HIRES-CURRENTS-PERF ARTES Business Applications & Space Solutions (1/2)

Facilitating sustainable shipping through artificial intelligence and satellite-based route optimisation

- Using currents to accelerate transport and reduce fuel consumption and emissions

Project overview

- **Reducing fuel consumption and CO2 emissions** in the shipping industry is essential for the **sustainable energy transition**
- **Amphitrite's** solution harnesses satellite data **to deliver high-resolution surface currents** for short-term route optimisation
- ESA support enabled **key partnerships for real-world testing and securing clients**

"Bringing innovation to a conservative market, especially using space technology"

Alexandre Stegner, Co-founder & CEO, Amphitrite

Benefits

- Supporting the energy transition by **decarbonising the maritime industry**
- Users can seamlessly adopt the solution immediately, with **no costly modifications to vessels or fuel** and experience instant **efficiency gains**
- **45% more accurate** than traditional numerical modelling methods, with strong current estimation errors **reduced from 72% to 35%**
- **Performance maximised with full-ocean data analysis**- optimising routes, avoiding waves, and enhancing safety while **cutting operating costs, fuel use, and emissions**
  - E.g. Estimated **fuel savings of 40-100T** for 20 rotations per year of Tangier-Tunis-Naples-Tangier rotation

13 CLIMATE ACTION

Project success

AMPHITRITE OCEAN DATA INTELLIGENCE

€160K ESA + Industry funding

HIRES-CURRENTS-PERF

DURING

- €57k Sales revenue during project
- 2.5 Jobs created in France
- 35% of sales exported
- 5 Partnerships developed

BEYOND

- €119k From wider portfolio benefitting from BASS
- 38 Business development opportunities with total value ~€425k
- 4 Contracts signed

FUTURE GROWTH

- Working with an NGO to remove pollution in the Pacific Ocean
- 1 Additional BASS project submitted to innovate
- Developing a high-quality data base for ocean wave forecast

LE London Economics

THEMATIC AREA: MARITIME & AQUATIC > TRANSPORT & LOGISTICS

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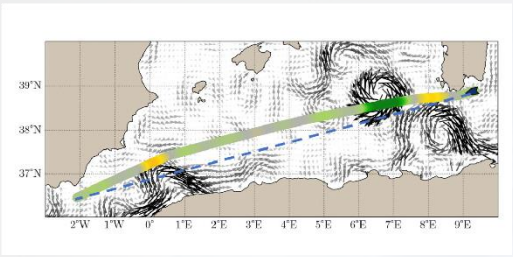
AMPHITRITE OCEAN DATA INTELLIGENCE

Customer need

In April 2023, the **Louis Dreyfus Armateurs** vessel Ciudad de Cadiz sought to **reduce fuel consumption** on its journey **from Sardinia to the Strait of Gibraltar**

Solution

HIRES-CURRENTS data was used to recommend an **optimized route**, deviating from the direct path. This **avoided counter currents and capitalised on positive currents**



Impact

- ✓ 70 minutes journey time saved
- ✓ 5% reduction in fuel consumption over 36 hours

THEMATIC AREA: MARITIME & AQUATIC > TRANSPORT & LOGISTICS