

# ***DIGIFISH***

*“Transforming landing sites into intelligent spaces”*

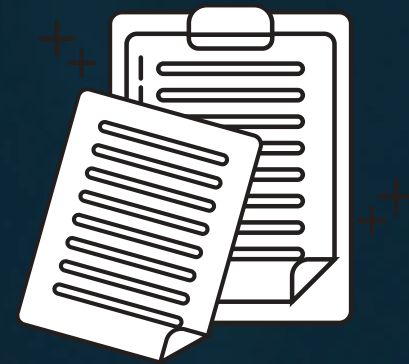
Presented by: Dr. Shelly-Ann Cox | Mr. Olushola King  
Chief Fisheries Officer | Vessel Monitoring System Technician  
Barbados Fisheries Division

2025 Regional Policy Dialogue  
Colony Club, St. James  
16 October 2025



# Challenges in Fisheries Management

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**Inefficient data collection methods**



**Inconsistent monitoring of fishing activities**



**Unsustainable fishing practices**



**Compliance and traceability issues**



**Safety at sea**



**Low digital literacy**

# Our Goal

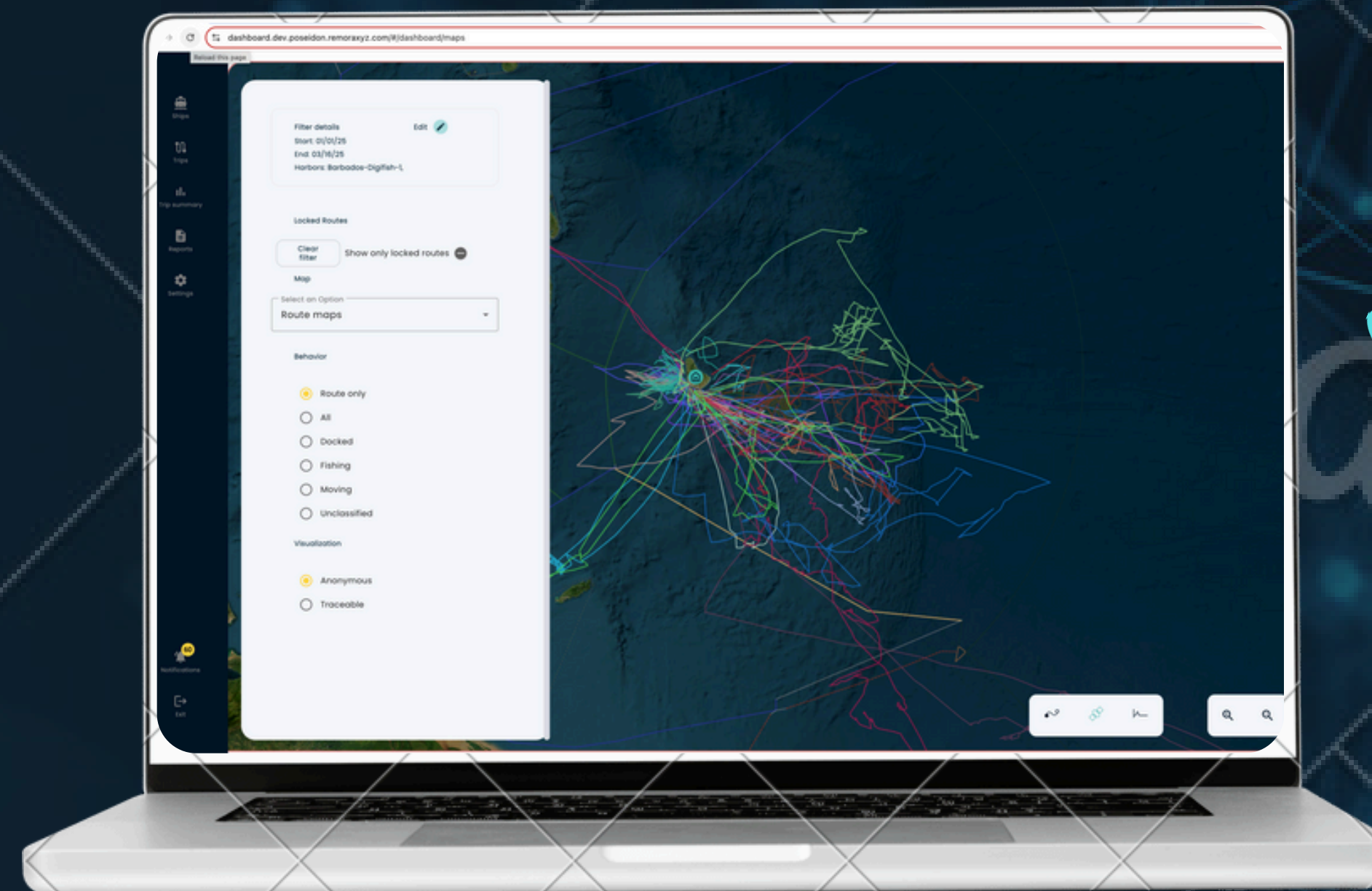


To promote the use of digital technologies, innovative data analytical methods, and enhanced traceability systems to support the application of the Ecosystem Approach to Fisheries (EAF) in Barbados.

