



PRODUCT OVERVIEW

Trackwell Vessel Monitoring System

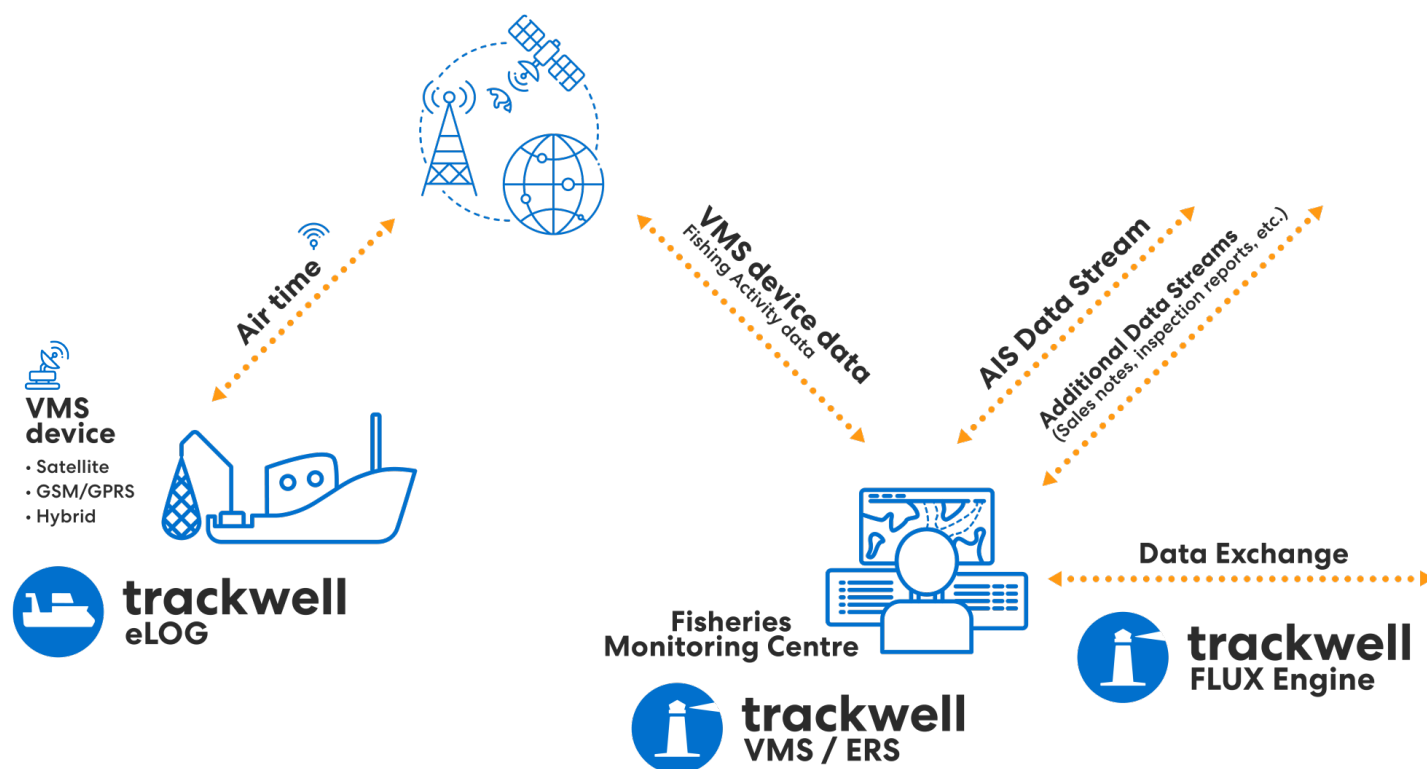
Trackwell VMS is a state-of-the-art fisheries monitoring centre software that provides powerful near real time insights for authorities/organizations to sustainably manage and control fisheries activities.



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Fisheries Management System

Trackwell **Fisheries Management Systems** offers a suite of solutions that include **VMS** (Vessel Monitoring System) software, the **ERS** (Electronic Reporting System for managing fishing activity data), the **eLOG** (electronic logbook for on-board catch registration), and the FLUX Engine which translates and standardizes the data into FLUX (Fisheries Language for Universal Exchange) to comply with international regulations. These solutions are powered by Data Analysis Engine that generates powerful insights tailored to the client's needs for different purposes such as, but not limited to, Safety at Sea, law/quota enforcement, IUU detection and research.



All of these are linked through a powerful task management system that allows users and administrators to have complete traceability of all issues and customized alerts generated by the platform, log of all actions taken by operators, vessel response, manual inputs and modifications, and other variables as defined by the customer.

Our solutions are offered as a Software as a Service (SaaS) and are completely independent of hardware providers yet fully compatible with most of the main MTUs available and different types of tracking devices (VMS/AIS/GPRS). Each product can work as a standalone and integrated with existing systems or as a fully integrated and comprehensive FiMS software suite.

