

---

## Service Definition Document:

G-Cloud 15 Framework

# Cobalt Software Platform

---



## Introduction

Cobalt is a highly configurable, commercial-off-the-shelf (COTS) software platform built to enable autonomy-native and AI-enabled operations across defence and national security. It accelerates and enhances decision-making across the entire mission lifecycle by providing users with intuitive digital workflows, data fusion and analysis, and advanced decision support systems.

Cobalt has been architected from the ground up for continuous deployment at operational scale in austere environments. Developed alongside military and national security users, the platform prioritises vendor-agnostic hardware and software interoperability, rapid capability insertion, and ease of use in high-pressure and mission-critical situations. The platform is operationally proven and is currently in use by UK Defence.

## Platform overview

Cobalt enables organisations to wield an increasingly complex matrix of capabilities by integrating disparate hardware, data and decision workflows into a unified collaborative platform. Entities, events, relationships, and environmental conditions from every integrated source are cohered into a data orchestration layer. Approved users across various units and echelons are able to work collaboratively across this shared data foundation - accessing, utilising and disseminating information to execute a wide range of workflows.

Cobalt's core feature set enables the end-to-end execution of complex operations by leveraging this unified data foundation to generate an all-domain common operating and intelligence picture (COP/CIP). The COP/CIP interface underpins full-spectrum situational awareness, mission planning and targeting, real-time command and control, and post-mission debriefing. Modular and user-definable workflows align to core military functions including planning, operations, personnel management, logistics, communications and geospatial analysis.

Artificial Intelligence (AI) and analytics capabilities are deeply integrated across the Cobalt platform, providing decision support across a wide range of workflows including observation triage, pattern of life anomaly detection, sensor feed processing. The system's vendor-agnostic MLOps architecture enables individual Cobalt deployments to run models and algorithms developed by either Arondite, internal organisations (e.g. DSTL) or third-party providers over any data feed or workflow.

Crucially, all data captured and generated by Cobalt during its operation is fed back into the organisation's data orchestration layer, where it is leveraged to increase decision support accuracy, update organisational knowledge bases, and inform future mission designs and plans. This 'data flywheel' philosophy generates compounding value: each mission strengthens the quality of insights, shortens subsequent planning cycles, and increases the fidelity of battlespace understanding.

## Key platform features

Cobalt's ability to underpin operations involving blended human-machine teams, heterogenous hardware platforms, data sources and network environments within one unified 'operating system' materially accelerates operational tempo by removing the need to regularly 'swivel chair' or manually transfer data between different siloed systems.

By digitising key processes, synchronising information across functions, and enabling both human and machine agents to act on a common representation of the battlespace, Cobalt increases tempo, improves coherence, and strengthens decision quality across the force:

***This document outlines high-level capabilities only. For detailed information and demonstrations of specific features please contact Arondite directly.***

### **Operational and organisational readiness**

- Generation of single source of truth data foundation within and between adjacent organisations
- Comprehensive friendly and adversary ORBAT mapping across all workflows
- Dynamic network view enabling visualisation and management of organisation-wide communication routes and capabilities
- Organisational equipment data tracking to enable user-configurable maintenance and logistics workflows
- Automatic and user-configurable behaviour rules for graceful degradation in austere network conditions, enabling prioritisation of essential information exchange over restricted or intermittent bandwidth
- Offline mapping and compute-efficient model/algorithm support for high-fidelity decision support in low/no bandwidth environments

### **Platform and data integration**

- Data ingest from any sensor feed, using either proprietary or standards-based formats (e.g. NATO STANAGs, SAPIENT)
- Hardware integration suite for rapid onboarding of new robotic and autonomous capabilities into the platform, with integration time measured in hours or days
- Ability to ingest, process and share data across multiple classification levels, with robust security and granular role-based access controls
- Full Cobalt functionality available via API access at every layer of the platform, enabling interoperability and integration with adjacent software platforms

### **Full-spectrum situational awareness**

- Layer-based COP/CIP for enabling highly configurable mission and role specific geospatial workspace
- Intuitive map-based interface with historical and forecast time-series analysis
- Open-source data feeds for global asset tracking, weather context and terrain analysis
- Cross-domain and full-spectrum sensor fusion
- Ability to set geospatial and time-based triggers to configure complex pre-planned responses to e.g. area of operation incursions
- User-configurable alerting system for urgent and informational updates
- Collaborative map augmentation for asynchronous workflows via map-based tagging  
AI-enabled Pattern of life anomaly detection and observation triaging capability to identify, classify and track unknown entities

### **Autonomy-native Command and Control**

- Real-time orchestration of multiple heterogeneous robotic and autonomous assets
- Cross-cueing of sensors to effectors, with highly configurable human-on/in-the-loop workflows
- AI-enabled task-asset matching recommendations based on available platforms
- Collaborative targeting workflow, enabling multiple users to manage complex target classification, escalation and decision processes
- Secure mission collaboration across organisation, supported by federated and role-based access management
- Dissemination of orders and situational awareness across disaggregated units via frontline systems e.g. TAK
- Terrain analysis and platform-appropriate route generation

## Platform philosophy

Cobalt has been built to be enable material and ongoing enhancement to an organisation's effectiveness through continuous deployment at operational scale. As such, it has been built with rigorously mission-focused philosophy:

### **Interoperability and extensibility**

Cobalt is fundamentally interoperable and extensible by design and is committed to modular and open systems approaches. The platform has been architected for data federation across instances to support DDIL environments. Industry-standard APIs are also available at every layer of the platform, allowing organisations to integrate existing and future capabilities as demand requires.

Arondite encourages the utilisation of standards-based data formats. Cobalt maintains and continually extends robust support for customer-defined protocols, such as NATO STANAGs and SAPIENT, as well as industry-standard protocols such as MAVLink and Cursor-on-Target. Cobalt can also ingest any arbitrary data formats as the customer requires. As technology progresses, Cobalt is built to evolve with organisations and their integration requirements, to ensure operators can wield every tool at their disposal.

### **Security and assurance**

Cobalt is built in accordance with the Secure by Design guidelines laid out by NCSC and the Cabinet Office. Stringent and granular role-based access control (RBAC) is implemented across every platform instance, governing how individual users can access, interact with and share individual data elements. All user actions and data interactions within the platform are subject to comprehensive audit logging.

Cobalt is built to securely process and share restricted data. All network traffic is encrypted via TLS 1.2 (minimum) or TLS 1.3. Ensuring robust data integrity and security ensures Arondite Cobalt can enable secure collaboration across organisational boundaries, adjacent data models and in austere edge environments.

### **Deployment flexibility**

To effectively support organisations operating across a variety of environments, contexts and echelons, Cobalt has been designed with a 'deploy anywhere' philosophy. Cobalt instances can run on offline workstations, existing on-premise hardware, and any private/public cloud solution – including AWS, Microsoft Azure and Google Cloud.

Individual Cobalt instances are containerised to support any edge hardware requirements. Cobalt instances are fully federated, with robust data reconciliation and synchronisation capabilities, to support deployment in DDIL environments. The Cobalt user interface is accessed via a standard Web browser for maximum compatibility with end-user devices and to accelerate deployment across large organisations.

## Further information

Detailed information on pricing, platform implementation and service support, data management and technical requirements can be accessed via the 'Arondite Cobalt' catalogue entry webpage.