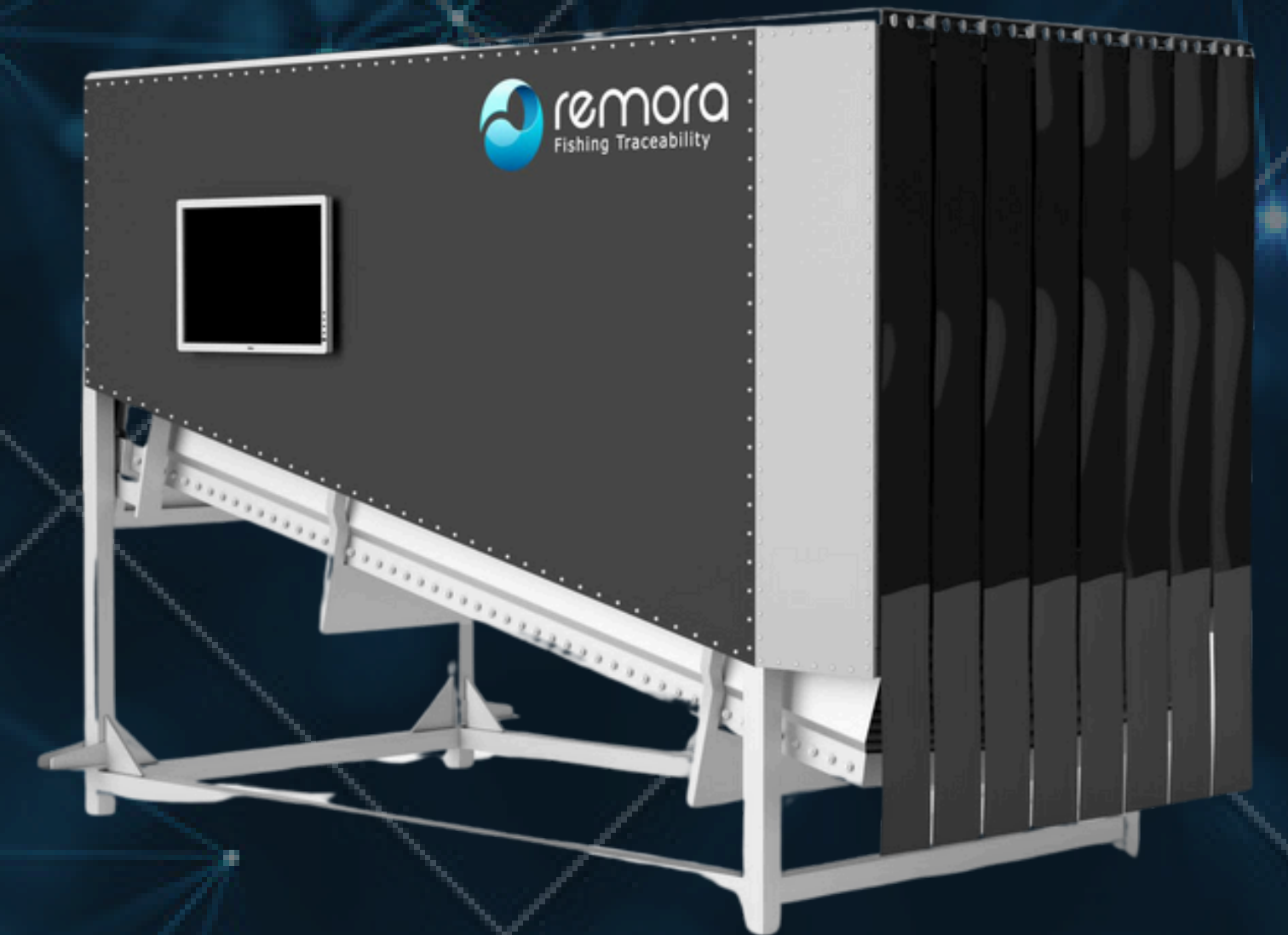
# Our Suite of Technologies



**Vessel Monitoring Device**



**Data Management Platform**



**'Internet of Things' Smart Scale**



# Vessel Monitoring Device



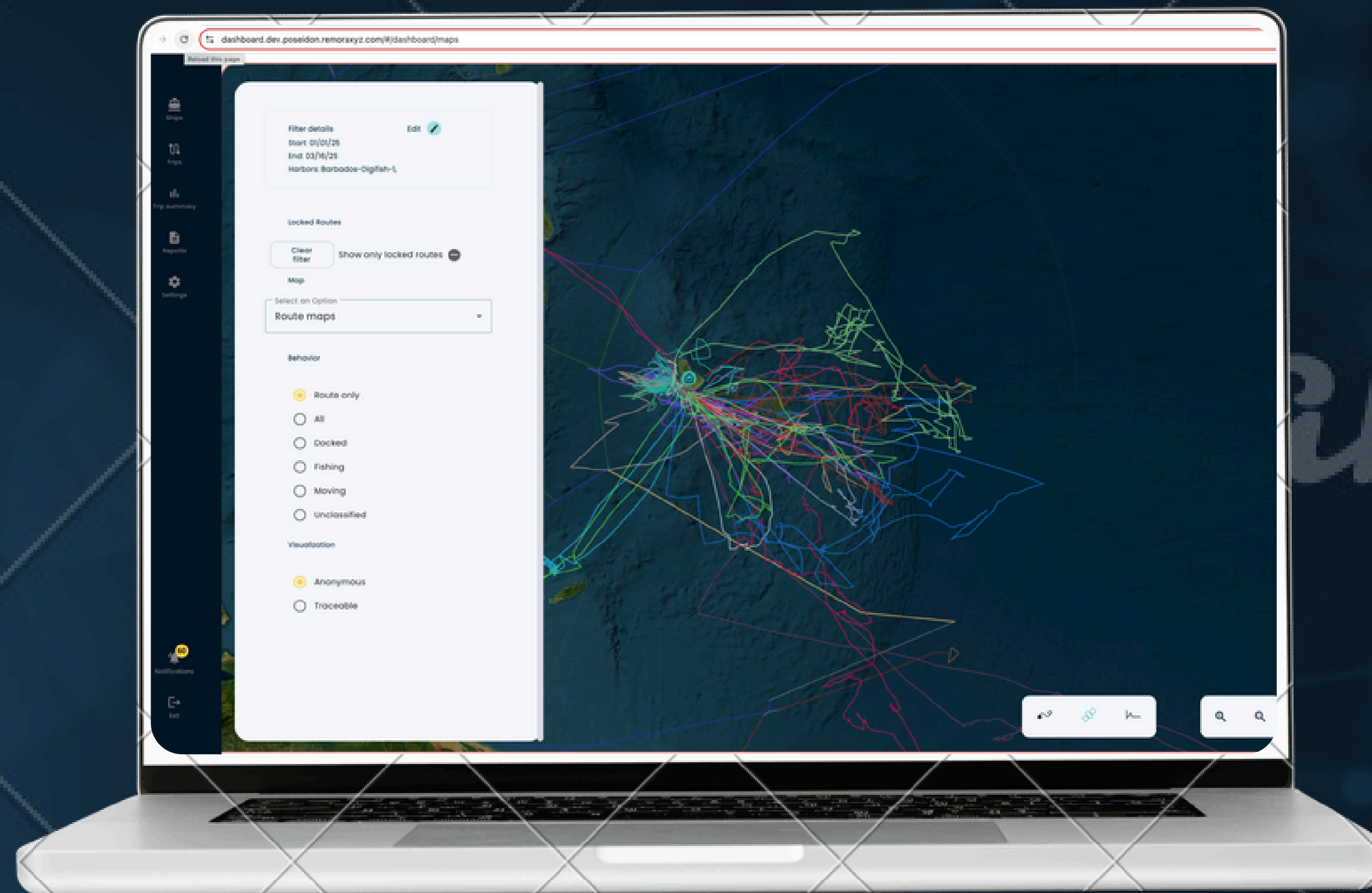
- ✓ Who was fishing where
- ✓ How far are they going
- ✓ Proof on respecting protected areas

## Key Features

- Determines location, speed and direction
- Solar powered, self charging
- Satellite communication
- Collects near real time data
- Easy to install
- Light weight
- Cost effective

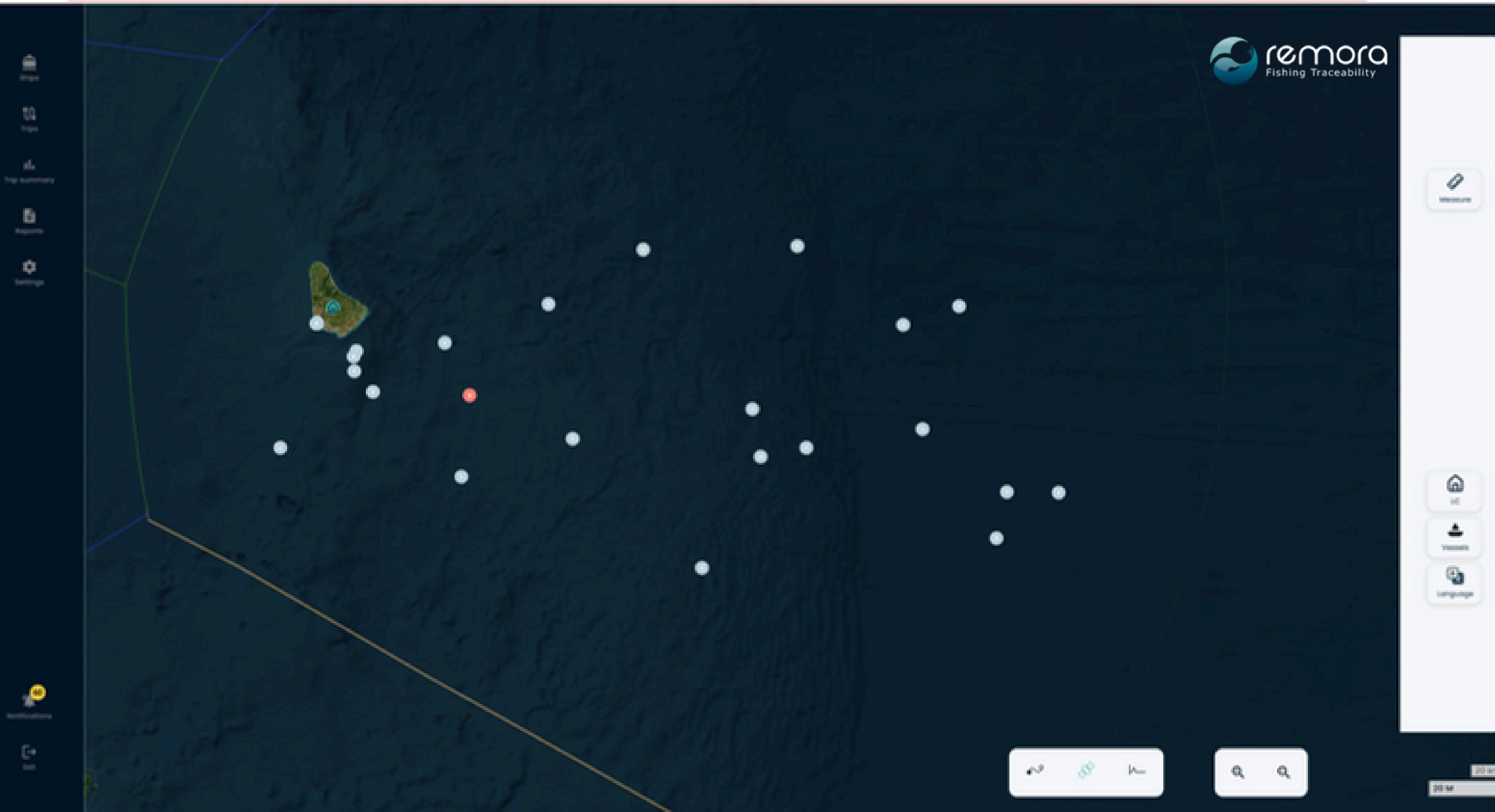


# Data Intelligence Platform



## Key Features

- Processes the information of the Remora hardware
- Stores and analyzes data on various aspects of fishing activities
- Generates visualizations that provide insights into the state of the fishery
- Generates analytical summary reports



