CUSTOMER SUCCESS STORY

C3.ai

A U.S. Department of Defense Agency Strengthens Logistics Resilience with AI and Real-Time Common Operating Picture

Value-Driven Benefits

20,000+

staff hours saved annually through automated data integration and synchronization

200+

users onboarded and actively using C3 AI Contested Logistics for planning, operations, and analysis

120

days of advance visibility into fuel inventory levels for proactive shortage mitigation and planning

Introduction

A U.S. Department of Defense agency is responsible for reliable access to fuel and energy for all military and government missions worldwide, operating one of the world's largest and most complex energy logistics networks, With over 700 vendors, five modes of transportation, 600+ fuel sites, and 8,000 customers, the agency faced increasing challenges in maintaining end-to-end visibility, managing disruptions, and ensuring resilience across its global supply chain.

Challenges

Prior to collaborating with C3 AI, the agency relied on siloed systems and labor-intensive workflows to track fuel movement, forecast demand, and monitor vendor performance. Without a centralized operational system or advanced planning tools, the agency was forced to operate in a reactive mode — struggling to respond quickly to disruptions and unable to run scenario planning. This lack of visibility led to delays and limited agility in mission critical operations.

Solution

To address these challenges, the agency partnered with C3 AI to implement C3 AI Contested Logistics, an AI-driven logistics resilience AI application, in a 16-week initial production deployment. C3 AI unified data from seven disparate systems to create a centralized, real-time digital twin of the agency's global energy supply chain. With a visual, modern, and easy to use graphic interface and automated analytics layered on top, users can quickly identify risks, simulate disruptions, and validate resilience strategies with precision.

Results

With C3 AI Contested Logistics, the agency has transformed the agency's operations to be proactive, nimble, and data driven. The application enables planning by providing realtime visibility across the entire fuel supply network and up to 120 days of foresight into potential disruptions. The application has empowered the agency to manage daily operations with more efficiency, saving over 20,000 staff hours annual and accelerating decision making across critical mission areas.

Challenges

Before partnering with C3 AI, the agency lacked the necessary tools to consistently deliver fuel to the right place at right time — especially during disruptions. Planners and analysts relied on manual processes and fragmented systems to track fuel movement, monitor vendor performance, and forecast demand. These conventional methods were labor-intensive, reactive, and failed to deliver the timely insights needed to respond to disruptions or adapt to evolving mission needs.

The absence of a centralized platform further limited operational effectiveness. Data was spread across multiple disconnected systems, requiring teams to compile and interpret information manually to form an operational view. Without intelligent automation or simulation capabilities, planning for contingencies often took weeks or months.

The lack of a central platform and time-intensive processes left the agency vulnerable to delays, inefficiencies, and operational blind spots. Answering time-sensitive questions — such as the current location of fuel in transit or the impact of a supply disruption — demanded significant manual effort and often lacked the accuracy needed for highstakes decision making.

Approach

To address these challenges, the agency decided to deploy the C3 AI Contested Logistics application to enable a near real-time common operating picture of its entire fuel supply network, along with advanced tools for resiliency planning.

To start, the C3 AI team unified data from seven disparate sources — including over 2 million records across 735 vendors, five modes of transportation, 500 fuel sites, and 8,000 customers — to create a digital twin of the agency's energy logistics network. Then the team configured a graphical common operating interface on top to replace the manual, snapshot reports with dynamic, real-time network visibility.

Over the next 10 months, the C3 AI team collaborated with the agency to develop scenario analysis capabilities. The team configured custom pages to support specific workflows and identify critical pressure points across the network. Through scenario planning tools, users can rapidly test hypothetical disruptions and understand the downstream effects of supply risk, delivery timelines, and operational impact.

The agency was able to leverage C3 AI Contested Logistics to conduct real-time scenario and impact analysis when the Francis Scott Key Bridge in Maryland collapsed in March 2024. The application provided detailed analysis of the effects on energy products, identified at-risk supplies, and forecasted shortages. Within minutes — rather than hours or days — the agency developed and actioned an informed Course of Action to mitigate risk and maintain continuity of fuel support.

By replacing manual workflows with an agile, resiliency platform, the agency gained full visibility across its supply network and confidence to make informed decisions — even in moments of crisis.

About the Agency

- 2.2B gallons of petroleum products delivered per year
- 5 modes of transportation
- 600+ fuel sites worldwide
- 8000+ customers

Project Highlights

- 16 weeks from project kickoff to production-ready application
- 200+ users onboarded with plans to scale to over 500 users
- 20,000+ hours saved annually through data synchronization and real-time insights
- 25+ millions of rows of data unified from 21 different sources — from inventory levels to weather
- 1.9+ billion gallons of bulk fuel products overseen and managed through the C3 AI Contested Logistics application

"This is by far a better tool for a Common Operating Picture versus other products that just give inventory"

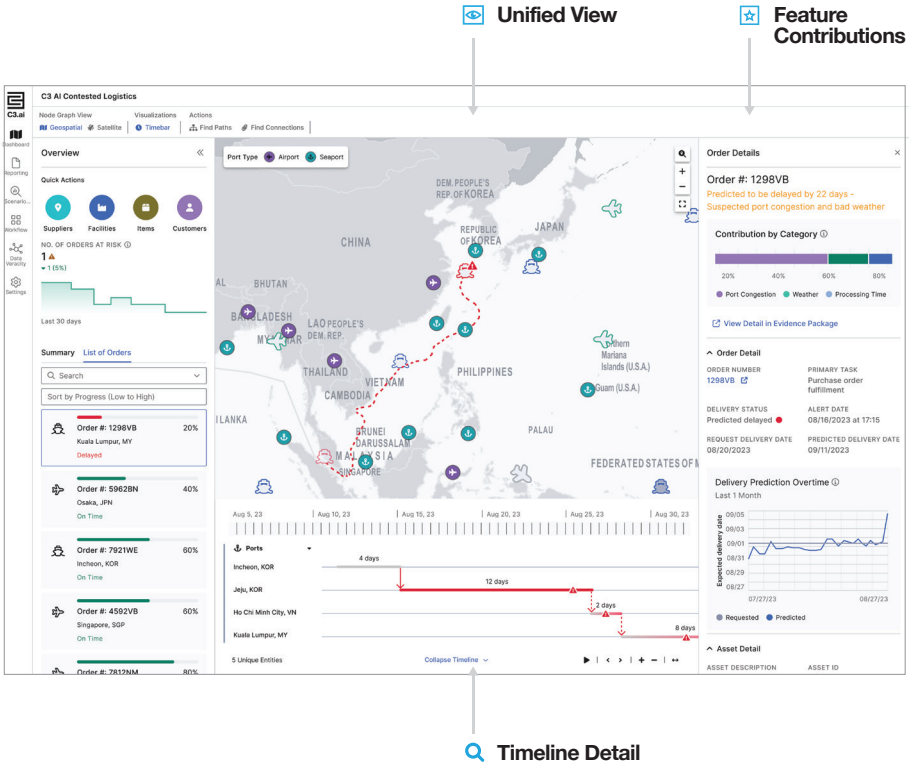
— **Agency Operator**

Solution Architecture

C3 AI Contested Logistics

Enterprise Data

- Inventory
- Historical Fuel Sales
- Distribution Plans
- Fuel Receipts
- Transportation Lanes
- Vendors
- Weather



Proven Results in Initial Production Deployment

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