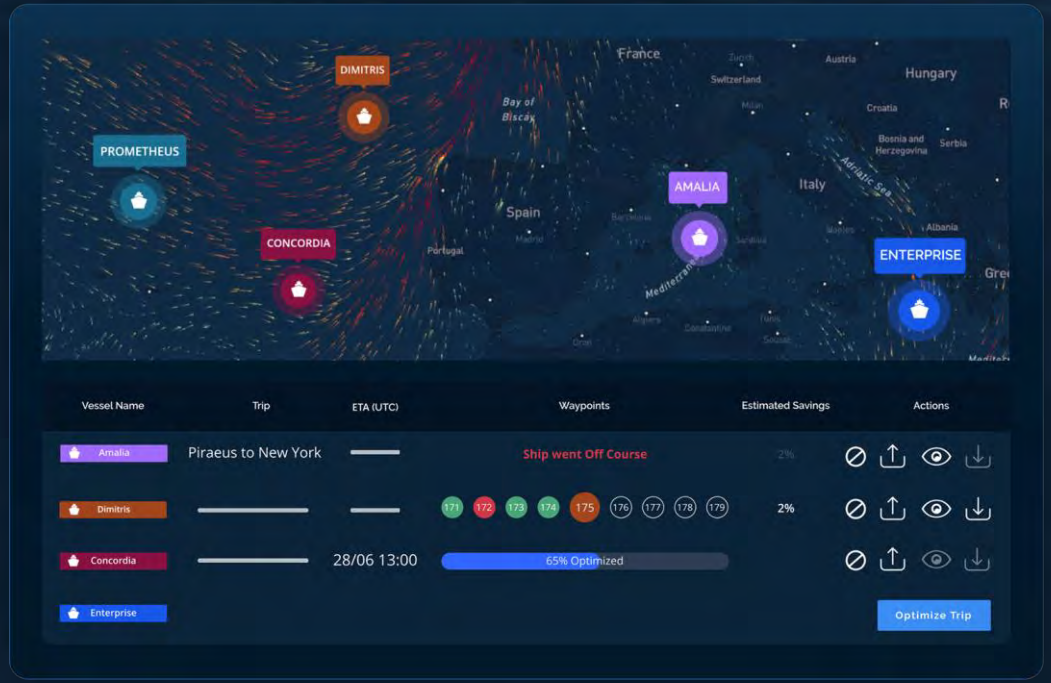
deepsea

Pythia

Performance routing for the 21st-century



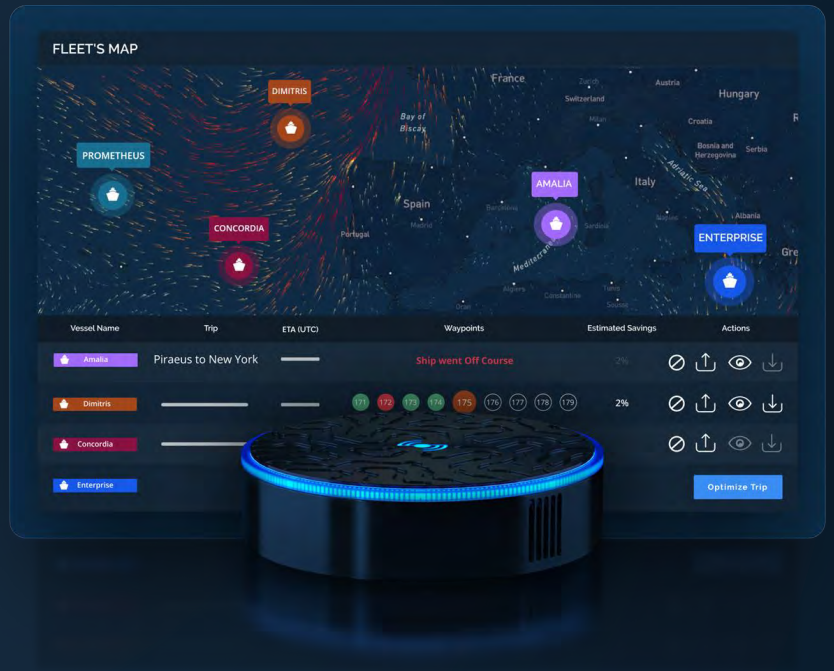
Pythia

Performance routing for the 21st-century

The world's first weather routing platform tailored to the exact performance profile of your vessel. Powerful AI models understand precisely how your vessel behaves under any weather and fouling conditions.