Information

Close

Vessel



Name: HAPPY WOODS

Landing Center: Barbados-Digfish-1

Fish Area: Area de Pesca de Barbados

Information

Boat Registration: ga\_soa\_0-4538271

Ship owner: No set

ID vms: ga\_soa\_0-4538271

Point Information

Date: 11/05/2025

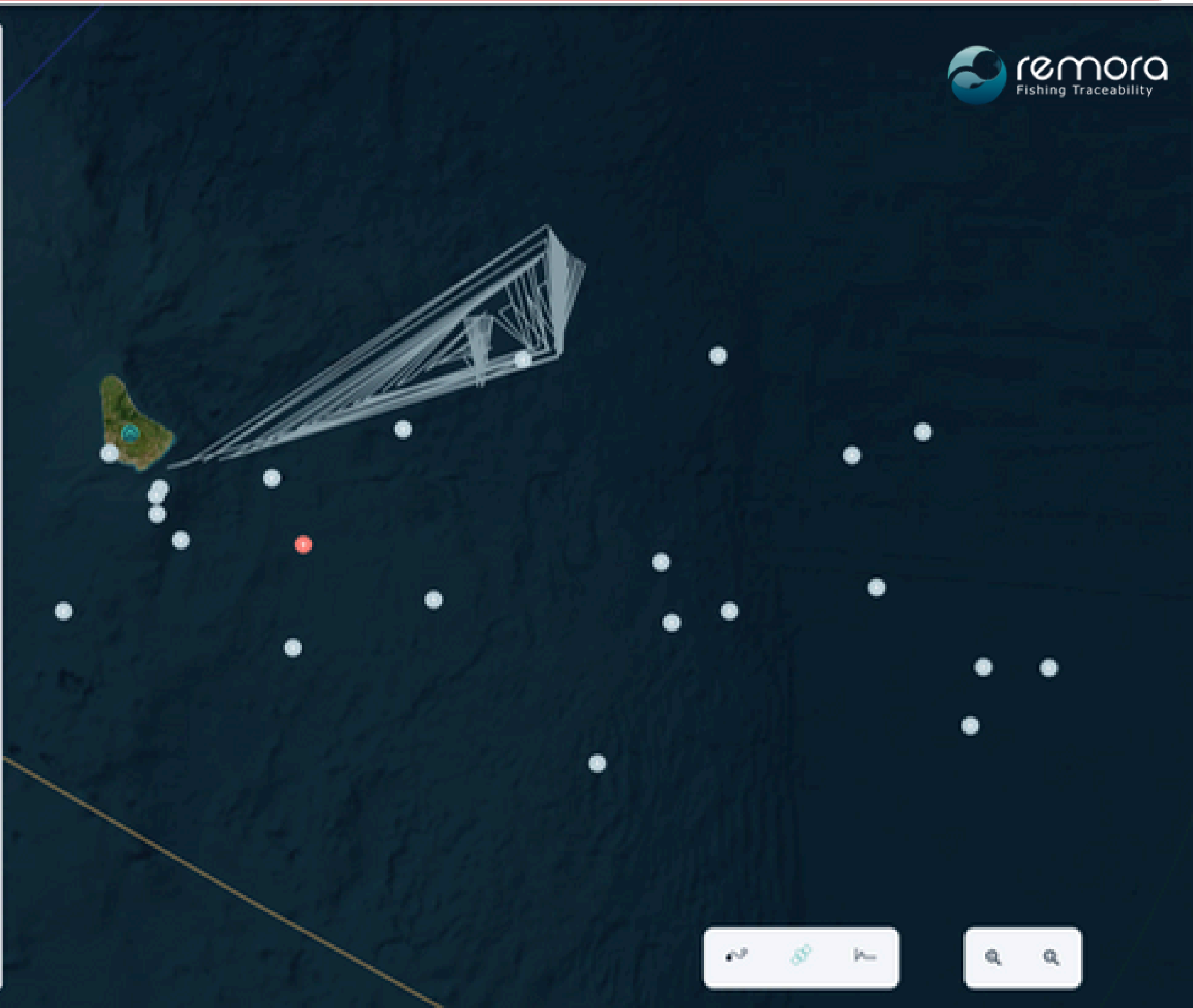
Time: 08:03 AM

Latitude: 13.275408104

Longitude: -58.333281471

Heading: 94

Speed: 3 knots (5.56 km/h)



Home

Reports

Language

?

20 km

Filter details

edit 

Start: 01/01/20

End: 01/01/20

Harbors: Barbados-Digfish-1

Locked Routes

Clear  
filter

Show only locked routes 

Map

Select an Option

Route maps

Behavior

☒ Route-only

☐ All

☐ Docked

☐ Fishing

☐ Moving

☐ Unclassified

Visualization

☐ Anonymous

☒ Traceable



Filter details

edit

Start: 05/11/24

End: 05/12/24

Harbours: Barbados (English-1)

Locked Routes

Clear filter

Show only locked routes

Map

Select an Option

Route maps

Behaviour

☐ Route only

☐ All

☐ Docked

☒ Fishing

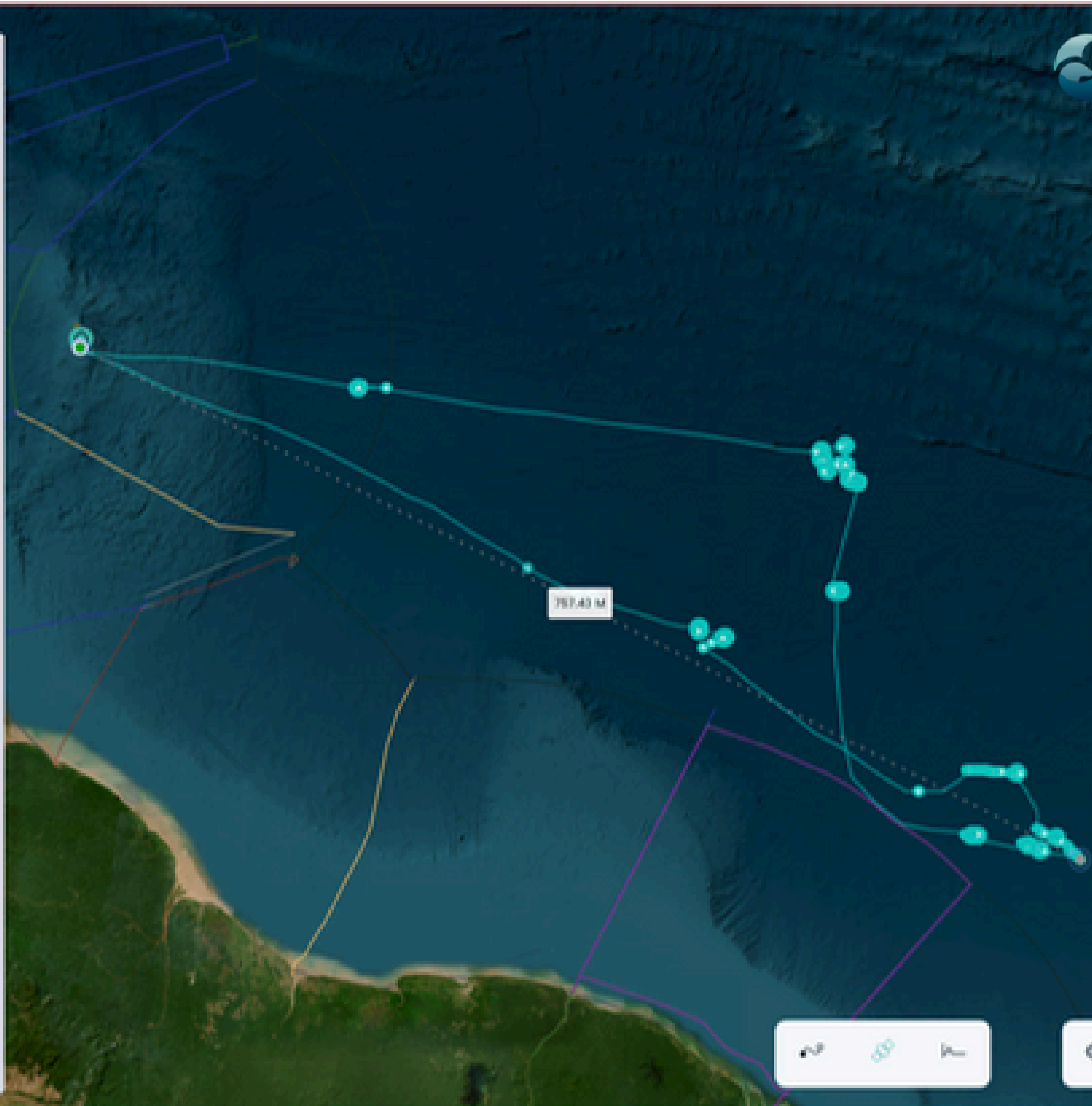
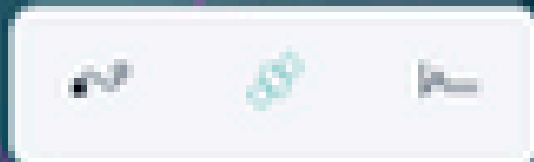
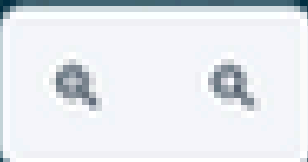
☐ Moving