Fisheries Management System

Device, Airtime and Data Components

VMS Units

- Satellite
- GSM/GPRS
- Hybrid

Airtime

- Data Plan
- Overage Cost

AIS Data

- Additional Positional Information

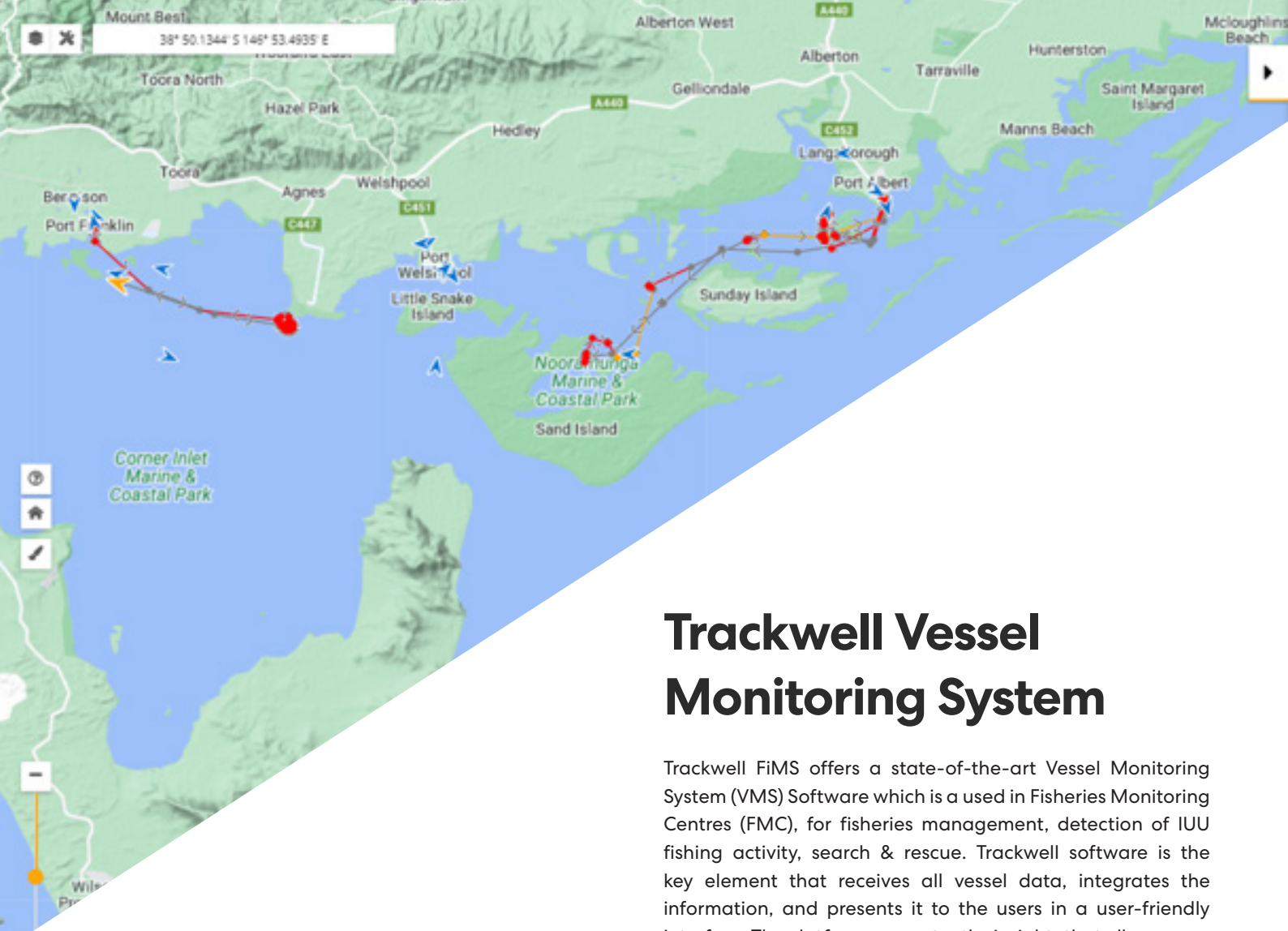
Software Components (Trackwell)

FMC Software

- Off-the-shelf Monitoring capabilities
- Additional Features
 - Data Governance
 - Data Exchange (FLUX)
 - Data Analysis

E-Logbook and ERS Software Module





Trackwell Vessel Monitoring System

Trackwell FiMS offers a state-of-the-art Vessel Monitoring System (VMS) Software which is used in Fisheries Monitoring Centres (FMC), for fisheries management, detection of IUU fishing activity, search & rescue. Trackwell software is the key element that receives all vessel data, integrates the information, and presents it to the users in a user-friendly interface. The platform generates the insights that allows users to actively monitor the fisheries activities and prioritise their physical enforcement and safety at sea operations through the automatization of customized alerts while keeping full traceability of all actions. This means that the software does not only receive data and display dots in a map but provides the essential added value for what the VMS system is designed and implemented for.

Trackwell VMS software is fully compliant with international fisheries regulations and facilitates the exchange of information between authorities, neighbouring countries, and Regional Fisheries Management Organizations (RFMOs). Our VMS software is offered as a Software as a Service (SaaS) that covers the software licence, preventive maintenance, and updates, and 24/7 support services needed to keep the whole system fully operational.

"The system suits our needs well, mainly because it is specially tailored to the needs of all these different member states that have unique requirements. This flexibility is one of the strengths of the Trackwell VMS."

