# AMPHITRITE

## OCEAN DATA INTELLIGENCE

cnrs

ÉCOLE POLYTECHNIQUE

# AI REVOLUTIONIZES WEATHER FORCASTING

**2022**
FourCastNet
Earth-2 Initiative
NVIDIA

**2022**
GraphCast
Google

**2023**
ClimaX
Microsoft

**2025**
Aardvark
ECMWF
UNIVERSITY OF CAMBRIDGE
Microsoft

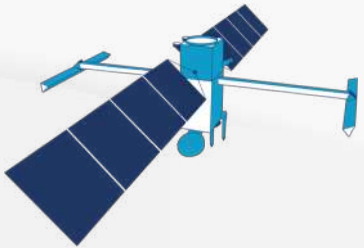
**x1000 faster ！**
than Numerical Weather Prediction (NWP)

# WHAT MAKES US DIFFERENT ?

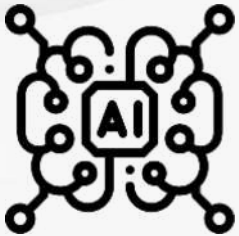
## Expert AI model

*rather than Global Ocean*

**Satellite & in-situ Observations**



**Cutting edge machine learning**




**Ocean Data**

**needed for**

**dedicated application**

# ABOUT AMPHITRITE

SPIN-OFF
**RESEARCH LABS**

**15 EXPERTS**

**OCEANOGRAPHY**

**SATELLITE DATA**

**AI & COMPUTER VISION**

**SOFTWARE DEV.**

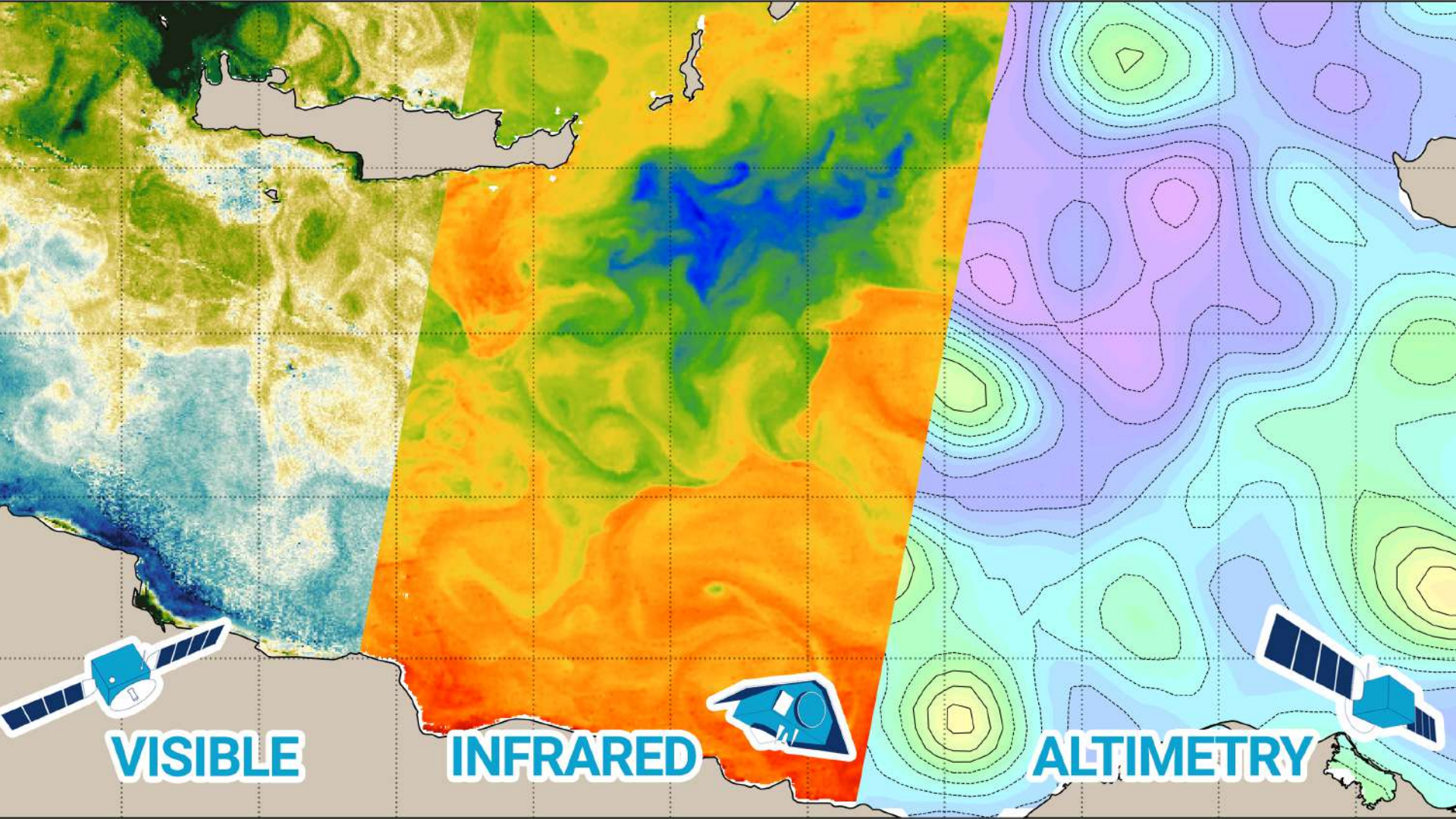
**AWARDS**

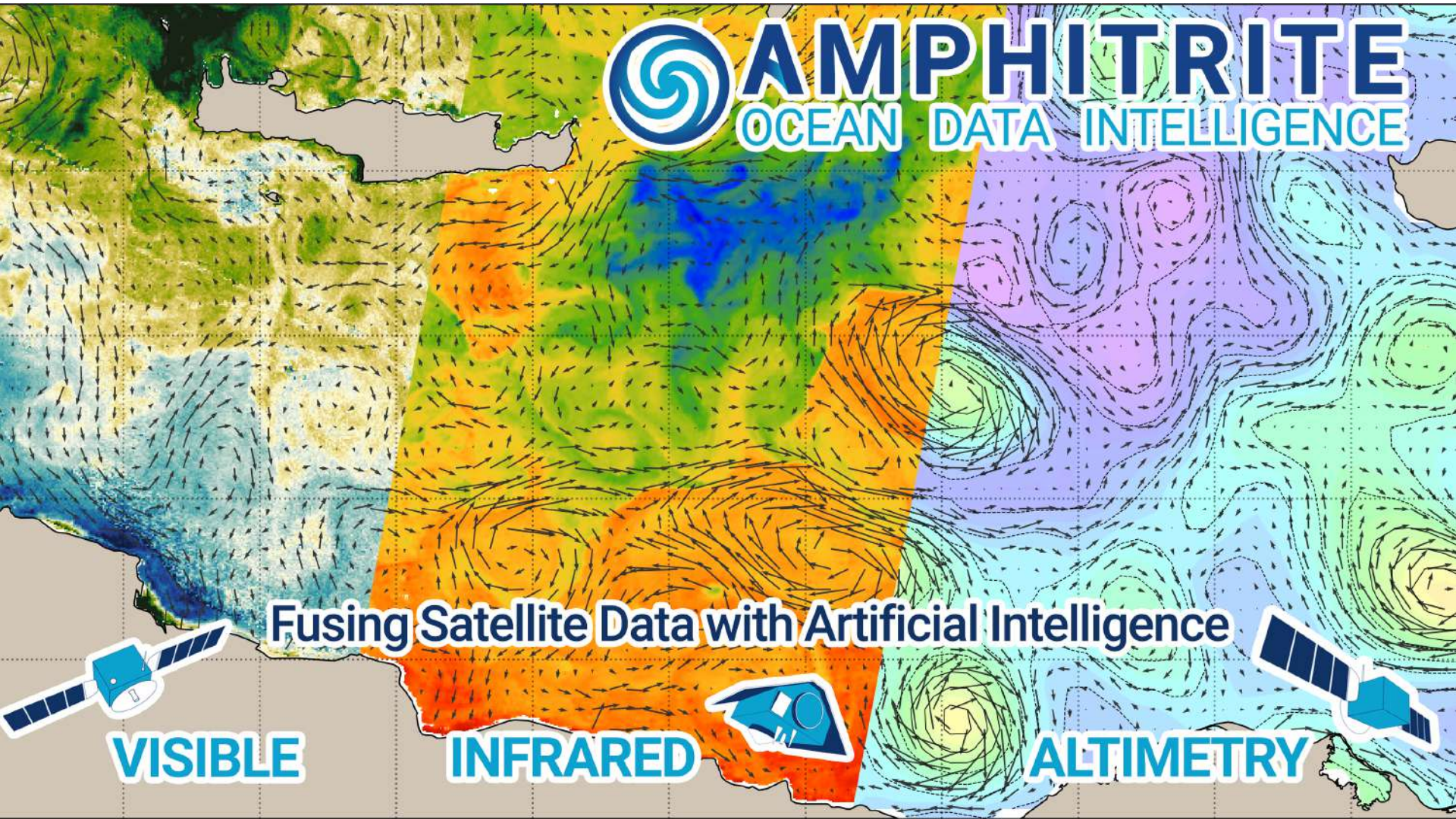