☐ Unclassified

Visualization

☒ Anonymous

☐ Traceable



# Data Intelligence Platform

My landing centers

Select date range

Start \*

7/1/2023



End \*

8/31/2023



Select landing centers

Landing center \*

Centro de Acopio de ...

Apply

Centro de Acopio de Barbados

Total trips

10

Total trips by vessel

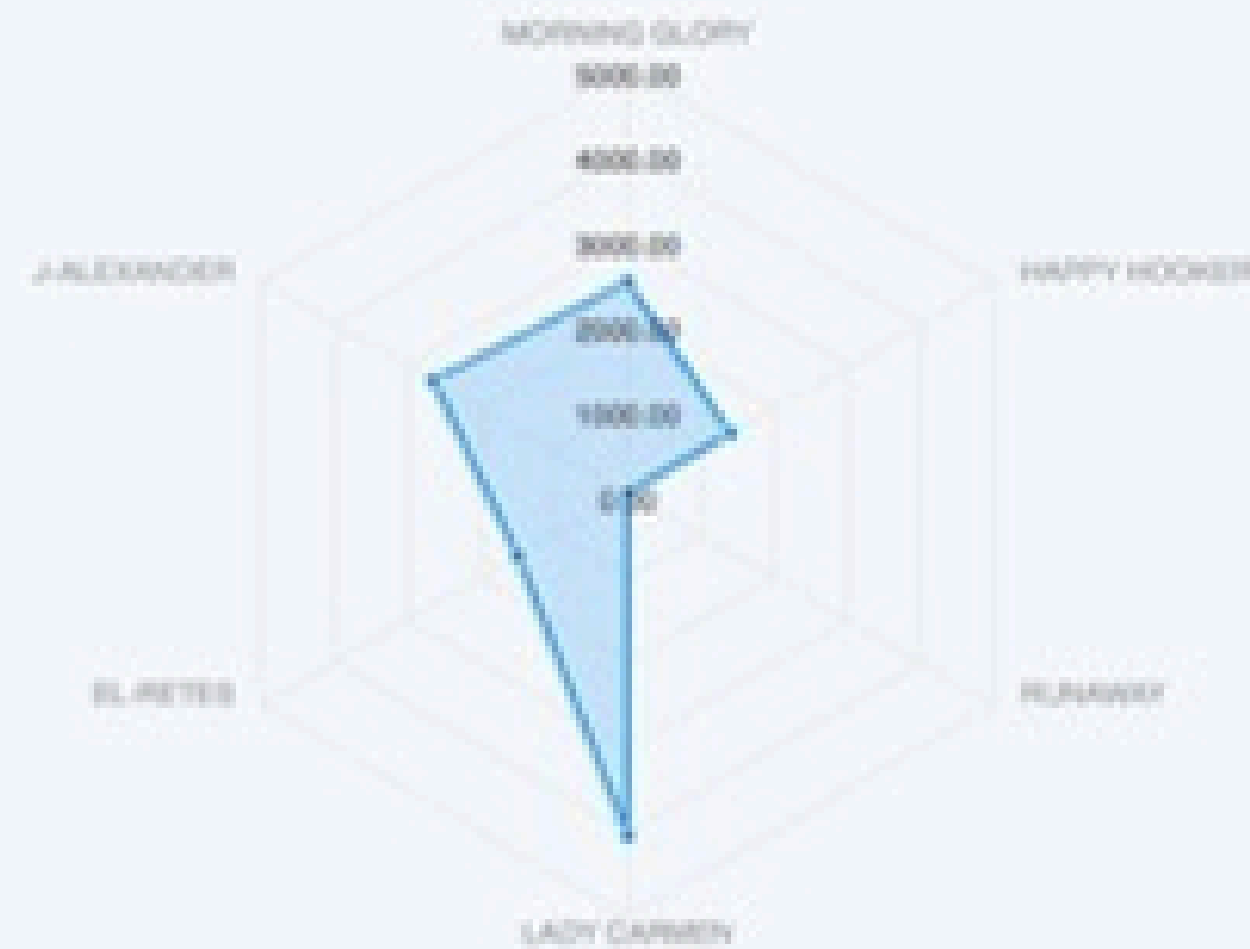
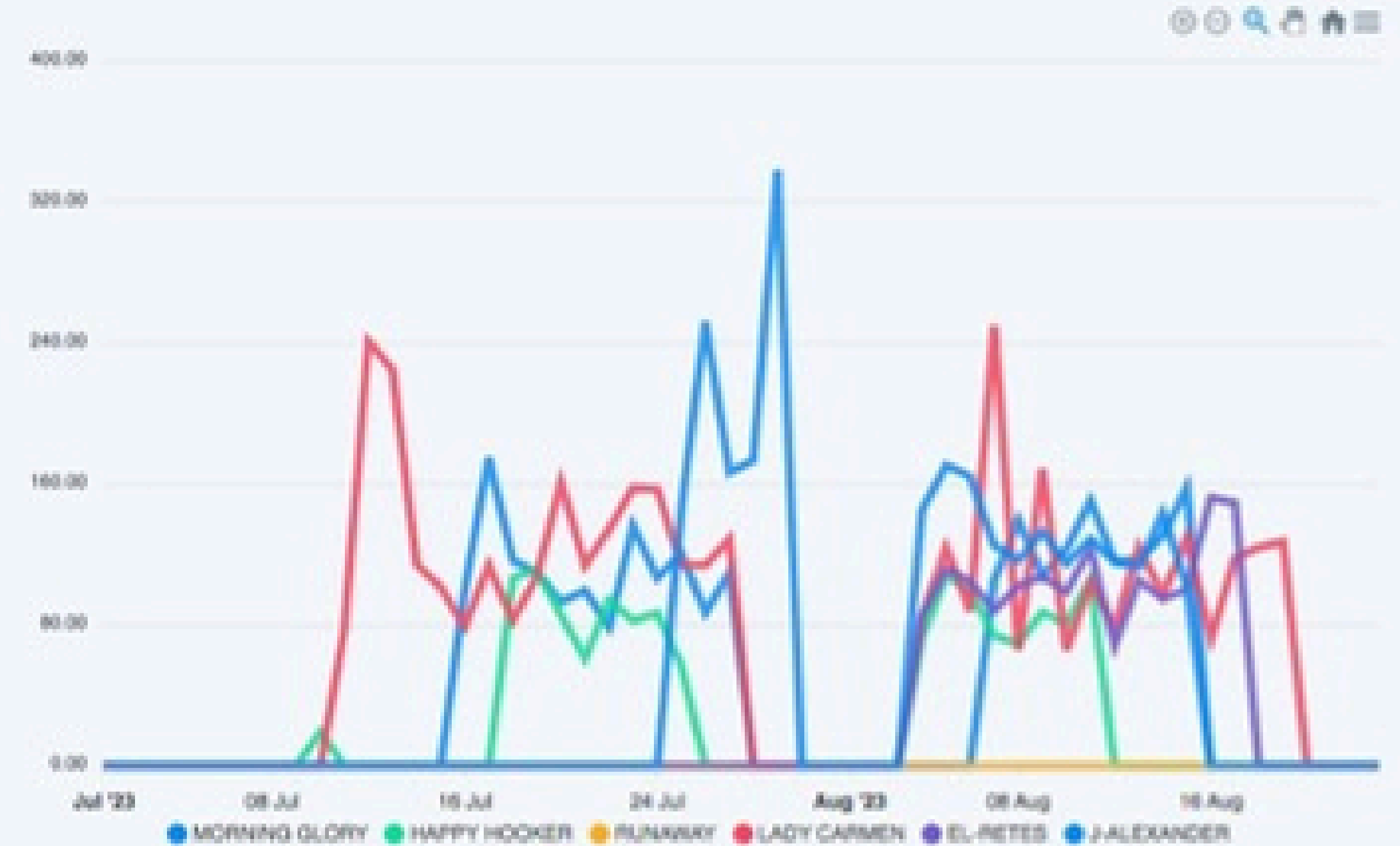
4