Ramesh Chand, Manager Vessel Monitoring System at FFA



Main Features of the Trackwell VMS Software



Graphical User Interface (GUI)

- User Friendly Interface
- Map Display



VMS Monitoring Engine

- Track Vessels and Manage Fleets
- Zone Monitoring and Enforcement
- Sustainable Fisheries Management
- Safety at Sea
- Vessel Registry
- Fishing Licences and Permits



Reporting Tools

- Customized Reports
- ERS / Logbook Data



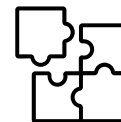
Data Handling

- User Management
- Data Governance
- Data Security & Reliability
- Scalability & Capacity



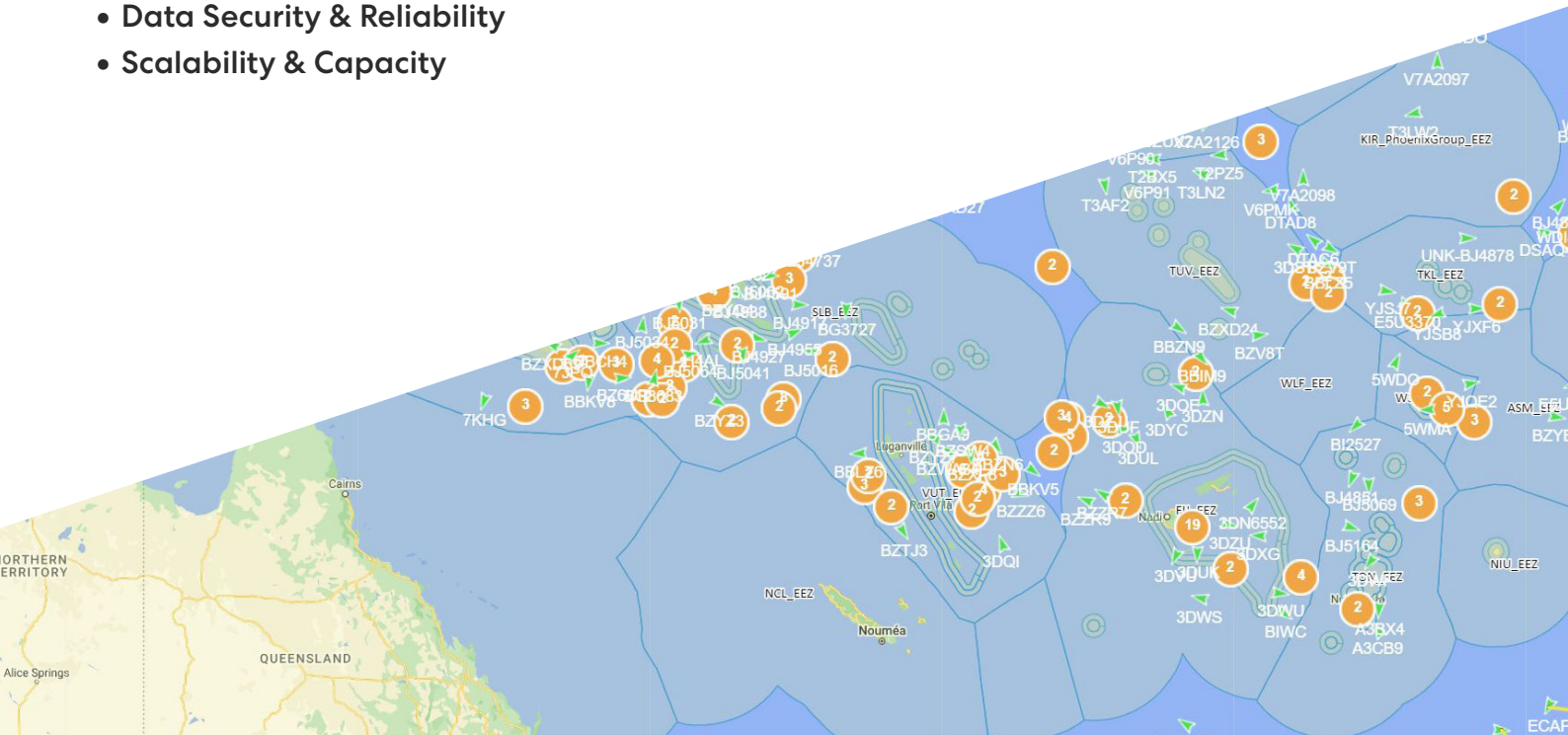
Data Exchange & Communications

- FLUX Communications
- Data Exchange



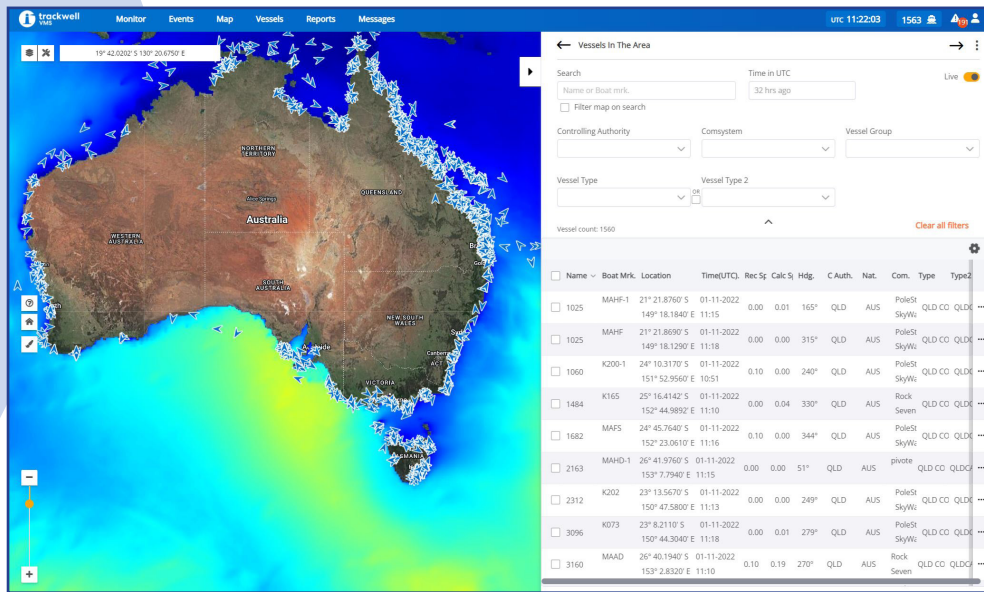
Device & AIS Integration

- AIS Integration
- Device Compatibility





Graphical User Interface (GUI)

