

# CORAS

www.coras.com

CORAS positions the DoD to make faster decisions with proven Decision Science and Enterprise Decision Management, AI, Real-Time Analytics, and FedRAMP High Service

## Portfolio Optimization

Enterprise visibility, balancing, and optimization up and down departments

## Budget Prioritization

Ensure the next dollar spent advances the mission

## Product Management

Align products and prototypes with enterprise strategy

## Strategic Road Mapping

Enterprise visibility to maximize strategy

## Single Pane of Glass

One-stop-shop for decision makers - real-time data at your fingertips

## Real-Time Business Insights

Interact with data, people, and processes in real-time - no more educated guessing

## Cross-Function Team Management

Bring teams together, align them with strategy, get more done

## Portfolio Rollup

Aggregate cost, schedule, risk, and performance data across the organization

## Overview

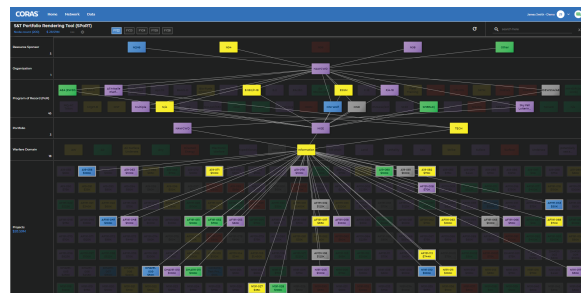
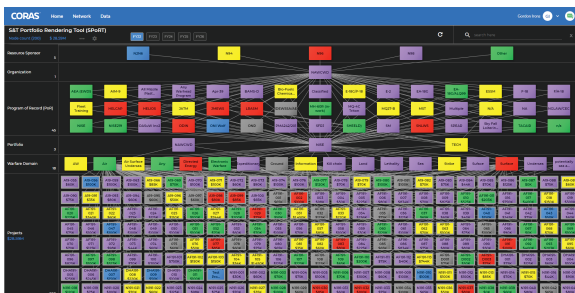
CORAS is a FedRAMP High configurable Enterprise Decision Management SaaS solution in the Federal marketplace, runs on the NIPR and SIPR, and has Impact Level 5/6 controls built in through AWS GovCloud. This platform provides DoD and Federal agencies the ability to aggregate data from multiple sources, then uses NLP and AI to provide insight and generate relationships throughout the reporting stack. Further in this document you'll find more information on how we've integrated with agencies and solved their challenges.

## CORAS Capabilities and Use Cases

### Smart Lanes

The DoD struggles to have visibility across multiple portfolios and budgets. Utilizing our Smart Lanes, we leverage our unique AI capabilities to help the customer clearly see the interconnections across any desired data set. This gives leaders the ability to identify redundancies, relationships, dependencies, inefficient use of funds and in turn, arms them with the necessary data to reallocate funds, make accurate budget cuts, and streamline mission-critical initiatives.

CORAS 'Smart Lanes' S&T Portfolio Visualization tool leverages AI/Natural Language Processing (NLP) capability to visualize and suggest project and portfolio relationships across the Navy. Smart Lanes empowers leadership with data discovery, transparency, and strategic alignment to get a complete view of which projects are driving value in each warfare domain.

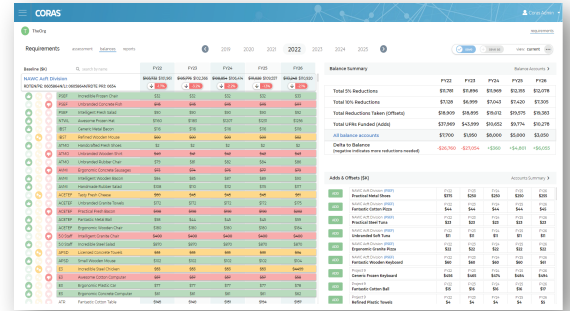


Leaders can drill down to evaluate granular data

# The POM Budget Challenges

A Navy Client had a mission need in the area of annual Program Objective Memorandum (POM) budget “adds/offsets” warfighter funding requirements; specifically a tool and solution to assess and prioritize POM requirements and balance accounts at both the Portfolio and Branch levels.