# Data Intelligence Platform

Total distance  
**12085.73 km**

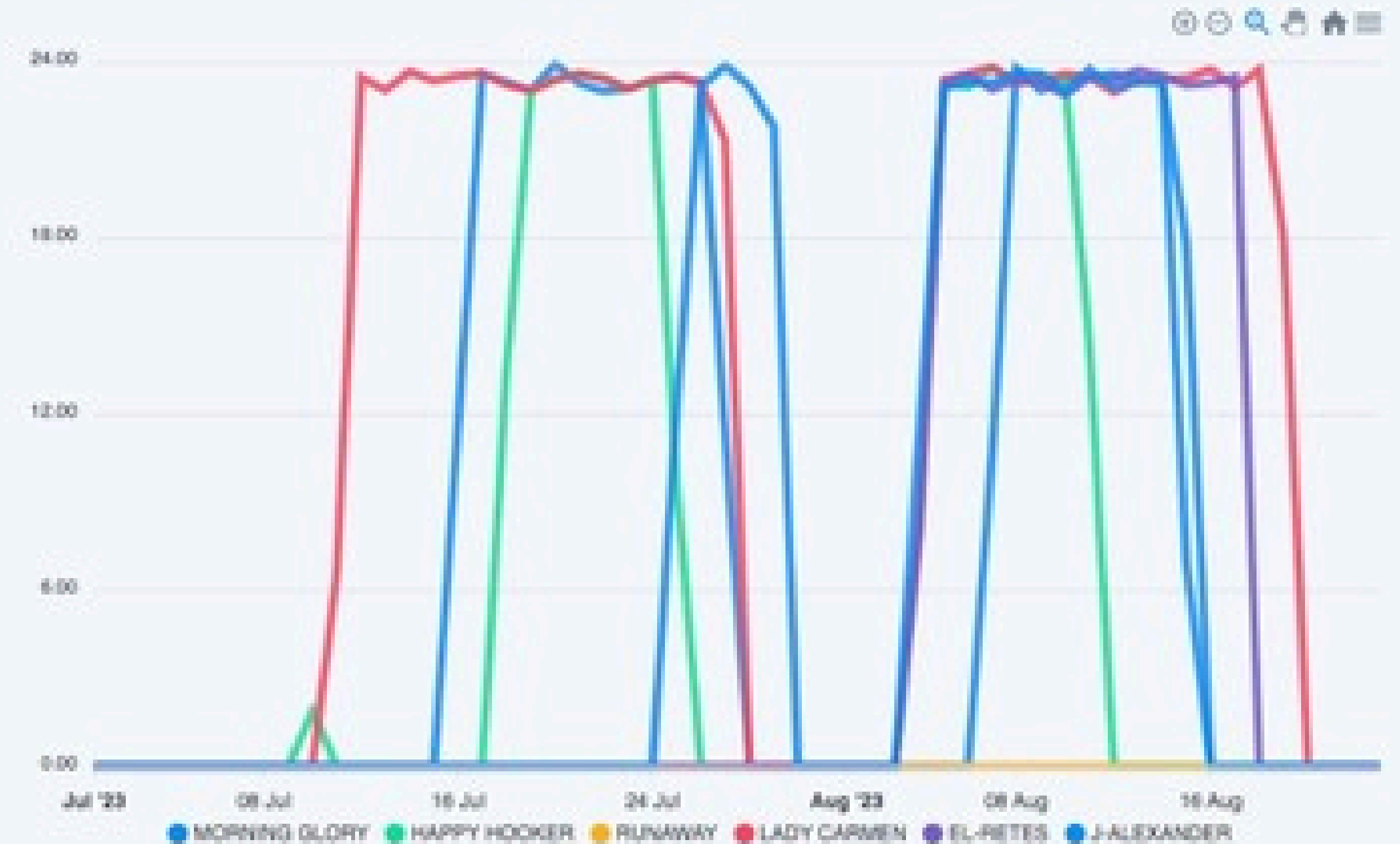
Distance per boat



# Data Intelligence Platform

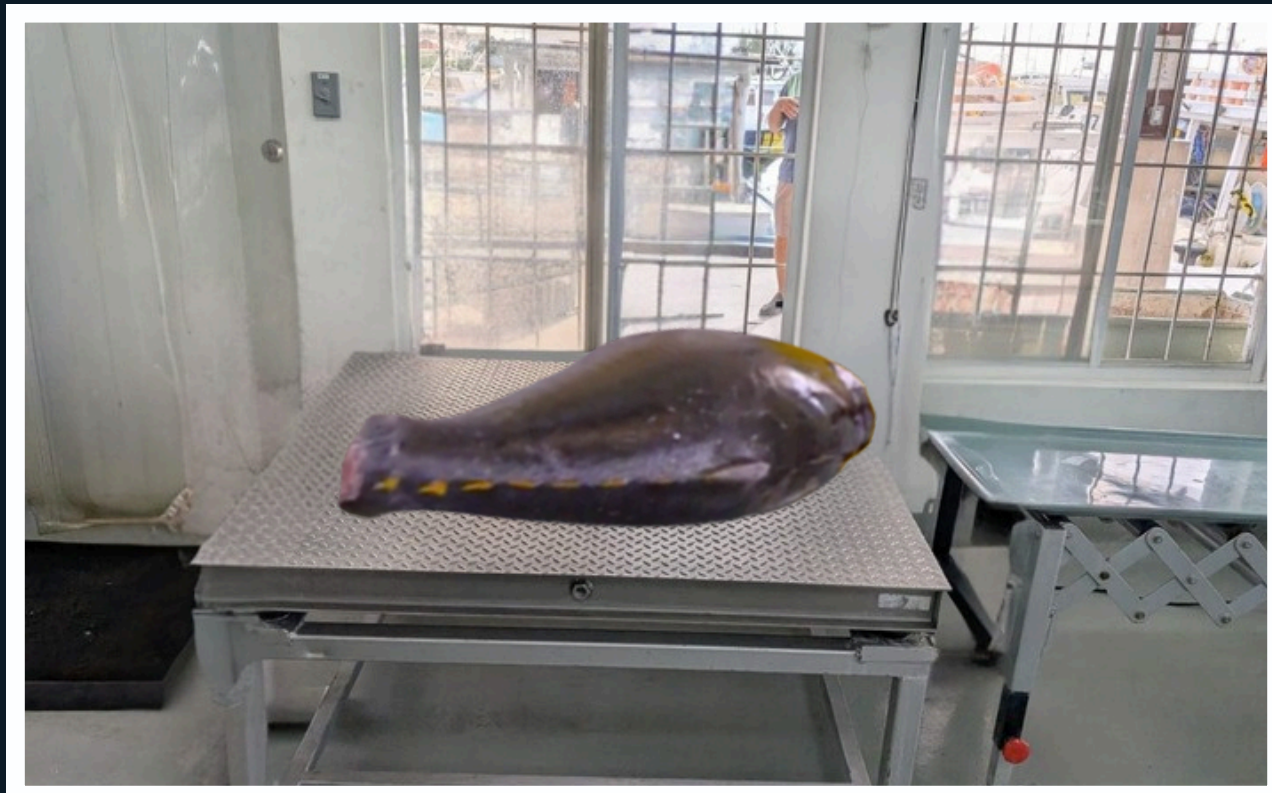
Total fishing time  
**2179.81 h**

Fishing time per boat



# 'Internet of Things' Smart Scale

## Before the Smart Scale



620 Vals

OFF LOADING SHEET

*The Calypso*

| FISH NO. | BOX NO. | TYPE  | GRADE | TEMP | LEN | FISH NO. | BOX NO. | TYPE  | GRADE | TEMP | LEN |
|----------|---------|-------|-------|------|-----|----------|---------|-------|-------|------|-----|
| 1        | 1       | 1/10  | 22    | 20   | 115 | 37       | 1       | 1/10  | 22    | 20   | 115 |
| 2        | 2       | 2/10  | 22    | 20   | 115 | 38       | 2       | 2/10  | 22    | 20   | 115 |
| 3        | 3       | 3/10  | 22    | 20   | 115 | 39       | 3       | 3/10  | 22    | 20   | 115 |
| 4        | 4       | 4/10  | 22    | 20   | 115 | 40       | 4       | 4/10  | 22    | 20   | 115 |
| 5        | 5       | 5/10  | 22    | 20   | 115 | 41       | 5       | 5/10  | 22    | 20   | 115 |
| 6        | 6       | 6/10  | 22    | 20   | 115 | 42       | 6       | 6/10  | 22    | 20   | 115 |
| 7        | 7       | 7/10  | 22    | 20   | 115 | 43       | 7       | 7/10  | 22    | 20   | 115 |
| 8        | 8       | 8/10  | 22    | 20   | 115 | 44       | 8       | 8/10  | 22    | 20   | 115 |
| 9        | 9       | 9/10  | 22    | 20   | 115 | 45       | 9       | 9/10  | 22    | 20   | 115 |
| 10       | 10      | 10/10 | 22    | 20   | 115 | 46       | 10      | 10/10 | 22    | 20   | 115 |
| 11       | 11      | 11/10 | 22    | 20   | 115 | 47       | 11      | 11/10 | 22    | 20   | 115 |
| 12       | 12      | 12/10 | 22    | 20   | 115 | 48       | 12      | 12/10 | 22    | 20   | 115 |
| 13       | 13      | 13/10 | 22    | 20   | 115 | 49       | 13      | 13/10 | 22    | 20   | 115 |
| 14       | 14      | 14/10 | 22    | 20   | 115 | 50       | 14      | 14/10 | 22    | 20   | 115 |
| 15       | 15      | 15/10 | 22    | 20   | 115 | 51       | 15      | 15/10 | 22    | 20   | 115 |
| 16       | 16      | 16/10 | 22    | 20   | 115 | 52       | 16      | 16/10 | 22    | 20   | 115 |