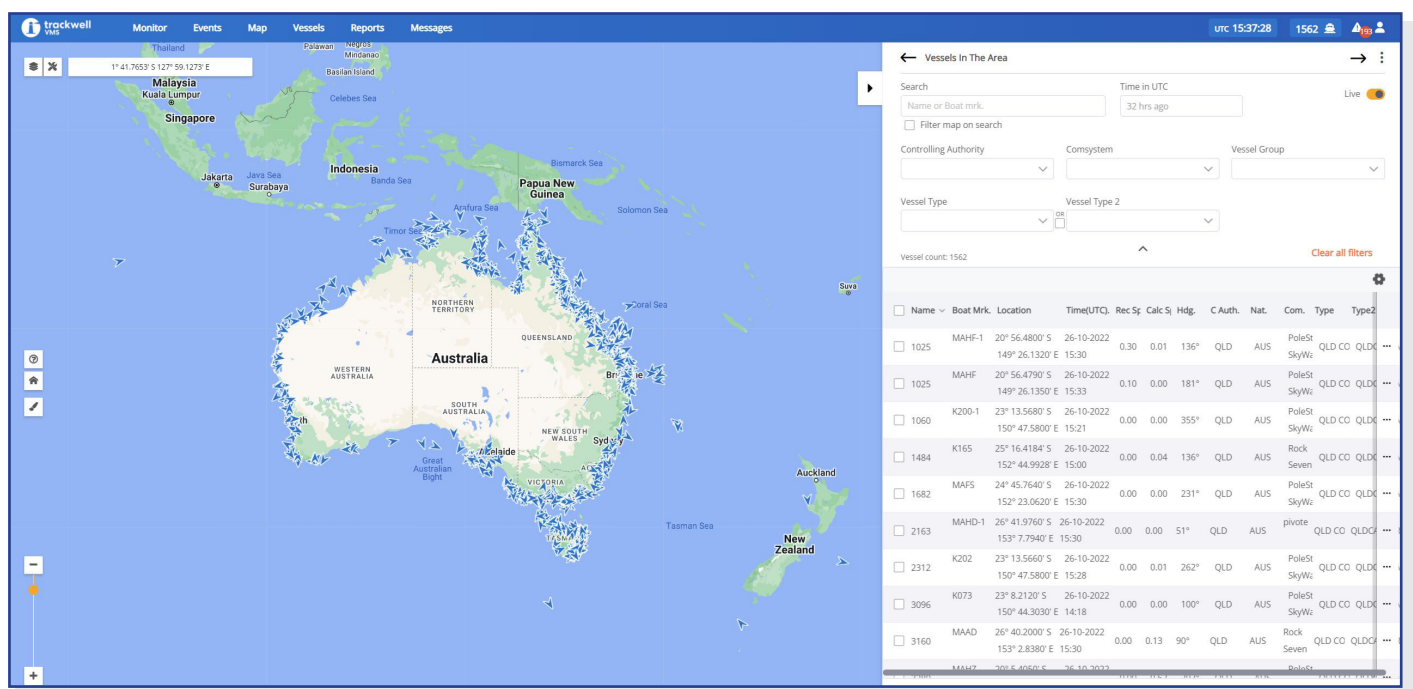


User Friendly Interface

The system is designed for ease of use providing an intuitive and easy to use user interface. The systems intuitive Monitoring page organizes all issues and alerts delivering users a complete overview of all monitoring issues and operations making their work faster and efficient.

Map Display

Vessel locations are presented on a state-of-the-art map application, supporting navigational maps on most standard formats. Among many features are easy to use vessel filtering, creation and handling of user defined maps, geo-fence editor, history trails and replay features for detailed analysis of vessel behaviour. Additionally, the system can integrate weather and oceanographic forecast and information layers.