# OUR INNOVATION

# FOR GREEN SHIPPING

## SATELLITE DATA-DRIVEN MODEL

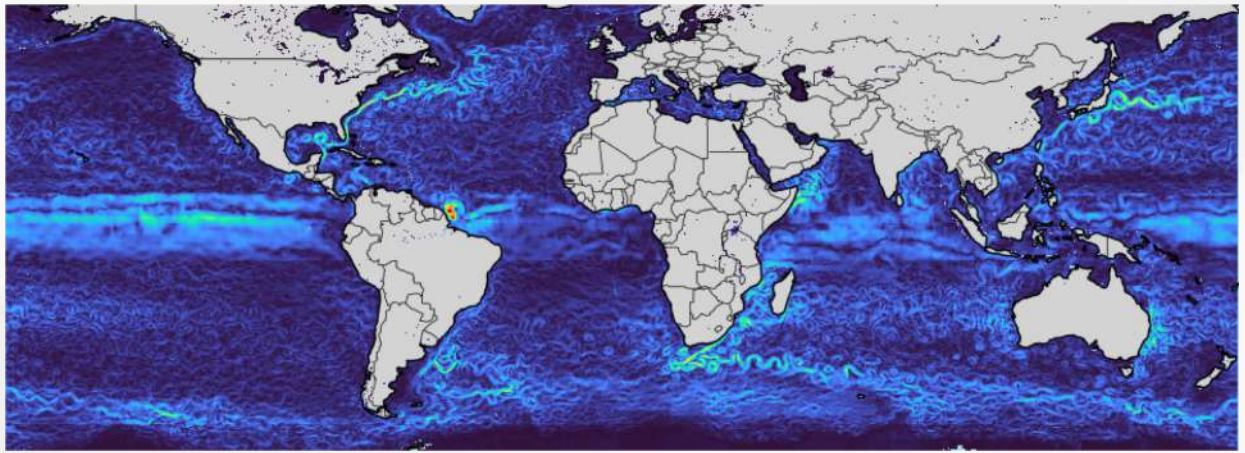
## AI COMPUTER VISION


VISIBLE
INFRARED
ALTIMETRY


AMPHITRITE
OCEAN DATA INTELLIGENCE
Fusing Satellite Data with Artificial Intelligence
VISIBLE
INFRARED
ALTIMETRY

AMPHITRITE
HIRES SURFACE CURRENTS

# HIGH RESOLUTION & HIGHLY RELIABLE



Global coverage

3-4km resolution (1/30°)

Every hour (with tides)