Features

- Tailor-made route suggestions
- Tailor-made speed suggestions
- Real-time tracking & reoptimisation
- Past trip archive
- Full performance reporting



10% SAVINGS IN FUEL & EMISSIONS PER LEG

Unique Technology

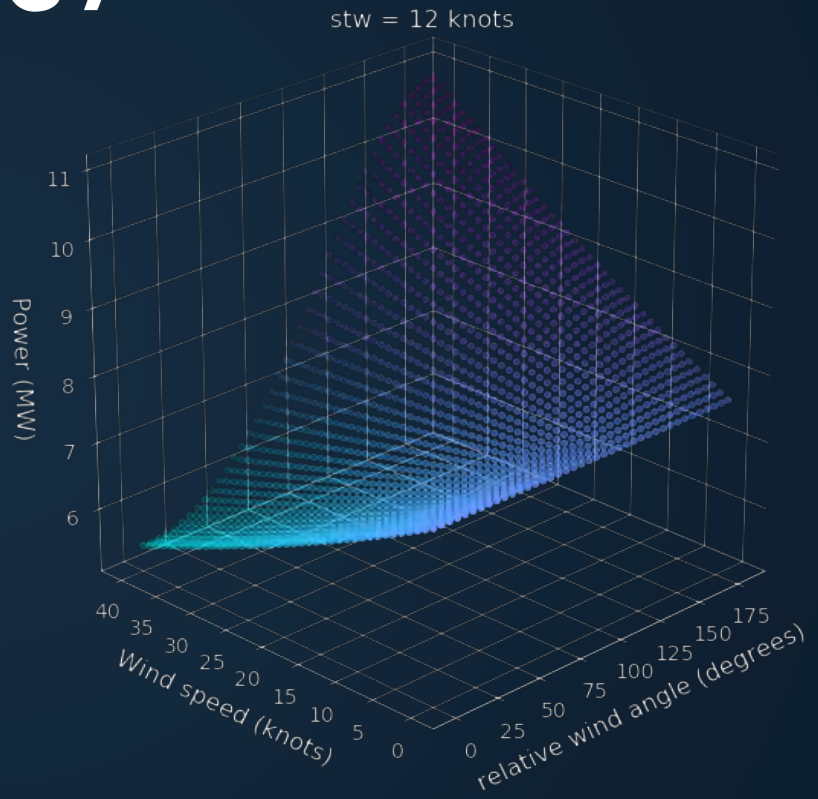
Custom, AI-generated performance models

Pythia takes into account 19 critical parameters - and tracks how the vessel's performance profile changes over time.

It uses this model to calculate the optimal voyage for each of your vessels. The outcome is significant fuel savings.

19

PARAMETERS ANALYSED



Accurate models enable real savings

Why DeepSea succeeds where state-of-the-art solutions fail

WIthout an accurate, tailored model of each vessel, attempts at optimisation can be counterproductive.

Industry standard solutions can detect strong weather and react to it by routing around it or slowing down, however the *size* of the reaction is not sufficiently tuned to the specific ship.

The real case study to the right shows how the cost of the reaction often exceeds its savings causing industry leading providers to yield **worse performance than even a simple shortest path constant speed approach in the majority of cases**.

DeepSea's models know the exact effect of weather at each speed for the specific vessel at its specific fouling state and thus determine the precise optimal reaction to every condition.

High-impact outcomes

Savings for a 10,000 TEU container ship in one year:

4.7 million tonnes
of CO_2 savings

150T/day
250 steaming days

$1.5 million
fuel savings

150T/day
250 steaming days

Future-proofed

Charterers
Markets
Regulations

Proof-of-value process

We provide a scientific proof-of-value process to establish precisely how much DeepSea can benefit your organisation.

01

DATA QUALITY AUDIT

Assessing the quality of data in order to ensure we are modelling your vessel based on correct information.

02

AI ACCURACY ANALYSIS

Building a model of your vessel to examine its accuracy under any conditions.

03

SAVINGS PREDICTION

Simulating Pythia's suggestions on past routes to determine the impact in terms of potential savings vs historic performance.

Proof-of-value process

Key deliverable:
A report showing the predicted savings for your vessels, calculated over a series of three historic legs, explaining how Pythia [makes savings]

Outcome:
A detailed and scientific understanding of precisely how much Pythia will benefit your organisation.