| 17       | 17      | 17/10 | 22    | 20   | 115 | 53       | 17      | 17/10 | 22    | 20   | 115 |
| 18       | 18      | 18/10 | 22    | 20   | 115 | 54       | 18      | 18/10 | 22    | 20   | 115 |
| 19       | 19      | 19/10 | 22    | 20   | 115 | 55       | 19      | 19/10 | 22    | 20   | 115 |
| 20       | 20      | 20/10 | 22    | 20   | 115 | 56       | 20      | 20/10 | 22    | 20   | 115 |
| 21       | 21      | 21/10 | 22    | 20   | 115 | 57       | 21      | 21/10 | 22    | 20   | 115 |
| 22       | 22      | 22/10 | 22    | 20   | 115 | 58       | 22      | 22/10 | 22    | 20   | 115 |
| 23       | 23      | 23/10 | 22    | 20   | 115 | 59       | 23      | 23/10 | 22    | 20   | 115 |
| 24       | 24      | 24/10 | 22    | 20   | 115 | 60       | 24      | 24/10 | 22    | 20   | 115 |
| 25       | 25      | 25/10 | 22    | 20   | 115 | 61       | 25      | 25/10 | 22    | 20   | 115 |
| 26       | 26      | 26/10 | 22    | 20   | 115 | 62       | 26      | 26/10 | 22    | 20   | 115 |
| 27       | 27      | 27/10 | 22    | 20   | 115 | 63       | 27      | 27/10 | 22    | 20   | 115 |
| 28       | 28      | 28/10 | 22    | 20   | 115 | 64       | 28      | 28/10 | 22    | 20   | 115 |
| 29       | 29      | 29/10 | 22    | 20   | 115 | 65       | 29      | 29/10 | 22    | 20   | 115 |
| 30       | 30      | 30/10 | 22    | 20   | 115 | 66       | 30      | 30/10 | 22    | 20   | 115 |
| 31       | 31      | 31/10 | 22    | 20   | 115 | 67       | 31      | 31/10 | 22    | 20   | 115 |
| 32       | 32      | 32/10 | 22    | 20   | 115 | 68       | 32      | 32/10 | 22    | 20   | 115 |
| 33       | 33      | 33/10 | 22    | 20   | 115 | 69       | 33      | 33/10 | 22    | 20   | 115 |
| 34       | 34      | 34/10 | 22    | 20   | 115 | 70       | 34      | 34/10 | 22    | 20   | 115 |
| 35       | 35      | 35/10 | 22    | 20   | 115 | 71       | 35      | 35/10 | 22    | 20   | 115 |
| TOTAL    |         |       |       |      |     |          |         |       |       |      |     |

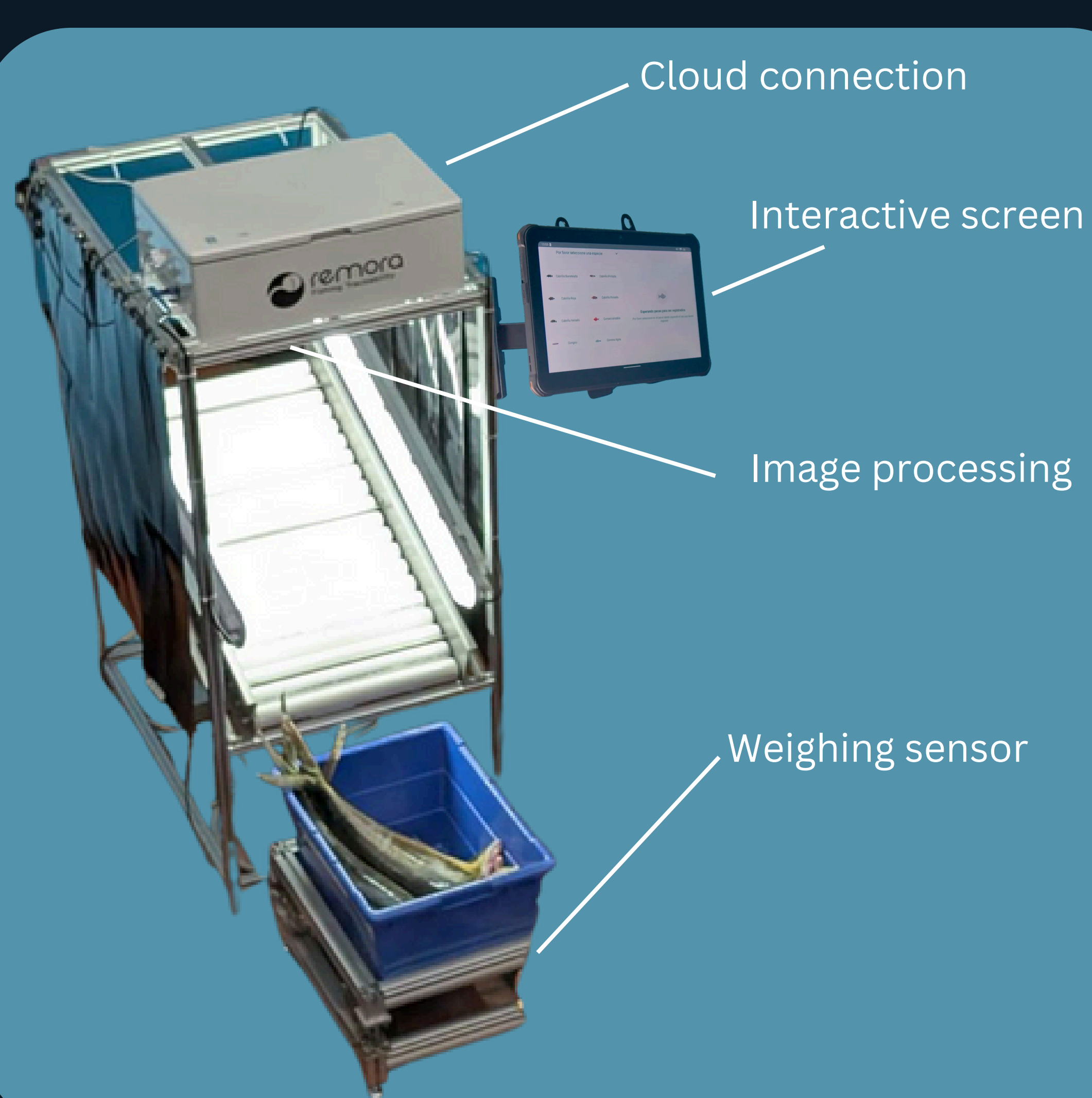
Off-loading and landing were carried out under strict supervision with all sanitary and inspection procedures being adhered to.