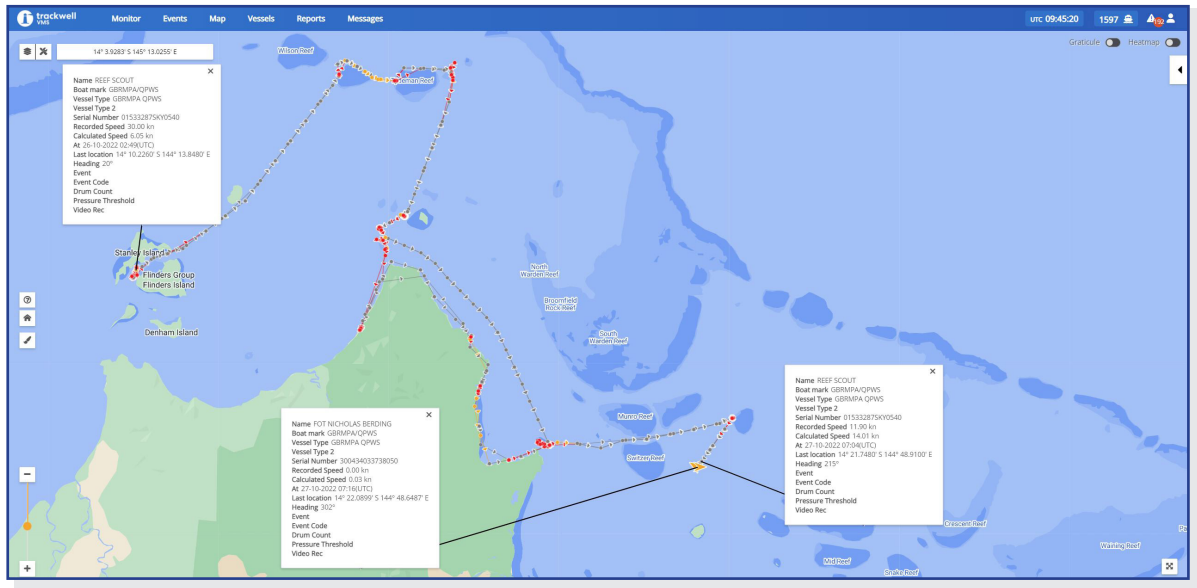




VMS Monitoring Engine

Track Vessels and Manage Fleets

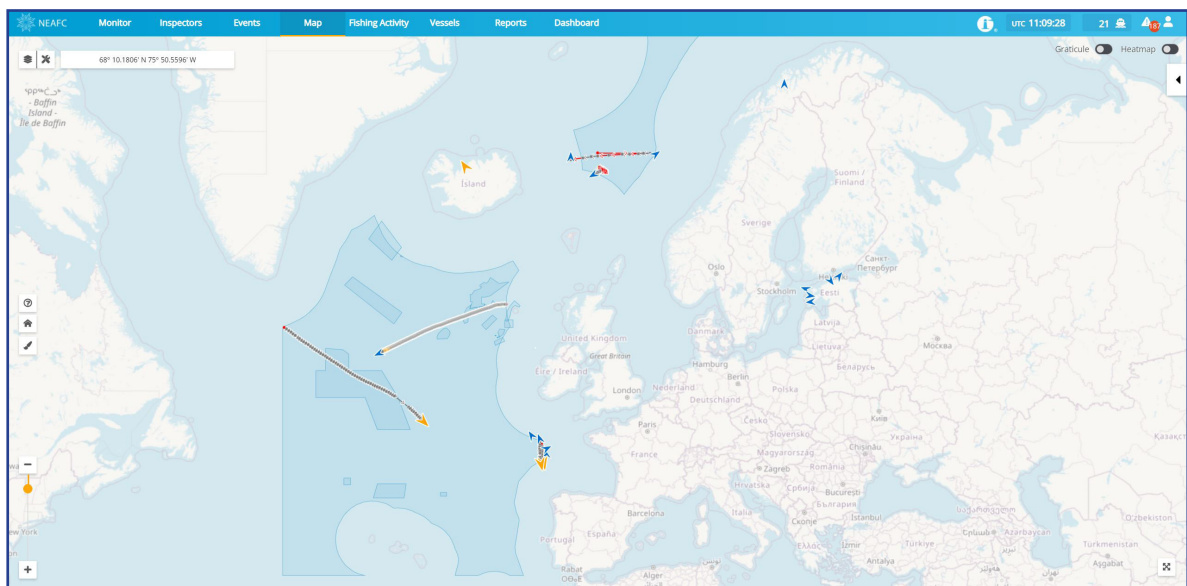
All vessel information is one click away. Vessel positions are displayed on a state-of-the-art map display showing vessel movement in near real time. Device events such as tampering alerts, distress calls and others are received processed and displayed by the system and prioritized for the operator to take action. Trackwell VMS software offers cutting edge analysis capabilities for all vessel data, resulting in better decision making, saving time and resources in monitoring, law enforcement and safety and rescue operations.

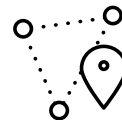


Zone Monitoring and Enforcement

The system allows users to configure any number of monitoring request with an advanced alert mechanism, which the system displays and prioritize as monitoring issues. These alerts can also be set up in relation to all vessels, predefined groups of vessels, dynamically calculated groups based on various characteristics (nationality, types of fishing, etc.) or for individually selected vessels.

The zone monitoring allows for real time data processing, customization of zones and geofencing alerts and finally the cross-checking of all data types to accurately identify issues.





Safety at Sea

Trackwell VMS monitors and alarms exit from / entry into harbours and issues a warning if vessel stops reporting outside of harbour zone or is not reporting according to schedule. It also displays customized alarms for distress signals from the vessels and prioritize the monitoring tasks accordingly.

Open issues

Close issues Show Timeage inside warnings ☒

Select scopes to show

☒ All ☐ Unassigned ☐ Assigned to tw Last 200 issues shown

Callsign	Issue	Date	Last log	Owner
A3CC	Transit	14.05.22	14.05.22	paula.atiola
BZWA33	Distress	24.09.19	24.09.19	joe.lauru
H4AL	SB_EEZ_Entry	16.10.22	09:50:29	Take
9V5084	SB_EEZ_Entry	10.10.22	07:29:50	Take
9V9353	SB_EEZ_Entry	11.10.22	07:15:19	Take

Sustainable Fisheries Management

Trackwell provides multiple tools for combatting illegal fisheries (IUU). The system offers a robust alert mechanism for monitoring of reserved fishing zones and marine protected areas and protecting fish stocks. It also integrates information from fishing licenses databases, certificates of seaworthiness, and other relevant data available to the customer to better perform their monitoring and enforcement of fishing regulations. With sustainable management of fisheries resources and protecting marine resources, fish stocks can recover.

