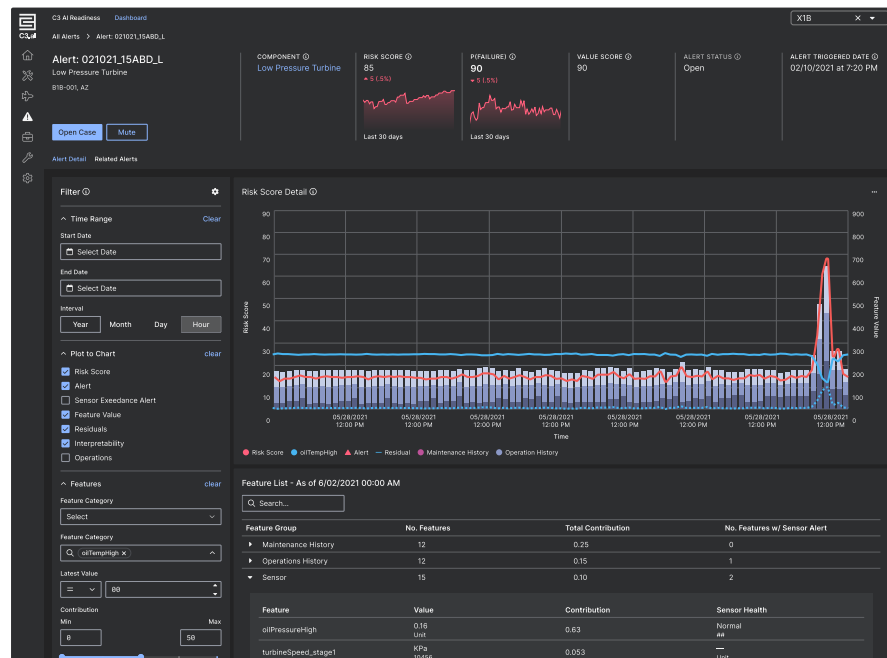


Figure 1. C3 AI Readiness provides highly configurable dashboards, allowing users to monitor the operational metrics most critical.

Feature Summary (cont.)

- **Seamlessly integrate with existing data infrastructure** to accelerate access to AI insights without disrupting current processes
- **Rapidly locate, retrieve, and present** relevant data to inform command-level decisions using C3 AI Generative AI for Enterprise Search
- **Define and launch work orders directly** from the C3 AI Readiness application through comprehensive closed-loop integration with work order management systems

Shift from Reactive Maintenance to Proactive Maintenance



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 Platform – 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.

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

- **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 optimal work scheduling based on asset failure risks
- **Enhanced situational awareness** through the integration of traditionally siloed maintenance and supply databases

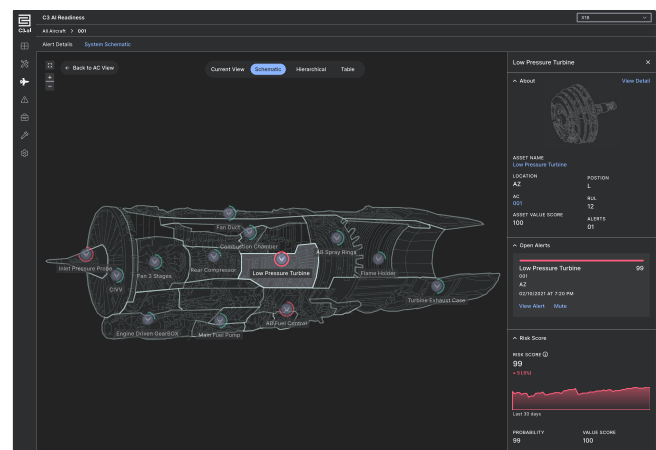


Figure 3. C3 AI Readiness provides in-application visualizations to help maintenance professionals quickly drill down to problem components and neutralize risk.