Collecting and organizing this information has been a very manual, spreadsheet-driven, labor-intensive process. The budgeting data resides in various source systems and in a variety of formats, including spreadsheets and emails.



Another difficulty had been the inability to compare current year trade-off requirement selections against historical years, for the purpose of analyzing trends and capturing and understanding prior decision reasons to enable more informed current-year decisions.

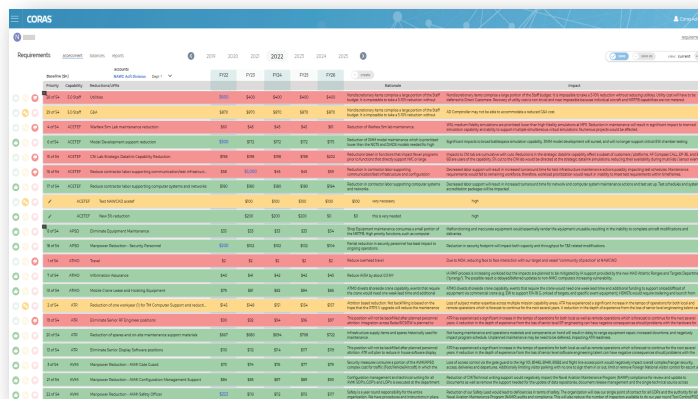
With personnel turnover and rotation, there was a need for a data repository providing knowledge management of historical budgeting decisions that can be accessed and utilized by new personnel, quickly and easily, to avoid starting the assessment and balancing process from scratch each year.

## Solution - Revolutionizing Adds/Offsets with EDMP

CORAS' Enterprise Decision Management Platform (EDMP) solution was configured to support the budgeting “adds/offsets” process to meet these challenges. The EDMP solution provided a complete data repository for one-stop shopping for all POM data (past and present) in a single location. This avoided the confusion of multiple spreadsheets of data in multiple locations, and maintained a comprehensive history on individual unfunded requirements and line-item requirement reductions.

EDMP offers automated trade/option balancing at Portfolio, Branch and Directorate levels, as well as the ability to contrast current vs historical POM submissions to better compare and report on why decisions were made.

Using CORAS' EDMP promoted and enforced standardization in the POM process, provided structured templates and automated analysis tools that were applied each year across the board, without the need to create new and multiple spreadsheets.



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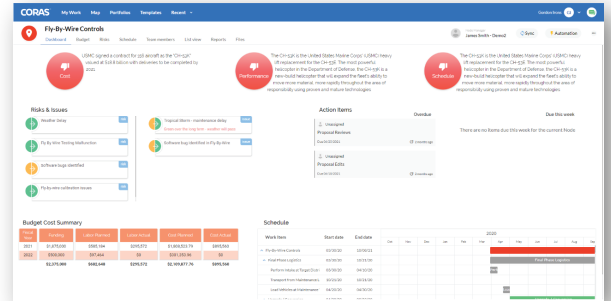


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## Managing Programs

When data lives in different systems, in numerous systems, and across many projects, it can seem impossible for the DOD to get the information it needs in the timely manner it requires. It's not just the number of projects, programs, and portfolios – many times there are many different roles managing different pieces of the schedule, financials, and risks all on the same project. The fact that contractors perform many of these duties further complicates the issue.

CORAS addresses this challenge by giving all roles in a Program a common, single point of entry to get a clear picture of what is going on at any level within the agency.