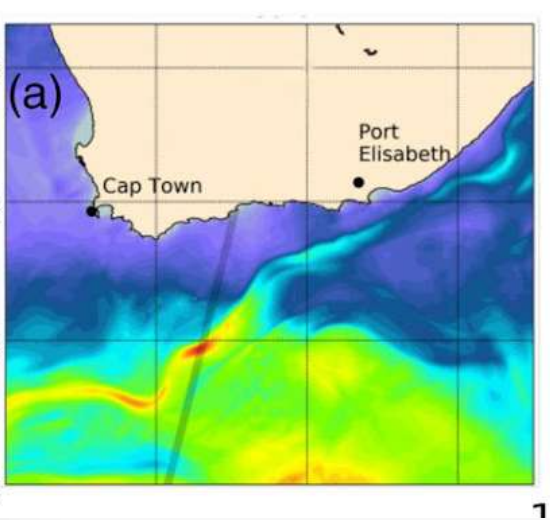
14 days forecast

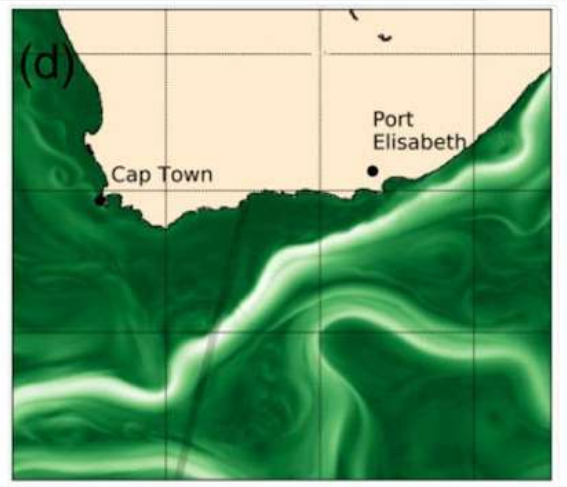
10 years historical data

Fast API

internal use only, do not distribute

# NEXT R&D Developments: HIRES-WAVES



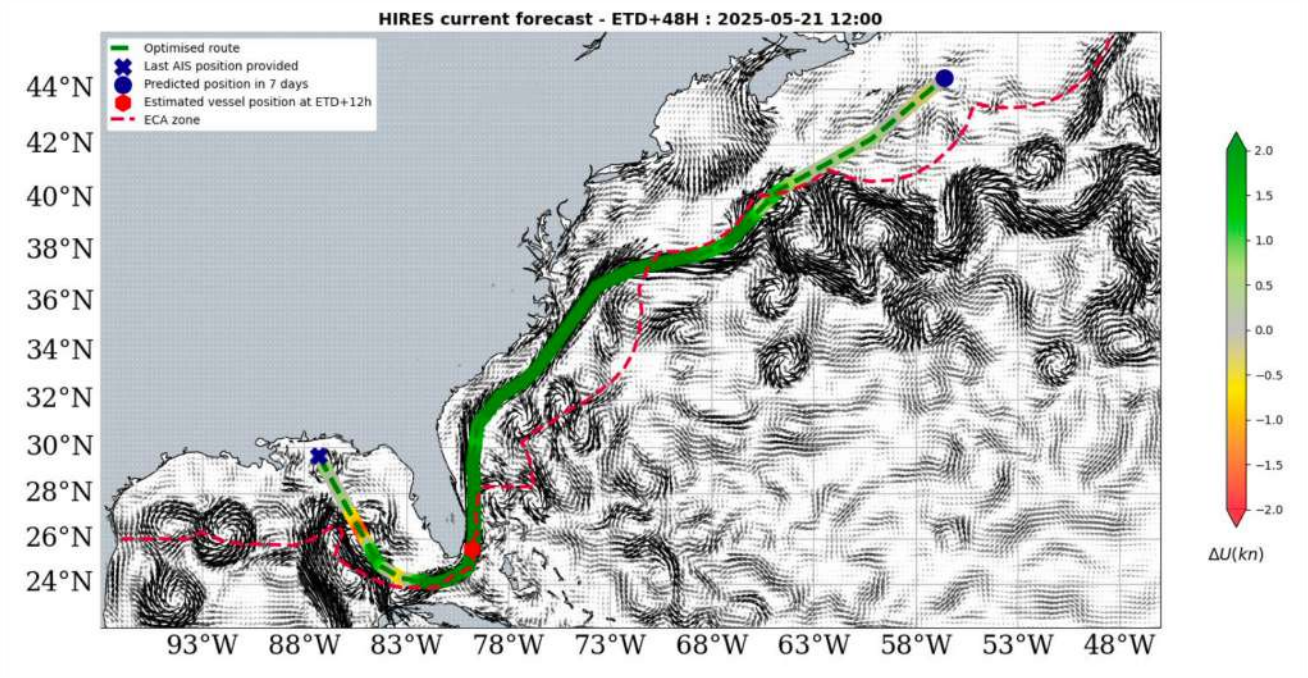




