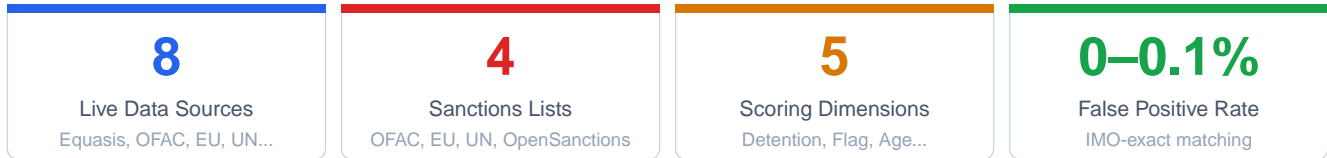


Maritime Intelligence Platform Overview

Vessel risk scoring, sanctions screening, ownership analysis, and voyage intelligence

Capabilities overview · Generated 2026-04-06



Platform Overview

ArcNautical is a maritime intelligence platform that scores vessels on a 0–100 risk scale using live data from PSC inspection databases, international sanctions lists (OFAC SDN, EU FSD, UN Consolidated, OpenSanctions), corporate ownership registries (GLEIF), and flag state performance reports (Paris/Tokyo MOU).

Every score is decomposable — fleet managers, underwriters, and compliance teams can see exactly which signals drove the number. The platform covers the full vessel lifecycle: pre-fixture screening, continuous fleet monitoring, voyage risk analysis, and compliance reporting.

Core Capabilities

Vessel Risk Scoring

Composite 0–100 vetting score per vessel using 5 independently weighted sub-scores:

- PSC Detention History (30%) — 3-year rolling detention count from Equasis
- Flag State Performance (25%) — Paris MOU + Tokyo MOU white/grey/black classification
- Vessel Age (15%) — linear scale factoring IMO CII tightening
- Inspection Recency (10%) — time since last PSC inspection
- Ownership Opacity (20%) — GLEIF LEI coverage + shell-jurisdiction flags

Batch scoring via IMO list upload. Individual vessel screens return results in under 2 seconds.

Sanctions Screening

IMO-exact matching against 4 international sanctions lists:

- OFAC SDN — US Treasury Specially Designated Nationals (vessel + entity)
- EU FSD — European Union Financial Sanctions Database
- UN Consolidated — United Nations Security Council sanctions
- OpenSanctions — Aggregated maritime dataset (3,701 vessels, 3,362 companies)

Only exact IMO/MMSI matches trigger a positive determination. Name-based fuzzy matches are flagged for human review but never auto-confirmed, eliminating false-positive risk.

Ownership Chain Analysis

GLEIF LEI-based corporate chain tracing:

- Entity identification via Legal Entity Identifier (LEI)
- Direct parent to ultimate parent chain walking
- Shell-company jurisdiction flagging (MH, PA, LR, VG, KY, BM + 13 others)
- Cross-referencing every entity in the chain against all 4 sanctions lists
- Ownership opacity score (0–100) reflecting transparency of corporate structure

Voyage Risk Analysis

Per-route risk scoring across 10 live intelligence signals:

- Piracy incidents (IMB, ReCAAP) — proximity and recency weighting
- JWC Listed Areas — war-risk zone transit detection
- Navigational warnings (NGA broadcasts) — active hazards along route
- EEZ transit analysis — country-level conflict index per waypoint
- Weather forecasting — wave height and wind speed along route segments
- Monte Carlo ETA simulation (500 iterations) — P10/P50/P90 arrival distributions
- Fuel consumption + CII impact estimation per route option

Monitoring & Compliance

Fleet Monitoring

Continuous scoring across your vessel book with automated alerting:

- Weekly delta alerts when a vessel's vetting score changes
- Sanctions list update notifications — immediate re-screening when lists change
- Counterparty rotation detection — flag when a vessel changes owner/manager
- CII compliance tracking — age-driven rating degradation monitoring
- Dashboard overview — fleet-wide risk distribution at a glance