Σ = 754.00

## Challenges

- Manual data collection
- Issues of quality control
- Time consuming to perform historical data analyses
- Difficult to integrate with other fisheries management systems

# 'Internet of Things' Smart Scale



- ✓ Proof on legal sizes and species
- ✓ Who caught what
- ✓ Helps to monitor fishing stock

## Key Features

- Artificial intelligence (AI) to identify the species
- Measures weight and length
- Manual input of temperature and grade
- Correlates with VMS data
- Prints a traceability tag



# Stakeholder Engagement



## Key Outcomes

- Increased awareness & adoption of digital tools
- Strengthened collaboration among key actors
- Access to the Remora platform granted to key stakeholders
- Tailored solutions & capacity building needs
- Policy & regulatory support for digital fisheries management



# Unlocking the Benefits of DigiFish



## Fisheries Management Authorities

- Efficient and accurate real-time data collection
- Consistent monitoring of fishing effort and catch composition
- Determination of catch per unit effort
- Application in Marine Spatial Planning (MSP)
- Data-driven decision making
- Enhanced stakeholder collaboration
- Conservation and ecosystem management

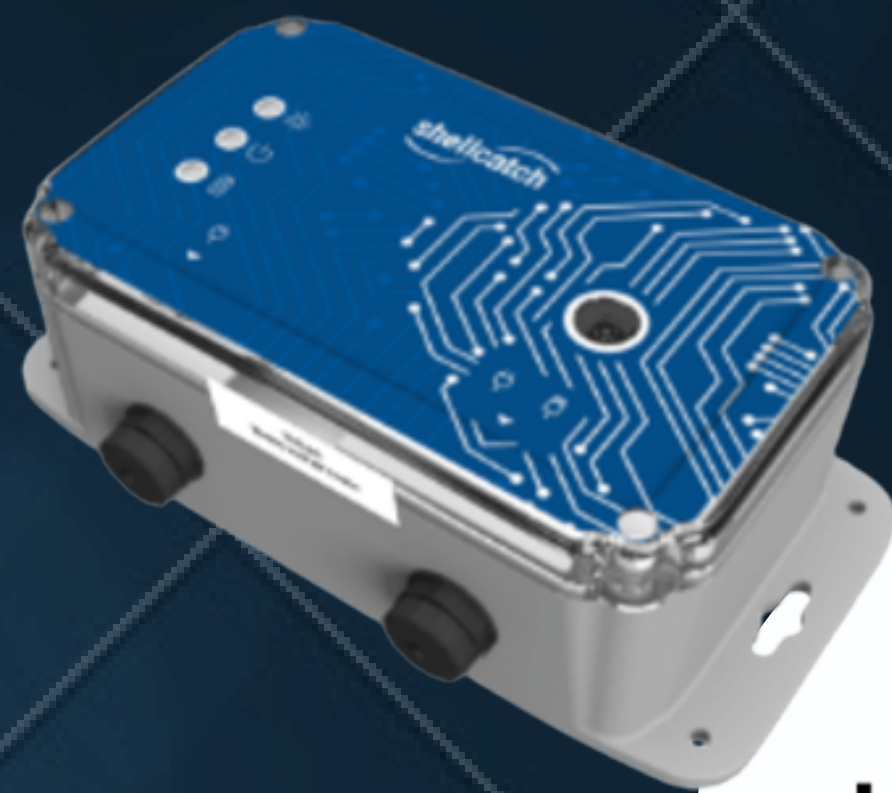


## Fisherfolk

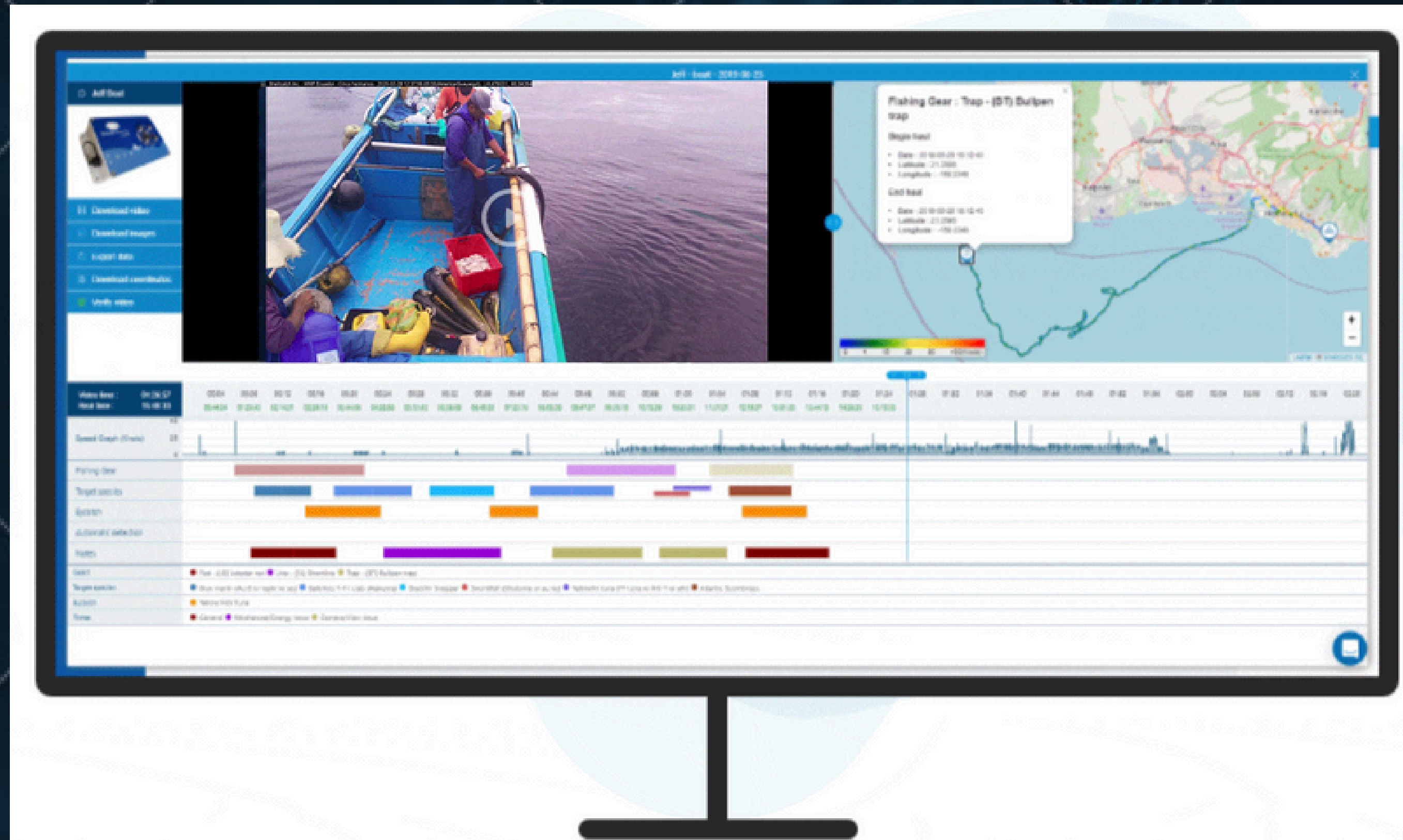
- Increases digital literacy
- Enhances safety at sea
- Helps optimize fishing trips
- Improves traceability for compliance with national and international regulations
- Opens access to premium markets
- Provides data to access financial & insurance services