**Wave** **Current**

**Interactions lead to local intensification**

internal use only, do not distribute

# USE CASE: Transatlantic voyage (optimized route)




subsea 7

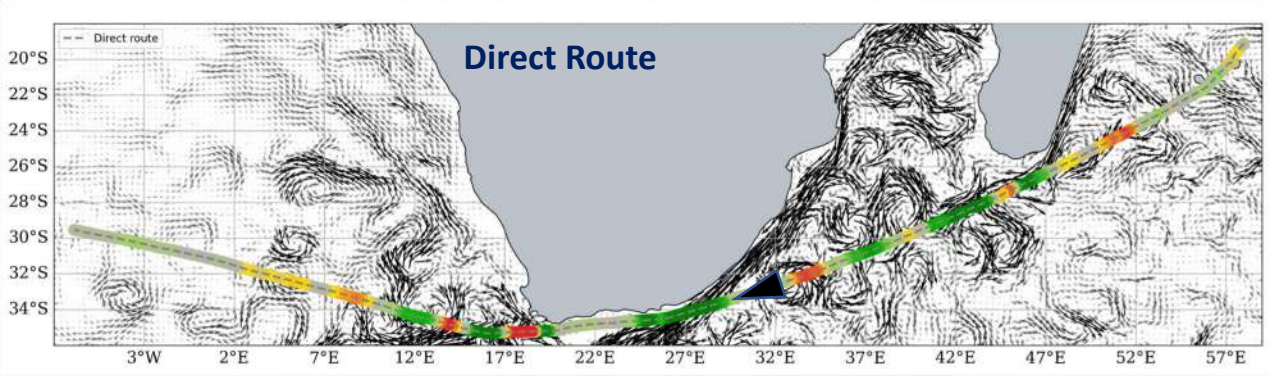
**Small changes in the trajectory to stay in the Gulf-Stream**