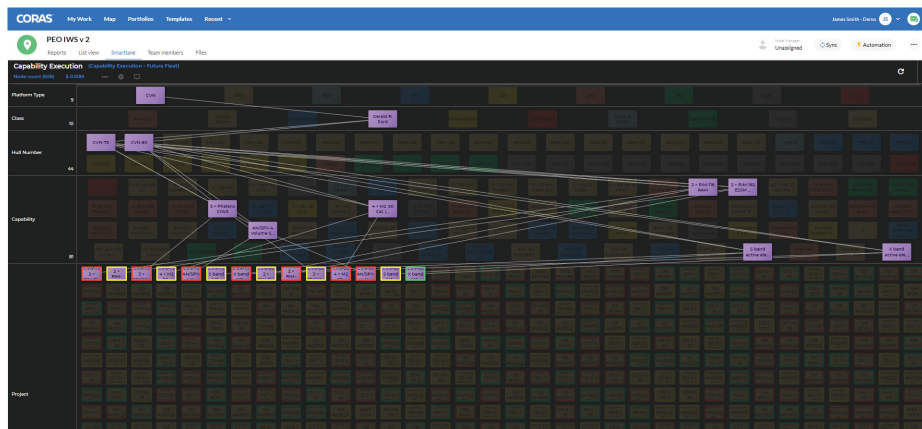


All information required to bring each member of the team in sync is automatically ingested from existing applications and data sources, then transformed to paint an accurate, standardized brief. Each tier, from senior leadership down to project execution, can get the facts they need to make crucial decisions in less than the time it takes to skim the front page of the newspaper.

## Strategic Asset Management

The DoD is facing a large caliber problem. It needs to know what to buy in the present, the near term, and the future to advance its capabilities and execute the mission. The data they need to achieve this is stove-piped, scattered, or currently unavailable. Despite this challenge, DoD still has the responsibility to make vital decisions that will affect the architecture of the military for the next 30-40 years.

CORAS helps make the disparate data challenge manageable by breaking through the stove-pipes, aggregating scattered data, gathering previously uncollected information, and presenting the information DoD leadership needs to inform decisions in real-time. CORAS is built to understand relationships between assets allowing leaders to perform robust “what-if” analysis and excursions to identify any present and future effects of their decisions.



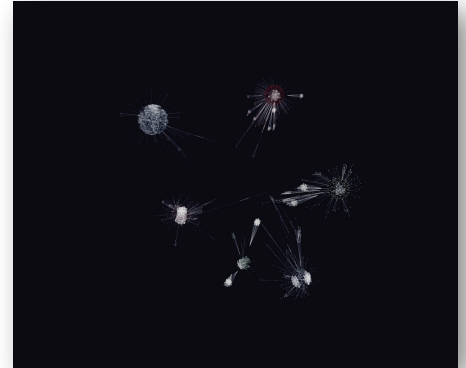


## AI-Enabled Aircraft Maintenance Solution

CORAS' solution first demonstrated on a client's data using AI and NLP to read and understand millions of unstructured text logs entered by maintenance workers at a blazing-fast speed of 8,000 sentences per second. This is dark data, that was previously inaccessible, optimizes maintenance cycles with AI.

### Filter Millions of Work Records

CORAS' solution allows the user to easily search and filter millions of aviation maintenance work records from NALCOMIS, OOMA, or other systems. Users can also search by structured identifiers such as Head of Family NIIN numbers and Work Unit Codes. As well as perform Natural language search queries over unstructured text data.



### Identify Common Failures Using AI

The AI reads and understands the comments and descriptions written in unstructured text fields by maintenance workers. It gives the capability to visualize and organize millions of work records into common problem clusters. Maintenance workers can quickly identify a set of previous work records pertaining to their present issue and the CORAS NLP summarizes prior corrective actions.

### Predictive Maintenance to Decrease Not Mission Capable (NMC) Rate

CORAS minimizes time in depot when aircraft is Not Mission Capable (NMC) by predicting part failures and future maintenance and analyzes part life-cycles and root cause of failures.