# Shellcatch

Onboard Camera Powered by AI

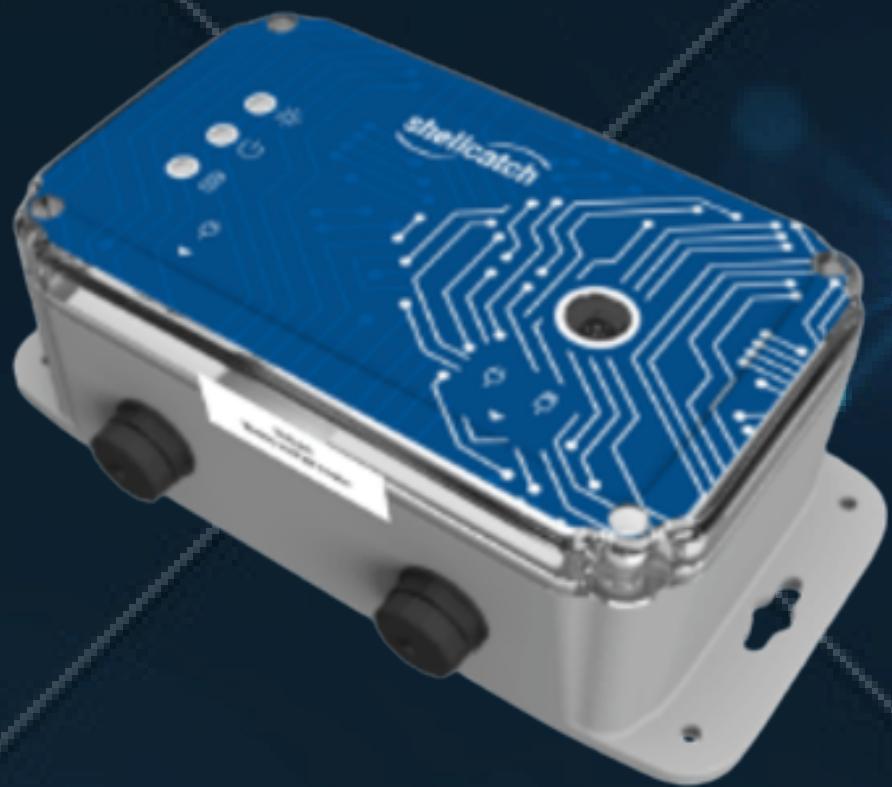


shellcatch



# Shellcatch

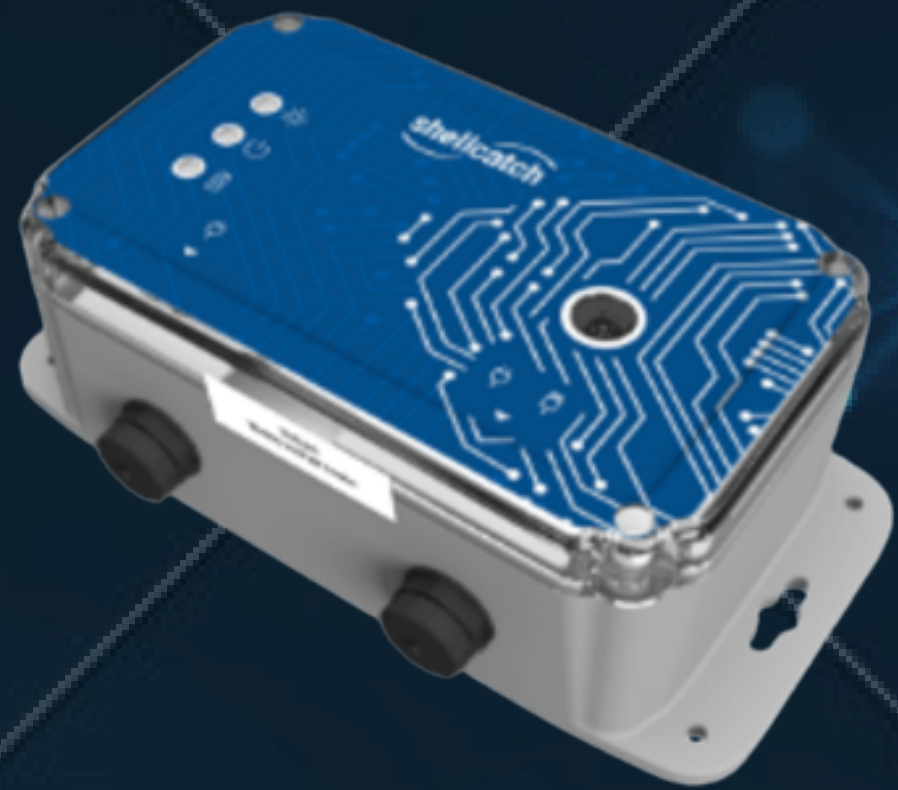
Onboard Camera Powered by AI



shellcatch

# Shellcatch

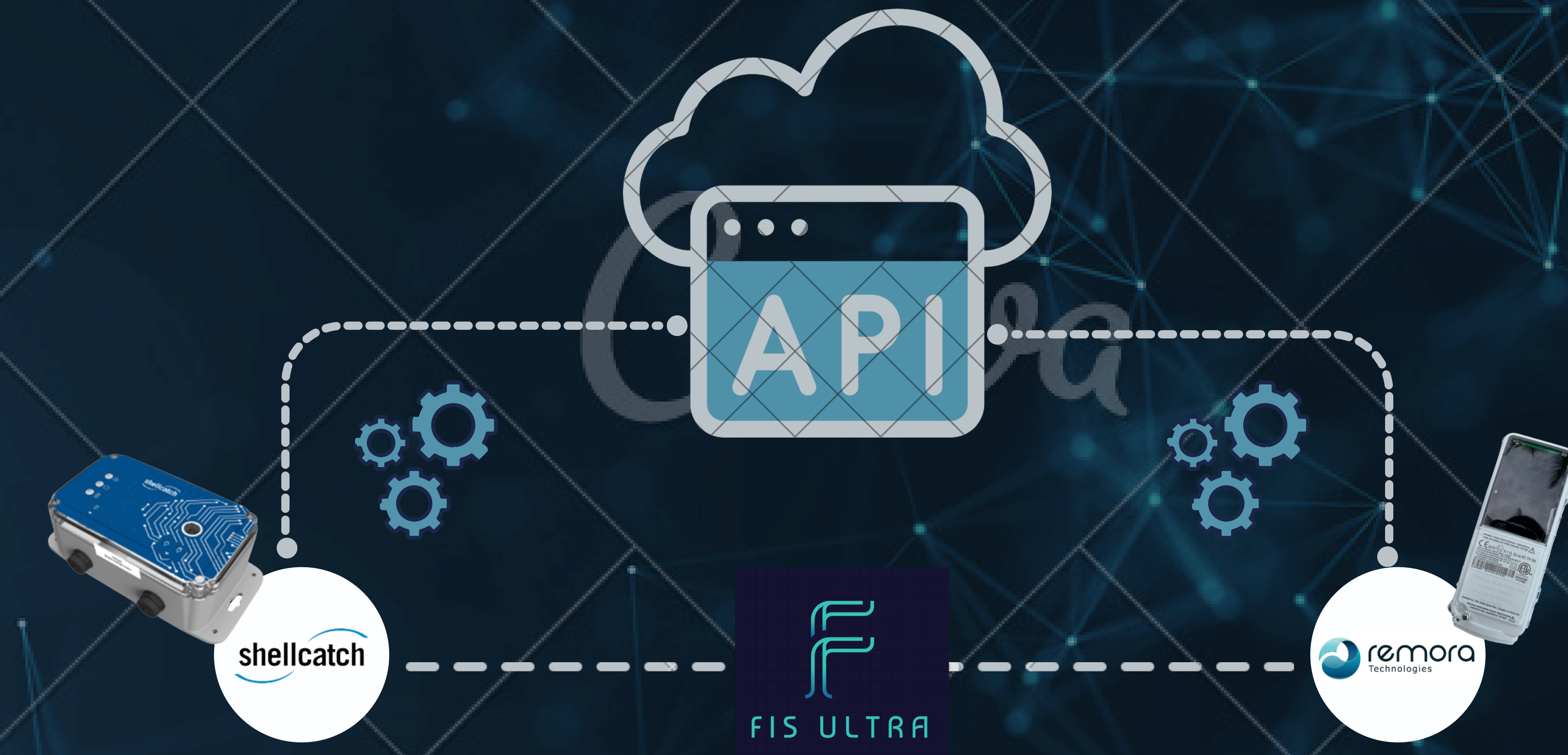
Onboard Camera Powered by AI



shellcatch

# Next Steps

Application Programming Interfaces (APIs) Integration



# Thank You!



## CONTACT INFORMATION

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Website: <https://www.fisheries.gov.bb>

## Photo Credits

Compete Caribbean  
Juan Marti  
Shell Catch  
Dr. Shelly-Ann Cox

## Video Credits

Compete Caribbean