Compliance Reports

On-demand and scheduled report generation:

- Vessel Dossier — comprehensive single-vessel risk report with sanctions, ownership, PSC history
- Fleet Summary — fleet-wide risk distribution, detention trends, flag analysis
- Route Comparison — side-by-side risk + cost analysis for alternative routes
- Piracy Briefing — regional incident analysis with seasonal patterns
- Scheduled delivery — weekly or monthly reports via email

Data Sources

Equasis — PSC inspections, vessel particulars, class society records (equasis.org)

OFAC SDN — US Treasury Specially Designated Nationals list — vessel and entity sanctions

EU FSD — European Union Financial Sanctions Database — vessel and entity designations

UN Consolidated — United Nations Security Council sanctions list

OpenSanctions — Aggregated maritime sanctions dataset (139MB, 3701 vessels, 3362 companies)

GLEIF — Global Legal Entity Identifier Foundation — corporate ownership chain data

Paris MOU — Annual flag state performance report — white/grey/black list classification

Tokyo MOU — Annual flag state performance report — Asia-Pacific regional classification

Scoring Methodology

Composite Vetting Score (0–100)

The ArcNautical vetting score is a weighted composite of 5 independently computed sub-scores:

PSC Detention History (30%) — Port State Control inspections from Equasis database. 0 detentions = 0, 1 = 40, 2 = 70, 3+ = 100.

Flag State Performance (25%) — Paris MOU and Tokyo MOU annual performance reports. White list = 0, Grey = 50, Black = 100. Unknown flags score 30.

Vessel Age (15%) — Linear scale from 0 (new build) to 100 (25+ years). IMO MEPC.354(78) CII reference lines tighten annually, making age a regulatory compliance factor.

Inspection Recency (10%) — Time since last recorded PSC inspection. Recent inspection with clean record reduces score. No inspection data = 50 (neutral).

Ownership Opacity (20%) — Scored on GLEIF LEI coverage, parent-chain traceability, and flag/registration jurisdiction. Shell-jurisdiction flags without clear LEI chain score higher.

Vetting Status Thresholds

0–25 — Low Risk

Clean vessel, well-maintained, transparent ownership. No elevated risk factors.

26–50 — Elevated

One or more risk factors present. Requires monitoring. Common for older vessels or grey-list flags.

51–75 — High Risk

Multiple compounding risk factors. PSC detention history, flag concerns, or opaque ownership.

76–100 — Critical

Immediate compliance concern. Sanctions match, extreme detention history, or blacklisted flag.

About ArcNautical

ArcNautical is built for maritime professionals who need to make risk decisions quickly and defensibly. Every data point is sourced from authoritative public registries, every score is decomposable into its component signals, and every screening result distinguishes between exact identification matches and fuzzy name similarities.

The platform is designed for fleet managers, P&I underwriters, shipbrokers, port operators, and compliance teams. Whether you are screening a single vessel before fixture or monitoring a fleet of 200, the same scoring engine and data pipeline applies.

Get Started

Screen a vessel

Enter an IMO number or vessel name to get an instant vetting score with full breakdown.

Upload your fleet

CSV or IMO list upload for batch scoring. See fleet-wide risk distribution in seconds.

Set up monitoring

Configure weekly alerts for score changes, sanctions list updates, and compliance triggers.

Generate reports

On-demand vessel dossiers, fleet summaries, and route comparisons for your records.

Explore the full platform

arcnautical.com — run a vessel screen, explore your fleet, generate compliance reports.

Reply to this email with an IMO number and we'll send you the full dossier.

This document is provided for informational purposes only. ArcNautical scores are computed from publicly available data sources and do not constitute legal, compliance, or insurance advice.

Sanctions screening matches are based on exact IMO/MMSI identification only. Users should independently verify findings with the relevant regulatory authority (OFAC, EU, UN).

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