

# NEREUS

One trusted model of the ocean,  
superfast reaction.

**12B**

values in one live global model:  
seabed and daily ocean snapshot (design)

**21**

meteorological/ oceanographic  
parameters maintained at native  
resolution, scaled as required

**38%**

of “navigable” cells hide shallower  
ground. Nereus routes on the shallowest.



## TWOBLUE

**Ocean intelligence and autonomy, from  
the seabed to the sensor.**

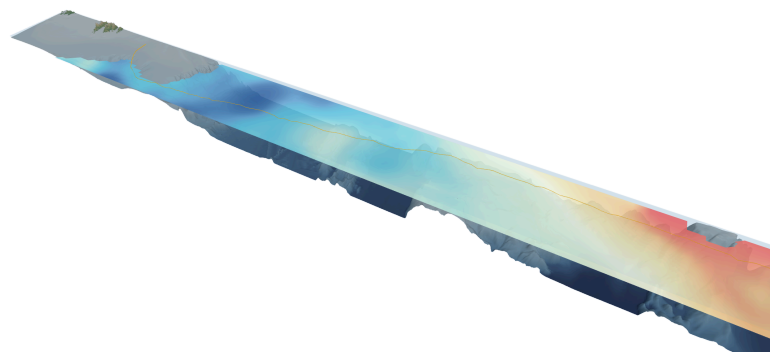
TwoBlue is a suite of engineering-grade tools for modelling  
the undersea environment, generating missions, executing  
them autonomously, and integrating acoustic, magnetic  
and optical sensing. Each product runs on its own.  
Together they are designed around one ocean model and  
one interface.

**Honest resolution.** Every variable is stored on its own  
native grid, and every answer reports the resolution  
actually received.

**Whole-route checking.** Corridors are sampled between  
waypoints, so a hazard in the gap is found, not skipped.

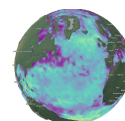
**Navigation-safe seabed.** It reveals seamounts that  
averaged charts hide.

**Real sound speed.** Profiles resolve surface ducts and the  
SOFAR axis from measured data.

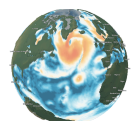


ROUTE CORRIDOR • SURFACE TO SEABED

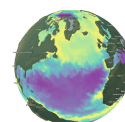
## EVERY LAYER, ONE GLOBE



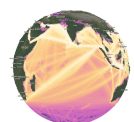
Mixed layer



Wind-sea



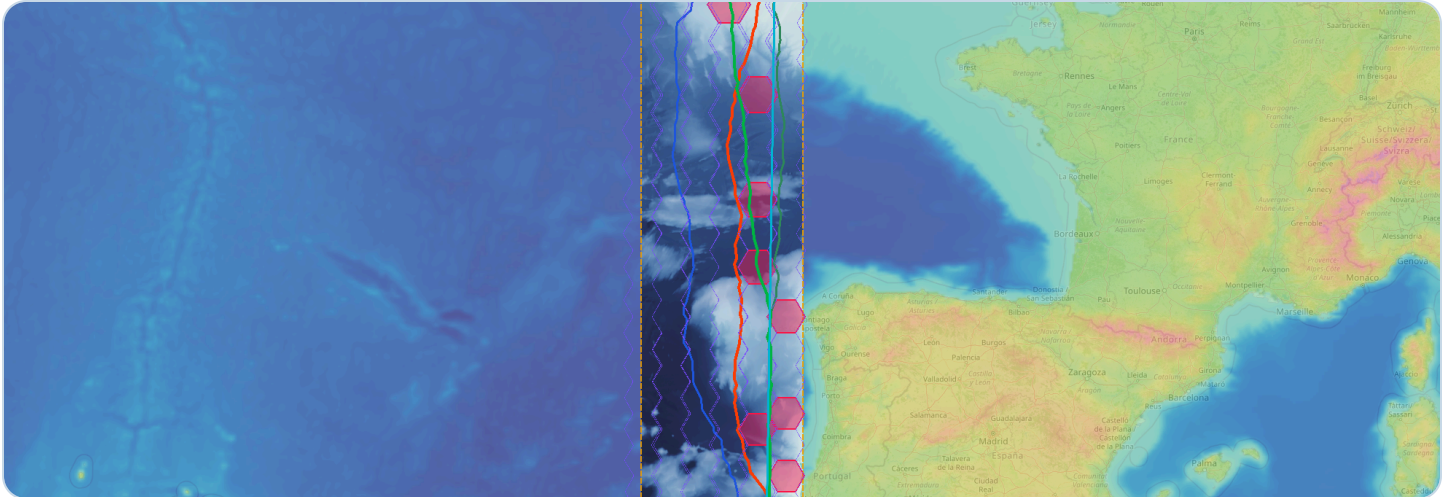
Biogeochemistry



Shipping

# POSEIDON

Plan the mission from  
the seabed up.



● Optimal

● Shortest distance

● Best detection

● Evasion

● Sensor placement

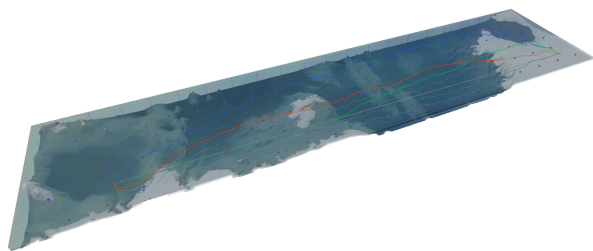
**Mission generation.** Builds platform-specific missions from the live ocean model, platform and sensor performance.

**Safe routing.** Land-safe navigation graphs and alternative routes, deepest-water or shortest-distance.

**Red-team evasion.** Cumulative detection probability and the path an adversary would take.

**Acoustics first.** Ray tracing, transmission loss and passive and active detection range for the area you choose.

**Coverage and budget.** Hexagonal sensor lattices and budget-constrained deployment, with outputs ready for QGIS.



## 9

Tridents today; the design scales to 2,000  
Every route visible in 3D on Nereus.

3 - D MISSION VOLUME

One workflow, from the seabed to the mission.