



PRODUCT SHEET

BIGOCEANDATA

ROUTE OPTIMISATION

Weather-aware, vessel-aware voyage optimisation

Reduce total voyage cost, improve ETA confidence, support safer routing and strengthen ship-shore decision-making from planning through execution.

Built for shipowners, managers and operators, Big Ocean Data (BOD) Route Optimisation helps teams reduce total voyage cost, improve ETA confidence and support safer, more practical route decisions with a workflow designed for ship and shore teams.

Embedded within BigOceanData, the service combines ABB-powered route optimisation with vessel context, route-risk awareness and voyage workflow support. Teams can compare route options against cost, fuel usage, time, weather, safety thresholds and operational constraints - not distance alone!



Not just the shortest route!

BOD Route Optimisation helps teams choose the route that best matches commercial, operational and safety priorities across the full voyage.

1

Lower voyage cost

Optimise routes against total vessel costs, fuel, time and operating priorities rather than distance alone.

2

Safer route choices

Apply route restrictions, safety thresholds and high-risk area avoidance in one workflow.

3

Better ETA confidence

Use forecast-aware routing to support more reliable arrival planning and voyage control.

4

Stronger ship-shore alignment

Connect shore and vessel side planning and voyage monitoring more effectively.

KEY CAPABILITIES

Lower voyage cost

Optimise for time, fuel and cost, not simply the shortest route between ports.

High-risk and piracy avoidance

Reflect security-sensitive areas and route-risk considerations within voyage planning.

Safe coastal and nearshore routing

Support practical routing in shallow and coastal waters alongside offshore optimisation.

Weather-optimised ocean routing

Support better route decisions on long passages using forecast-aware optimisation.

Vessel-specific performance logic

Use standard vessel profiles or your own custom models for more realistic optimisation.

Operational constraints and no-go areas

Apply ECAs, route restrictions, thresholds and company operating preferences.

BOD Route Optimisation

From pre-voyage planning through live voyage management and post-voyage review, BOD Route Optimisation is designed to support the full voyage decision cycle. It helps shore teams and vessels work from the same route picture, refresh plans as conditions change and review performance against the original plan.

Unlock weather-optimised routing and achieve measurable ROI through a flexible, partnership-driven model.

FROM PLANNING TO VOYAGE REVIEW

Planning, execution and review

- ✓ Route templates. Speed up setup for repeat routes and regular voyage patterns.
- ✓ Two-way RTZ exchange. Support collaboration between ship and shore within the platform or with route-file exchange.
- ✓ Automatic re-optimisation. Refresh route plans when weather forecasts, schedules or actual route changes
- ✓ Monitor against plan. Compare actual voyage progress with the optimised route during execution.
- ✓ Post-voyage review. Assess planned versus actual routing and performance after the voyage.

What teams value most

- ✓ ABB routing capability. A proven routing engine supporting voyage optimisation and practical operational use.
- ✓ Embedded in BigOceanData. Route optimisation sits inside our wider maritime operations platform.
- ✓ Ship-shore context. Combine route decisions with vessel tracking, voyage management and operational visibility.
- ✓ Risk-aware decision support. Bring route-risk and security considerations into the same workflow as route planning.
- ✓ Built for execution. Move from route creation to live voyage monitoring and route-performance review.

WHERE ROUTE OPTIMISATION DELIVERS VALUE

Operational area	What it enables
Shipowners and ship managers	Compare route options before sailing and select the one best aligned to total cost, fuel usage/cost, time and risk priorities.
Operators and chartering teams	Support voyage control with ship-shore route exchange and re-optimisation while underway.
Fleet performance and voyage teams	Track actual performance against plan and strengthen post-voyage review.
Security and risk-aware operations teams	Bring route optimisation into broader fleet, voyage and compliance workflows.



Why BigOceanData

BigOceanData is a proven maritime operations platform that brings together vessel tracking, voyage management, port and area monitoring, route risk and analytics in one cloud-based environment. It is designed to give maritime teams a clearer operational picture across fleet, voyage and risk workflows.

Route optimisation adds ABB-powered voyage optimisation, helping teams move seamlessly from route planning into execution, monitoring and review.

The result is a more connected workflow from voyage planning through execution and review.



Request a live walkthrough to see how BOD Route Optimisation supports your voyage planning, operational control and ship-shore decision making

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