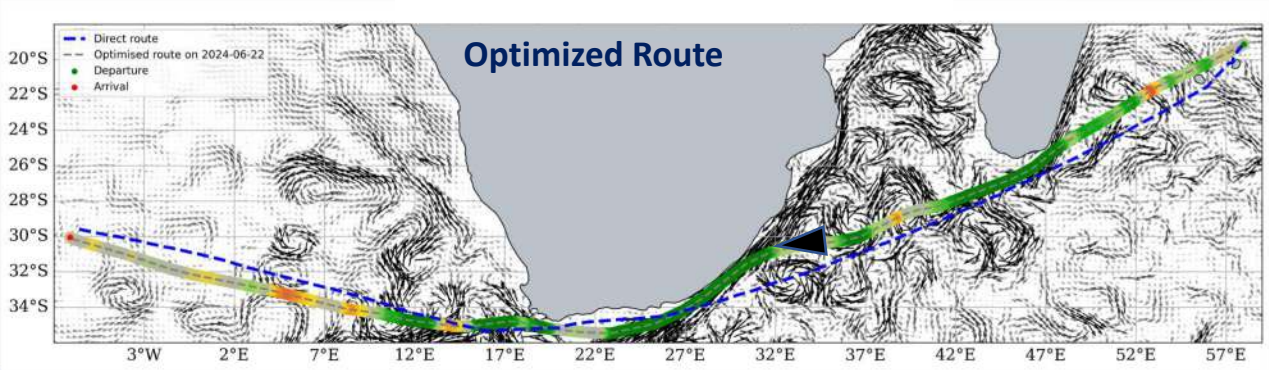
**9% both time & fuel savings !**

**during five days**

internal use only, do not distribute

# FINE-SCALE ROUTING: NEW ROUTING MODE !




SIGNAL MARITIME

**Small changes in the trajectory**

**Up to 8-9%**

**Gains only on currents !**

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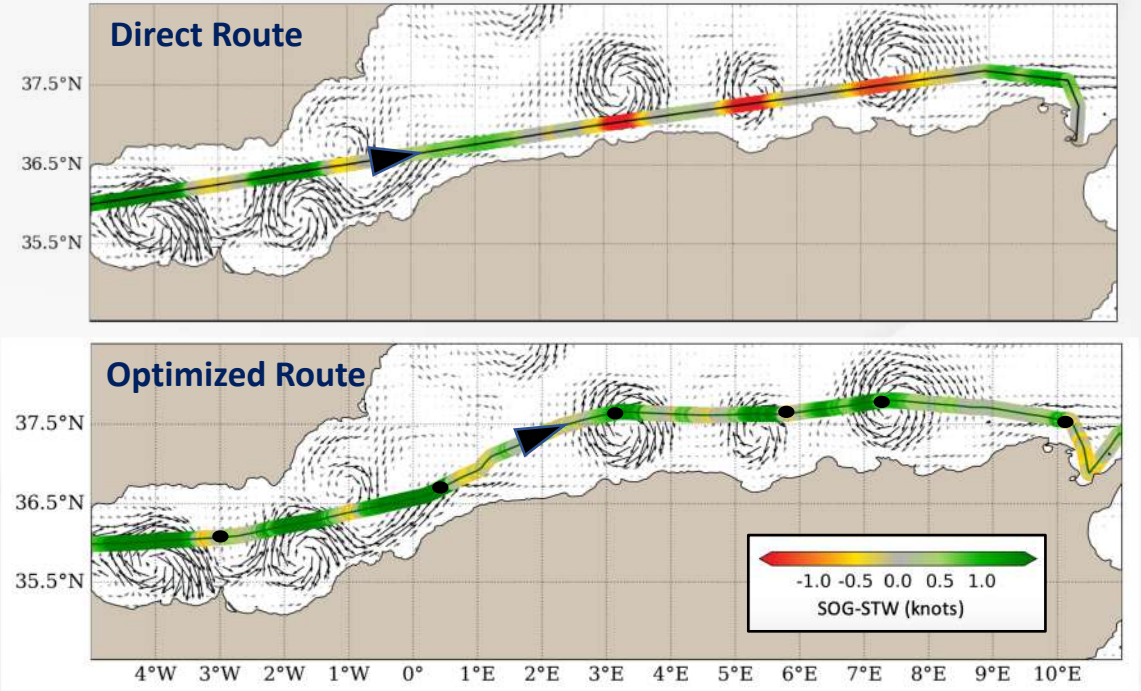
# SHORT TERM OPTIMAL ROUTING: NEW ROUTING MODE !




LouisDreyfus ARMATEURS

**Small changes in the trajectory**

**Fuel cuts up to 4%**

**optimal for**

**SHORT-SEA SHIPPING**

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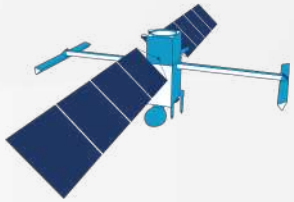
SHIPPING SOLUTIONS



**High quality ocean data**
via multi-satellite AI fusion

**API for all routing systems**
Easy data transfer to solution provider

**Short-term optimal routing**
up to 4 -16% gains in fuel & $CO_2$

**Accurate STW**
for vessel performance monitoring

# SEVERAL APPLICATIONS: AI-DATA FUSION FOR OCEAN-TECH

***New paradigm***

*AI data-fusion*

**GOLD STANDARD OCEAN-DATA**

***Innovative Saas solutions***

**GREEN SHIPPING**

**NAVY**

**ENVIRONMENT**

internal use only, do not distribute

# **OUR PARTNERS** and/or **CLIENTS**

internal use only, do not distribute

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