Select scopes to show
When events are created a scope is assigned to the event. Select which should be visible.

Issue / Log / Polling
[Click for details / 1.1](#)

Vessel
[Click for details / 1.2](#)

Issue list
Issues created by Events and Actions or manually added.

Issue commands
Right click issue

- QLD-closure- 23.
- Show on map 31.
- Edit issue 24.
- Disown issue 26.
- Close issue 02.
- Reopen issue 11.
- Poll program 04.
- Manual position 13.
- Create an issue
- Closure entry

Logbook
For the selected vessel, selected in the issue list
These logs can show which actions are taken and by whom to resolve an issue.



Fishing Licenses & Permits

Fishing Licenses and permits can be integrated as part of the vessel registry information and synchronize with external databases. As an additional feature, authorized users can assign, change their status, suspend, or manage fishing licenses and permits according to their specific customization requirements.

The screenshot shows the 'Vessel' page in the Trackwell VMS interface. The top navigation bar includes 'Locations', 'Map', 'Vessels', and 'Reports'. The 'Vessel' page has a left sidebar with 'History' and 'Settings' tabs. The main content area is divided into two columns of fields for vessel information, including 'AAIC', 'Callsign', 'Flag/Country', 'Gear type', 'Hull material', 'Int. reg./Reg. nr.', 'Name', 'Vessel type', 'Comments', 'External regist./Win', 'Home/Reg port', 'IMO number', 'Mmsi', 'Origin', 'Vessel type 2', and 'Year built'. Below these fields are sections for 'Parameters', 'Vessel type 1', 'Vessel type 2', 'Origin', 'Ctrl auth', 'Administrators', 'Tracking', 'Fishing Licence', and 'Vessel Licence'. The 'Fishing Licences' section is expanded, showing a table with columns for 'Category', 'Code', and 'Licence'. The table contains one row with 'fish', 'ENGINE_INSP_EXP_DATE', and 'ENGINE INSPECTIONS EXP'. There are also checkboxes for 'Authorized', 'Payment accepted', and 'Suspended'.

Vessel Registry

Trackwell VMS software manages the entire database of ships and all their information. The Vessel registry page allows users to perform functions such as searching, listing and editing vessel information (name, position, last position, report history, course and speed, registrations, Fishing licences, authorisations and permissions etc). The system has a built-in vessel registry where new reporting vessels can be added and can also be automatically synchronized with an external national registry when needed.

The screenshot shows the 'Basic' tab for vessel registration. The top navigation bar includes 'Basic', 'Administrators', 'Tel.', 'Tracking', 'History', 'Fishing licence', 'Files', and 'Emails'. The 'Basic' tab has a 'Save' button and several input fields for vessel information, including 'Name', 'Vessel type', 'Home port', 'Vessel type 2', 'Callsign', 'CFR', 'Mmsi', 'Origin', 'Country', 'Gross tonnage', 'Internal regist.', 'Main eng. power (kw)', 'External regist.', 'Main eng. power (hp)', 'IMO number', 'Most length (m)', 'AAIC', 'Width (m)', 'Draft (m)', 'Gear type', 'Year built', and 'Hull material'. There is also a 'Comments' section with a text area.

