

**BYTEHARBOUR**

Secure, Governed Data-Sharing Layer

Share data securely, without losing control of it.

ByteHarbour provides a secure and governed data-sharing layer for moving information between systems, organisations and security domains, **preserving metadata, provenance and handling controls as data moves**. It connects legacy and modern applications through modular interfaces, standalone or alongside Consilium, Harbour Guard and third-party platforms.

Controlled

Interoperable

Traceable

On-Prem · Private Cloud · Hybrid

UK-Sovereign

Deploy as a standalone exchange capability, or as the governed data layer across the wider **Espanaro** product ecosystem.

www.ESPANARO.com

WHAT IS BYTEHARBOUR

A governed data-sharing layer across systems and domains

ByteHarbour provides a secure and governed data-sharing layer for moving information between systems, organisations and security domains. It connects legacy and modern applications through modular interfaces, preserving metadata, provenance and handling controls as data moves. It can operate as a standalone exchange capability or integrate with Consilium, Harbour Guard and third-party platforms.

THREE PRINCIPLES

• Controlled

Apply defined rules and workflows to how data is shared and consumed across boundaries.

• Interoperable

Connect diverse applications, formats and organisational environments through modular adapters.

• Traceable

Preserve provenance, metadata and an auditable record of information movement.

THE CHALLENGE & THE OUTCOME

THE CHALLENGE

Defence, national security and critical-infrastructure organisations need to exchange information across systems and organisational boundaries without losing control of how it is handled.

Legacy integration approaches often create **isolated data silos, brittle point-to-point connections and duplication**, while conventional file sharing can weaken provenance, governance and assurance.

OPERATIONAL VALUE

ByteHarbour delivers:

- Controlled data exchange
- Reduced integration friction
- Preserved provenance
- Consistent governance
- Faster partner collaboration

THE APPROACH

ByteHarbour connects existing systems **without forcing organisations to replace them**, providing a governed exchange layer that supports controlled sharing and moves information between applications, teams and domains through **configurable interfaces and policy-aligned workflows**.

WHAT BYTEHARBOUR DOES

Connect, normalise and govern data as it moves

ByteHarbour sits between your systems and your partners, moving information through policy-aligned workflows while preserving provenance and handling controls.

- + Connects legacy, modern and specialist systems through configurable adapters.
- + Normalises data into consistent structures for exchange and reuse.
- + Preserves source, provenance, classification and handling metadata.
- + Supports controlled publish, subscribe, request and distribution patterns.
- + Enables governed data sharing across teams and organisational boundaries.
- + Routes information through policy-aligned workflows and approved interfaces.
- + Provides auditability of data movement, transformation and delivery.
- + Supports integration with command platforms, analytics tools and applications.

CORE CAPABILITIES

Four building blocks for secure, governed data exchange

01

Ingestion & Normalisation

Connect disparate systems and convert information into consistent, reusable structures.

02

Governed Data Exchange

Control how information is published, requested, transformed and distributed.

03

Metadata & Provenance

Preserve source, ownership, classification and handling context, aligned to ACP240 (guided by STANAG 4774 & 4778).

04

Audit & Integration Services

Provide traceability and connect data flows to operational applications and workflows.

CONNECT

Legacy and modern systems



NORMALISE

Consistent data structures



GOVERN

Policy-aligned workflows



DISTRIBUTE

Approved interfaces and partners

INTEGRATION BY DESIGN

Connect existing systems without forcing replacement

ByteHarbour provides a governed data-exchange layer that supports controlled sharing, preserves provenance and enables information to move between applications, teams and domains through configurable interfaces and policy-aligned workflows.

INTEGRATION AREA	SUPPORTED APPROACH
Legacy & operational systems	Configurable adapters for existing databases, applications, sensors and specialist platforms.
Application interfaces	APIs and structured data formats including JSON and XML.
Message & event distribution	Event-driven and message-based patterns including MQTT and DDS.
Security & data controls	Integration with identity, policy and access-control services, including Harbour Guard where required.
Command & analytics platforms	Data consumed by Consilium, Cognisight, Pulse Sentinel or third-party systems.

DEPLOYMENT OPTIONS

Deploy where the mission needs it

ON-PREMISES In your network For controlled networks, secure facilities and locally hosted environments.	PRIVATE CLOUD Managed services For centrally managed services within approved cloud infrastructure.	HYBRID Best of both For data exchange spanning local systems, partner environments and central services.
---	---	--

BUILT FOR CONTROLLED ENVIRONMENTS

Assurance considerations

● Secure by design Policy-driven access, provenance preservation and controlled, governed information sharing.	● Data residency Exchange aligns to your network boundaries, classification model and operational governance.	● UK-sovereign Engineered in the UK with direct access to the product and delivery team.
---	--	---

REPRESENTATIVE USE CASES

Where ByteHarbour makes the difference

Cross-Organisation Data Sharing

Exchange operational information between government, industry and mission partners with defined controls.

Legacy System Integration

Connect ageing or specialist systems without requiring wholesale replacement.

Multi-Domain Information Exchange

Move data between approved environments while retaining metadata and governance.

Operational Data Fusion

Provide consistent data feeds to command, analytics and decision-support platforms.

Programme & Supply-Chain Collaboration

Enable governed information sharing across delivery partners and technical teams.

Trials & Evaluation

Test data-exchange patterns, adapters and governance models in controlled pilot environments.

WHY BYTEHARBOUR

Governed data sharing, built in the UK

- ✓ Enables controlled sharing without duplicating entire systems.
- ✓ Supports open, modular integration rather than vendor lock-in.
- ✓ Preserves provenance and handling context as information moves.
- ✓ Provides traceability for assurance, investigation and audit.
- ✓ Works with existing legacy and modern technology estates.
- ✓ Routes information through policy-aligned, approved interfaces.
- ✓ Can operate independently or as part of the wider Espanaro product stack.
- ✓ UK-sovereign engineering with direct access to the product and delivery team.



Share what you must, without losing control of how it is handled.

ByteHarbour is built around governed exchange and preserved provenance, moving information between systems, teams and domains through policy-aligned workflows.

TECHNICAL SUMMARY

At a glance

Product type	Secure data integration and governed information-exchange software.
Primary function	Connect, normalise, govern and distribute data across systems and organisations.
Architecture	Modular, integration-led and configurable for different environments.
Deployment	On-premises, private cloud or hybrid.
Interfaces	APIs, structured data, message buses, event streams and configurable adapters.
Users	Operators, data teams, security teams, architects and technical integrators.
Lifecycle	Suitable for discovery, integration trials, pilot deployments and operational implementation.

HOW TO ENGAGE

A straightforward path from first conversation to operations

STEP 01
Discovery

Understand the data-sharing problem, environment and existing systems and interfaces.

STEP 02
Data-Sharing Workshop

Shape adapters, governance and deployment options around your mission and constraints.

STEP 03
Pilot

Evaluate ByteHarbour in a controlled deployment ahead of wider operational rollout.

Share operational data securely, consistently and with control.

Speak to Espanaro about a ByteHarbour discovery, data-sharing workshop or pilot deployment.

[Book a discovery session](#)

CALL

+44 1686 510 150

EMAIL

info@espanaro.com