Proven Results in 8-12 Weeks

Visit C3.ai/get-started

C3 AI Readiness: Fleet Health

Increase Fleet Health Visibility to Accelerate Operational Decisions

Fleet Health for C3 AI Readiness enhances awareness of asset health and maintenance operations



Complete Visibility

of a fleet's mission capability and health to drive awareness and inform maintenance guidance



Elevated Critical Insights

enable leaders to swiftly identify mission-endangering vehicle risks for deep-diving



Enhanced Communication

via in-app messaging, accelerating priority alignment and removal of resolution blockers

C3 AI Readiness is an AI-driven predictive maintenance application that maximizes mission capability. Fleet Health for C3 AI Readiness enables commanders to attain total awareness of asset capability and vehicle health, informing leader guidance addressing predictive alerts.

Traditionally, commanders depend on bottom-up reporting from operators and maintainers to gather updates on maintenance effort. Fleet Health shows a complete view of the readiness status across different command levels through a unified interface accelerating time-to-insight.

Fleet Health presents customizable KPIs and trends for fleet mission capability and vehicle health to pinpoint assets with the most pressing needs. Leaders can examine individual vehicle details to gain a deeper understanding of the problems tied to underlying sensor-based algorithms (SBA) and component remaining useful life thresholds. Visualization of resolution pathways provides commanders visibility into in-progress work, ensuring required maintenances are in place prior to critical missions. Fleet health offers commanders an in-application communication channel to assist operators and maintainers in overcoming obstacles during execution and to ensure priority alignment between leadership and field teams. Fleet Health enhances commander visibility of unit readiness and actions, planned or in progress, to restore mission capability.

Feature Summary

- **Unified dashboard** enables leaders to quickly confirm that maintenance SOPs are being executed
- **Customizable metrics** to assist leaders in identifying status of readiness risk across a command
- **Vehicle deep dives** allow users to investigate vehicle alerts from SBA and survival analysis
- **Alert-to-work** order resolution pathways allows leaders to identify gaps in progress and make informed inquiries
- **In-app collaboration** helps bridge the gap between HQ and the motor pool or flight-line via in-app messaging

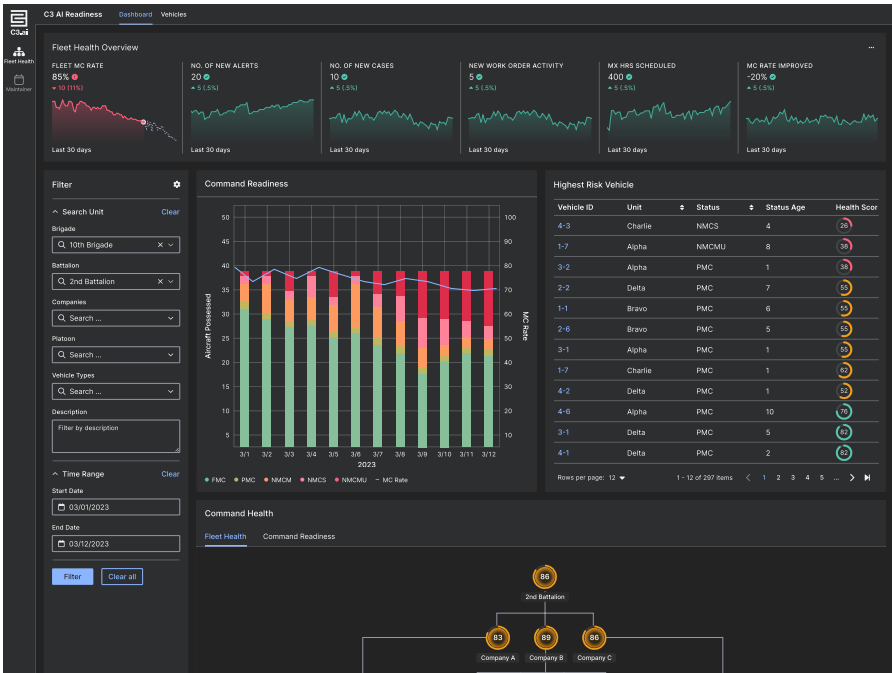


Figure 4. Fleet Health overview provides an overview of command's readiness and highlights at-risk areas.