8.5%
Efficiency gain

$875k
Fuel costs saved per year

81x
Return on investment

Optimisation tailored to your needs

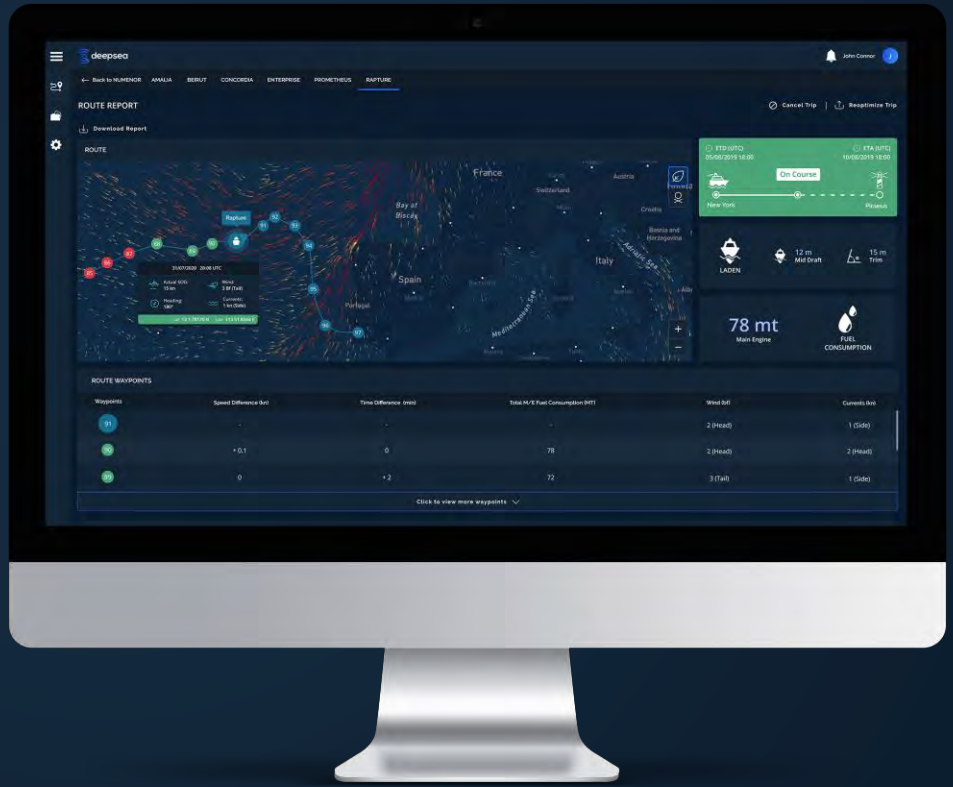
Pythia determines the optimal route and speed for any voyage that you request, given your route, speed and trim policies and any other constraints you provide.

This includes fully customisable safety margins, weather limits, and other key criteria based on the charter party or company policy.

Live voyage tracking

Pythia tracks the progress of the journey in detail - including its current position, weather, and speed - as well as progress against schedule and the details related to each waypoint.

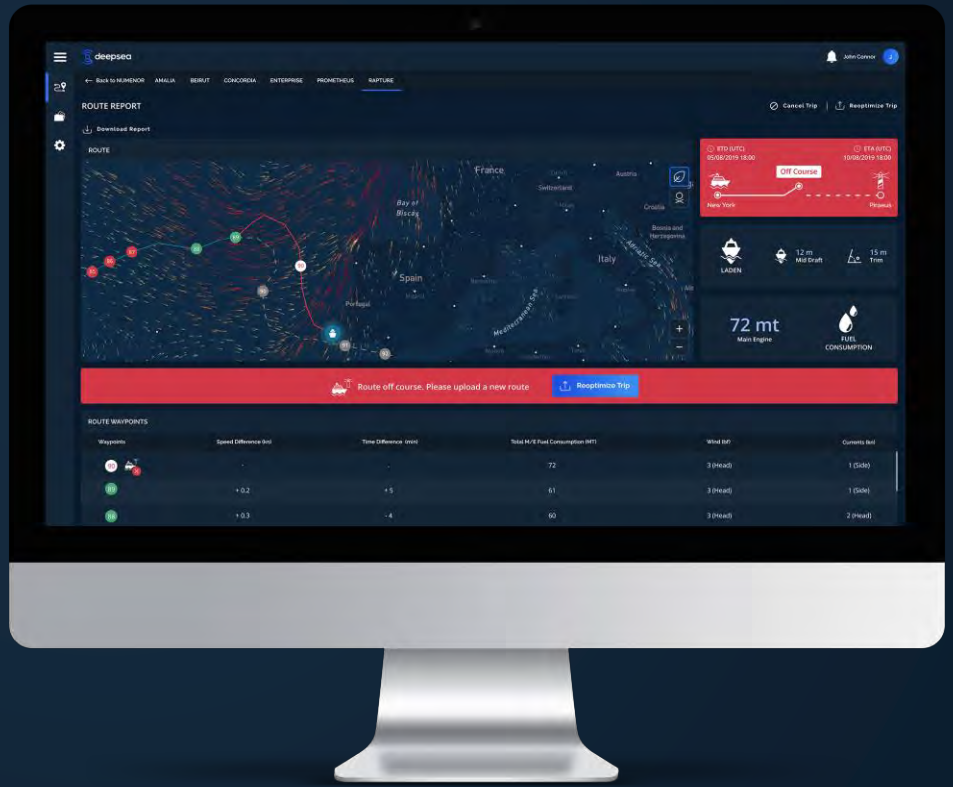
Real-time notifications keep the user informed of the progress of the vessel.