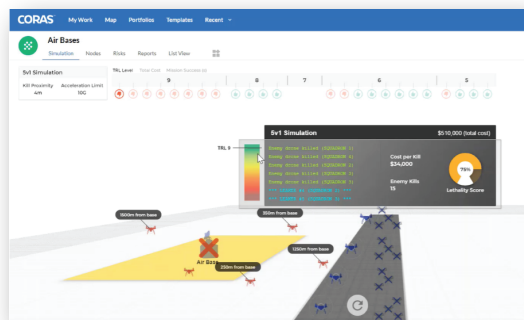


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## Airbase Defense Simulation

When it comes to air base defense, the DOD has a wide selection of options -- a variety of drone types, different detection equipment, and more. But what is the right type of drone to purchase to best defend an air base, while minimizing cost? What is the right mix of these assets to meet lethality needs without breaking the bank?



The difficulty in making these decisions today is that getting the answer is very labor intensive, as the information lives in many different systems and data sources. This leaves the DOD waiting a long time to get the answers they need, when they need those answers today -- not tomorrow, or months from now.

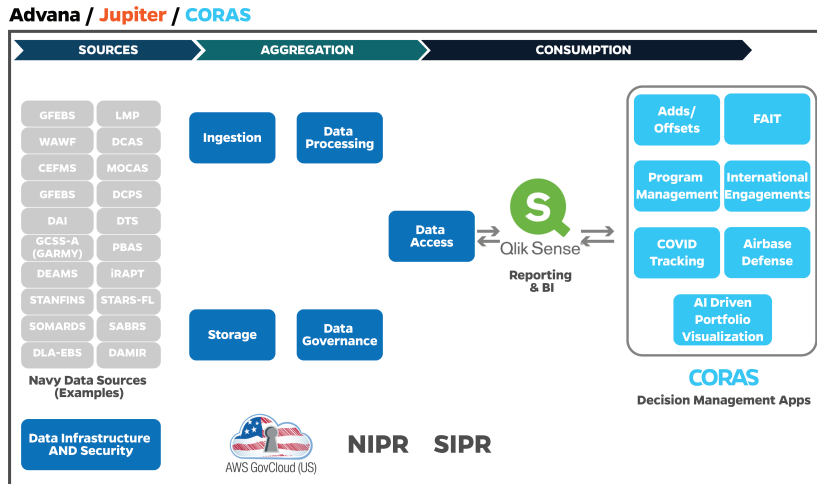
CORAS solves this challenge by utilizing its Enterprise Decision Management Platform to run simulation support, allowing quick input of asset effectors, providing quick results of these scenarios, to then send this information to more high-fidelity components for a further, more detailed simulation scenario analysis.

Along with simulation support, the platform provides the ability to manage air defense assets, with business rule automation, risk analysis, team collaboration, lethality cost budgeting, with dashboards and both standard and custom self-service reporting capability.

## Data Integration

CORAS Federal's data integration pulls any and all information you need into one place. Whether that's spreadsheets, budgets, or reports CORAS connects to any existing data sources without have to migrate them to a new system.

The beauty behind our data integration is that we don't stop at just aggregating data but we allow for 2-way data communication. This allows you to update your spreadsheets, budgets, and reports right from the CORAS Application or adjust that data right in the existing system it lives in.



## Artificial Intelligence & Natural Language Processing

Powered by Artificial Intelligence (AI) and Natural Language Processing (NLP), our predictive engine empowers leaders to discover and visualize previously unseen relationships in both structured and unstructured data. Not just providing data insights but enabling truly data-driven decisions in real-time.

CORAS brings an interactive command and control decision management platform with UI interactive knobs and handles to discover what-if scenarios that visualize how today's changes affect future budgets, mission readiness, and planning.

## FedRAMP High

To provide a secured environment for our Federal and Department of Defense customers, CORAS Federal uses a security model to ensure data is secured at different levels. This is not by accident: To receive **FedRAMP High** authorization, we need to provide security at the data architecture, end-user, and browser levels.



## Authorization Boundary: Secure Island in the Cloud

CORAS Federal is built to be a secured cloud location, designed with tight control of data traffic through the boundary of the infrastructure. In essence, this is like a castle with a drawbridge where all traffic is tracked, recorded, and analyzed for possible security issues.