C3 AI Readiness: Maintainer Module

Optimize field-level maintenance to support tactical missions

Maintainer Module for C3 AI Readiness empowers maintenance supervisors to efficiently manage their teams while enabling technicians to be more self-sufficient with built-in Generative AI knowledge retrieval.



Effective Management

of the maintenance team to
prioritize manpower and tasks



Optimized Schedules

to minimize downtime by aligning
personnel, equipment, and parts



Rapid Knowledge Access

to relevant enterprise maintenance
documents to resolve complex tasks

C3 AI Readiness is an AI-driven predictive maintenance application that maximizes mission capability. The Maintainer Module is a set of tools within C3 AI Readiness that enables maintenance teams to optimize maintenance operations to support most mission critical assets.

Traditional predictive maintenance solutions focus on predictions but often neglect the downstream requirements. Maintainer Module empowers users to seamlessly transition C3 AI Readiness insights into downstream maintenance actions through effective team management, robust schedule optimization, and rapid knowledge retrieval.

Maintenance supervisors can effectively manage their teams by understanding each technician's work order history, availability, and competencies. Maintainer Module's schedule optimizer empowers supervisors to develop daily or weekly schedules to minimize unplanned downtime based on maintainer qualifications and availability, as well as upcoming missions. When carrying out maintenance tasks, maintainers can rapidly access the right information from the vast volumes of enterprise-level technical manuals and historical documentation via the generative AI retrieval agent. Near real-time maintenance monitoring provides leaders visibility to in-progress tasks, enabling timely intervention for blockers and complicated tasks. Maintainer Module accelerates time-to-resolution for maintenance operations.

Feature Summary

- **Schedule optimization** provides optimal personnel, maintenance action, and schedule pairings
- **Workforce management** provides maintenance supervisors a complete view of their team with details around historical work orders, qualifications, and training
- **Centralized monitoring of maintenance** to synchronize operations, improve team accountability, and enable collaboration
- **Rapid access to technical documentation** to accelerate troubleshooting and technical references
- **Professional development** opportunities by identifying training and qualification opportunities
- **Unified view** of at-risk systems and upcoming maintenance services
- **In-app collaboration channels** enable users to effectively coordinate and accelerate issue resolution

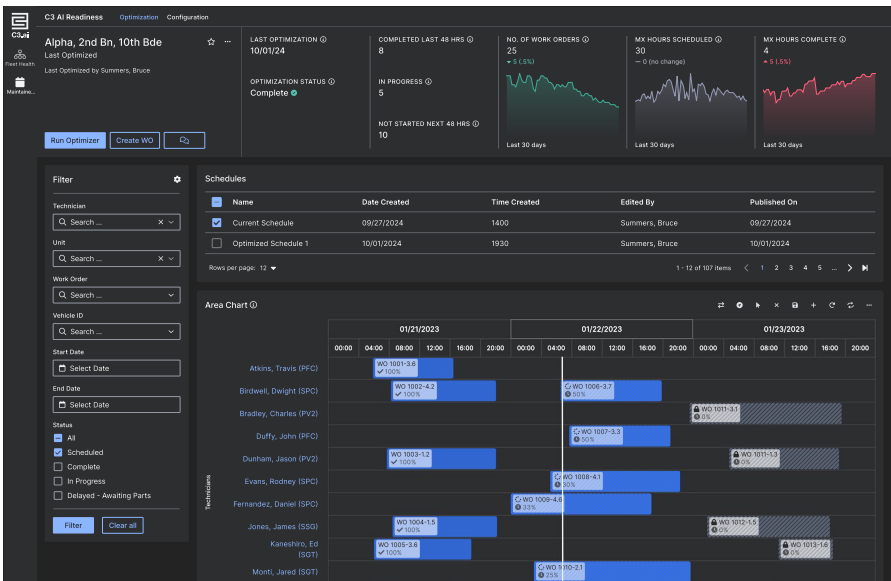


Figure 5. Maintainer Module overview with workforce management metrics and work order schedule.