Automatic Reoptimisation

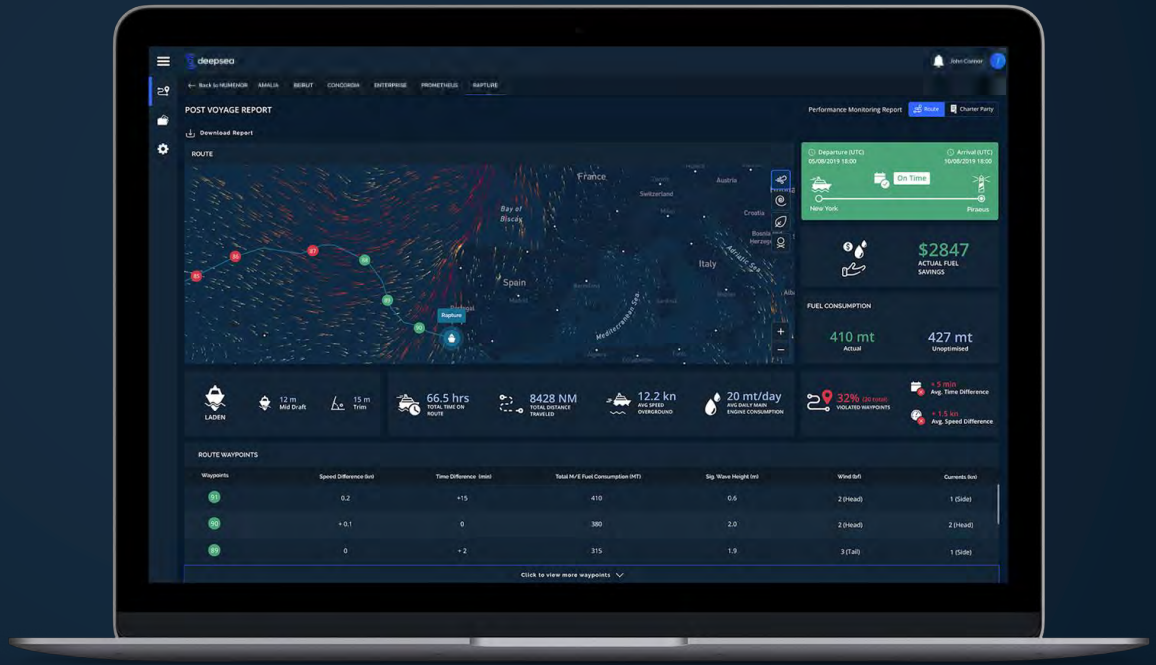
Pythia tracks your vessel and checks progress according to schedule.

It automatically reoptimises based on changes to weather forecasts, progress against the proposed route, and manual changes to the parameters of the journey.



Post-voyage reporting

When the voyage is over, a report is produced showing the total savings related to Pythia, the voyage in full and other key metrics.



Your entire fleet, on one platform

A single platform to manage and optimise all your vessels.

Our unique approach to creating value

Our AI-focused approach leads to exceptional outcomes

deepsea		"Standard" approach	
Vessel-specific voyage planning based on AI models	Up to **10%** savings	Voyage planning with generic (or no) models of vessels	Less than 4% savings
Transfer learning and advanced data cleansing for **accurate insights**	More than **95%** accuracy	Models based on "standard" methods with limited cleansing	Less than 90% accuracy
An **end-to-end solution** for maximising value & minimising hassle	**Single** point of contact	Models based on simple statistical methods with limited data cleansing	Multiple parties to manage
A complete fleet efficiency suite with a **seamless upgrade path**	Whole fleet; **one platform**	Narrow solutions for different aspects of the optimisation problem	Multiple platforms required

Get in touch

For more information and a full demo

Nabtesco Marine Control Systems Company

Sales Dept. (Kobe)

1-1617-1, Fukuyoshidai 1-chome, Nishi-ku,
Kobe, Hyogo 651-2413, Japan

(+81) 78 967 5361

Sales Dept. (Tokyo)

JA Kyosai Bldg., 7-9, Hirakawacho 2-chome,
Chiyoda-ku, Tokyo 102-0093, Japan

(+81) 3 5213 1155

Deep Sea Technologies

Greece Offices

24 Stadiou Str.105 64 Athens

info@deepsea.ai

+30 216 600 5599

Cyprus Offices

Panteli Katelari 16, Nicosia, Diagoras House

info@deepsea.ai

+30 213 017 6863

https://marine.nabtesco.com/english/index.html

www.deepsea.ai