The CORAS Federal environment is built within Amazon's AWS GovCloud (US) cloud. The AWS GovCloud infrastructure meets Department of Defense (DOD) Cloud Computing Security Requirements Guide (SRG) for Impact Levels 2, 4 and 5, approval at the FedRAMP High baseline, and has FIPS 140-2 certifications.



## End User Permissions

The CORAS Federal environment is built on the principle of Least Privilege: only the minimum access necessary to perform an operation should be granted. By default, users do not have access to all Nodes, lists, and reports within the CORAS Federal environment.

Instead, end user permissions are controlled within the Tenant by the customer. For example, if a new Node is created where users need to enter information, the users must be provided permission to access the Node and to make edits within. This ensures that only the users who need access to information are the recipients.

## Smart Card-Based Identification

Users accessing the CORAS Federal environment use a smart card for their multifactor authentication (MFA). CORAS Federal requires the use of personal identity verification (PIV) and common access cards (CAC). The CORAS Federal environment uses a CORAS-developed user-accounting where the user's smart card is tied to their account.

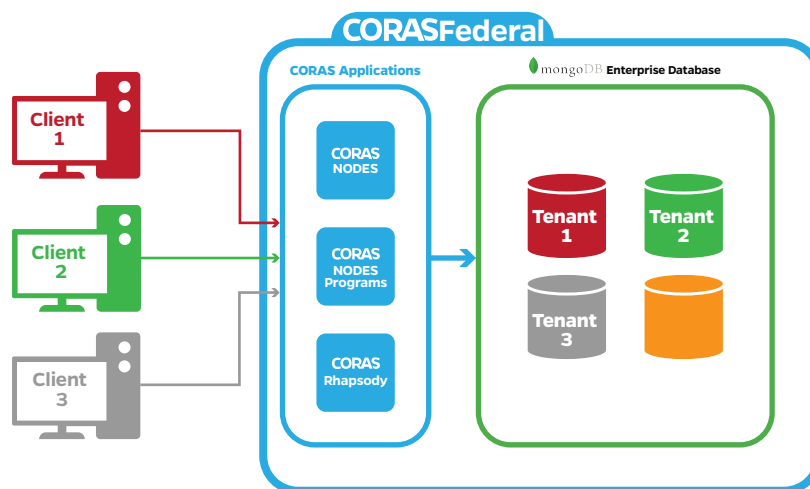


## Tenant Security

CORAS Federal uses a Multi-Tenant Data Architecture model, purpose-built to provide support for multiple customers or “tenants.” This means that a single instance of CORAS Federal software runs within the environment and serves multiple Tenants (customers).

Each Tenant has its own database with its own unique 36-character identifier, to separate customers and their data from each other. Information for that Tenant (data, configuration, user management, permissions) are contained within the Tenant itself.

When a user logs into CORAS Federal using their smart card, their account is linked to a specific Tenant within the CF environment. All data entered by that Customer is stored within their Tenant’s database.



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## Encryption from Database to Browser

To protect your information, CORAS encrypts data when being stored in the database, through our AWS GovCloud-based cloud environment, and to your user's browser. Encrypting data makes it unreadable by those who do not have the keys to decrypt it, meaning that your data is stored after being scrambled into an unreadable format.

### Database

Built using MongoDB Enterprise NoSQL database, CORAS Federal takes advantage of MongoDB's FIPS 140-2 certified Encryption at Rest using an AES-256 Symmetric Key. Connections to the database are limited to specific machines in the CORAS Federal cloud, reducing risk of leakage.

### In-Transit

Within the CORAS Federal cloud, all data is encrypted when transmitted using Asymmetric Keys with 2048-bit Key size. Encrypting traffic deters people from listening in on what is being transmitted. When combined with network segregation this encryption ensures data remains secure.

### To the Browser

Traffic to and from the end user is protected through TLS 1.2 and using an Asymmetric Key with a 2048-bit Key size. Even after leaving the CORAS Federal Authorization Boundary, the data is protected from eavesdropping.



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