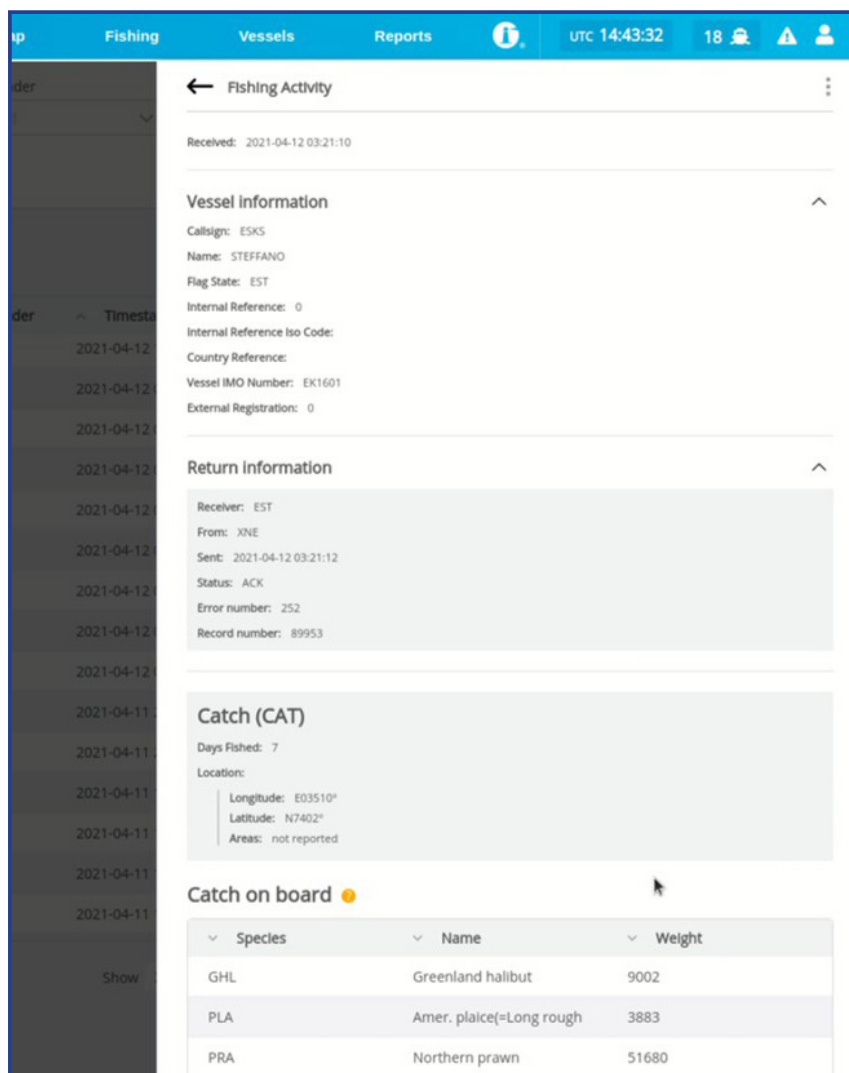
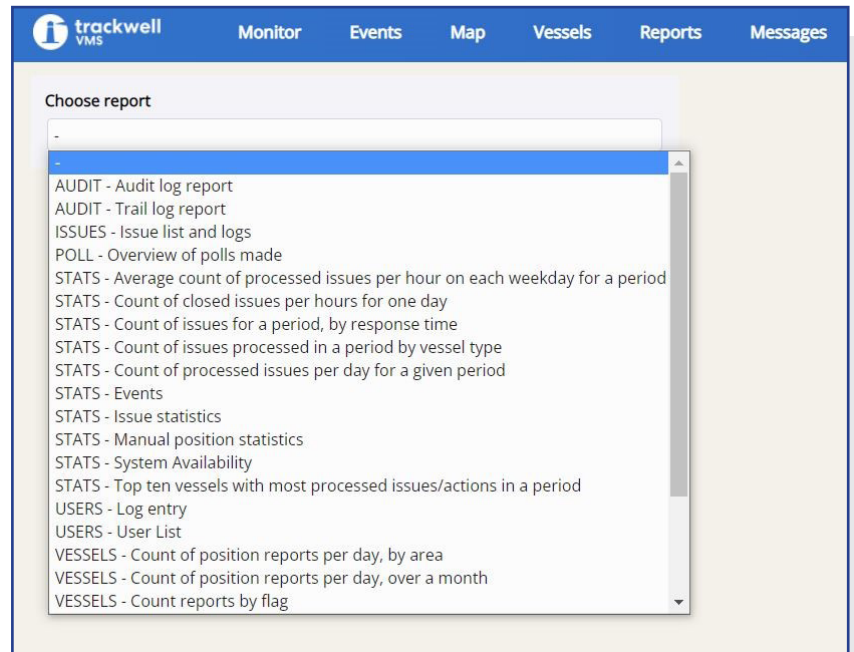
The screenshot shows the 'History' tab for vessel tracking. The top navigation bar includes 'Basic', 'Administrators', 'Tel.', 'Tracking', 'History', 'Fishing licence', 'Files', 'Vessel Licences', 'Queensland', and 'Emails'. The 'History' tab has a 'Map' button and a 'New' button. Below these are 'Manual Pos' and 'Poll' buttons. The main content area shows a table with columns for 'Type', 'Date', 'TEXT', and 'Received'. The table contains several rows of data, including 'ISSUE', 'LOG', and 'POS' entries. The 'POS' entries show coordinates and speed information.



Reporting Tools

Customized Reports

The system allows for the generation of pre-defined reports that are easily accessible where authorized users can enter various filtering parameters to get the required report. Customized reports can also be added according to customers specifications. All reports can be exported to most common file formats such as Excel, PDF, and Word formats.



ERS / Logbook Data

The ERS (Electronic Reporting System) software module can be seamlessly integrated in the Trackwell VMS software platform, as well as function as a standalone product. The ERS module receives, stores, processes and forwards fishing activity data, sales notes and other fisheries related information received from either from Trackwell eLog or third party electronic logbooks, and other external sources according to the clients' needs.



Data Handling

User Management

All user profiles are secured with a username/password with all industry standard security and accessed measures. The system has an advanced role-based access management system with standard roles such as admin, user, guest or any number of specially designed roles. The system also keeps an audit log of all user activities within the system.

Data Governance

Trackwell VMS software allows for shared usage, granting access only to subsets of information like in the case of the VMS systems from Regional Fisheries Management Organizations (RFMOs) or multi state countries. To allow this, complex data governance mechanisms need to be added as a fully customized solution to the specific client.

Data Security & Reliability

Trackwell ensures the highest levels of security and reliability. The company's procedures for data security meet the stringent needs of governments and RFMOs.

- 24/7/365 assistance
- High-performance systems with an uptime of over 99.95%
- Disaster recovery and backups protocols

Name	Description	Users
ADMINISTRATOR	Administrator Access	52
FISHERIES MANAGEMENT	Read Only Access	477
FISHERIES MANAGEMENT ALERTS	Read Only Access plus alerts	31
FISHERIES OFFICER	FO Access - Alerts & Poll	231
FLEET ADMINISTRATOR	Fleet Administrator	14
PERMISSIONS TEST	PERMISSIONS TEST	2
QLD-GBRMPA	DELETE	1
ROLE_API	Role for API access	6
ROLE_LOCATION_API	Role for Locations API users	8
ROLE_SYSTEM	DELETE	1
USER TYPE 3 FISHERIES WA	FISHERIES OFFICER/MANAGER	125
USER TYPE 4 FISHERIES WA	STAFF SAFE/WAPOL	12
USER TYPE 5 FISHERIES WA	GIS UNIT	4

Showing 1 to 13 of 13 entries

Show 15 Entries

First < 1 2 3 > Last

Capacity & Scalability

The system can be set up to accommodate any size of fleet, ranging up from tens to thousands of vessels. Whether national, international, or small-scale fleets the Trackwell system can accommodate. There is no limit on the number of users.



Data Exchange and Communications

FLUX Communications

The Trackwell VMS software supports the integration with Trackwell FLUX Engine for the distribution of fisheries-related data through the FLUX network. The FLUX Engine is a complementary back-end component that is offered as an additional service and can integrate both to Trackwell VMS software or to another existing FMC software.

The screenshot displays the NEAFC VMS interface. On the left, a map shows the North Atlantic region with various countries and islands labeled. On the right, a panel titled 'Vessels In The Area' provides search and filter options. Below the filters, a table lists 25 vessels with their respective details.

Name	Callsign	Location	Time(UTC)	Hdg.	Flag St.	Com.	Vessel Id.	
LYBT	48° 19.2600' N	19-10-2022	356°	LTU	FLUX	6647	...	
AURIGA	11° 50.4600' W	19-10-2022	19:06					
BALTIYSKAYA	67° 52.6800' N	20-10-2022	35°	RUS	HTTPS	5960	...	
KOSA	0° 28.7400' E	12:40						
BORIS	64° 37.9800' N	20-10-2022	0°	RUS	HTTPS	339	...	
SYROMYAT...	3° 31.0200' W	09:28						
DAGO	ESLM	65° 45.3773' N	20-10-2022	125°	EST	FLUX	6517	...
EDER SANDS	19° 38.8330' W	14:00						
EDER SANDS	GDNU	48° 44.5200' N	20-10-2022	356°	GBR	HTTPS	2157	...
ES2337	ES2337	12° 57.3600' W	02:43					
ES2337	ES2337	58° 27.6648' N	20-10-2022	335°	EST	FLUX	1507683	...
ES2665	ES2665	22° 3.1066' E	13:59					
ES2665	ES2665	58° 34.6618' N	20-10-2022	95°	EST	FLUX	1507686	...
ESFK	ESFK	21° 57.6163' E	14:00					
ESFK	ESFK	58° 12.8453' N	20-10-2022	14°	EST	FLUX	1507684	...

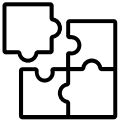
The screenshot displays the NEAFC VMS interface in report view. It shows a table of vessel data with columns for Vessel, Report Type, Transmitted, Area, Sender, Sent, Record Num, Format, and Received. The table lists various vessels and their corresponding report details.

Vessel	Report Type	Transmitted	Area	Sender	Sent	Record Num	Format	Received
UCUF	Catch on Entry	2022-10-20 09:28:00	XNS - IIA2	RUS	20-10-2022 11:56:00	93185	Naf	20-10-2022 12:05:3
UHIR	Catch	2022-10-20 08:50:00	XNS - IIA1	RUS	20-10-2022 09:55:00	93181	Naf	20-10-2022 10:06:2
UDHY	Catch	2022-10-20 07:23:00	XNS - IIA1	RUS	20-10-2022 08:56:00	93175	Naf	20-10-2022 09:04:4
UBHN	Catch	2022-10-20 07:02:00	XNS - IIA1	RUS	20-10-2022 07:56:00	93171	Naf	20-10-2022 08:06:0
UEZQ	Catch on Exit	2022-10-19 23:40:00	XNS - IIA1	RUS	20-10-2022 04:55:00	93153	Naf	20-10-2022 05:05:1
UCQX	Catch on Exit	2022-10-19 20:00:00	XNS - IIA2	RUS	20-10-2022 04:55:00	93152	Naf	20-10-2022 05:04:2
UEZQ	Catch	2022-10-19 08:00:00	XNS - IIA1	RUS	19-10-2022 08:56:00	93060	Naf	19-10-2022 09:05:2
UDHY	Catch	2022-10-19 07:15:00	XNS - IIA1	RUS	19-10-2022 08:56:00	93055	Naf	19-10-2022 09:05:0
UBHN	Catch	2022-10-19 07:02:00	XNS - IIA1	RUS	19-10-2022 08:56:00	93054	Naf	19-10-2022 09:04:2
ESJW	Catch on Exit	2022-10-19 05:40:00	XBS - IA	EST	19-10-2022 05:15:00	116987	Naf	19-10-2022 08:16:1
UCQX	Catch on Entry	2022-10-19 00:30:00	XNS - IIA2	RUS	19-10-2022 05:56:00	93037	Naf	19-10-2022 06:04:2
UEXP	Catch on Exit	2022-10-19 00:15:00	XNS - IIA1	RUS	19-10-2022 04:56:00	93033	Naf	19-10-2022 05:05:1
UEXP	Catch	2022-10-19 00:03:00	XNS - IIA1	RUS	19-10-2022 04:56:00	93032	Naf	19-10-2022 05:04:5
UHIR	Catch on Entry	2022-10-18 20:30:00	XNS - IIA2	RUS	19-10-2022 04:56:00	93031	Naf	19-10-2022 05:04:5

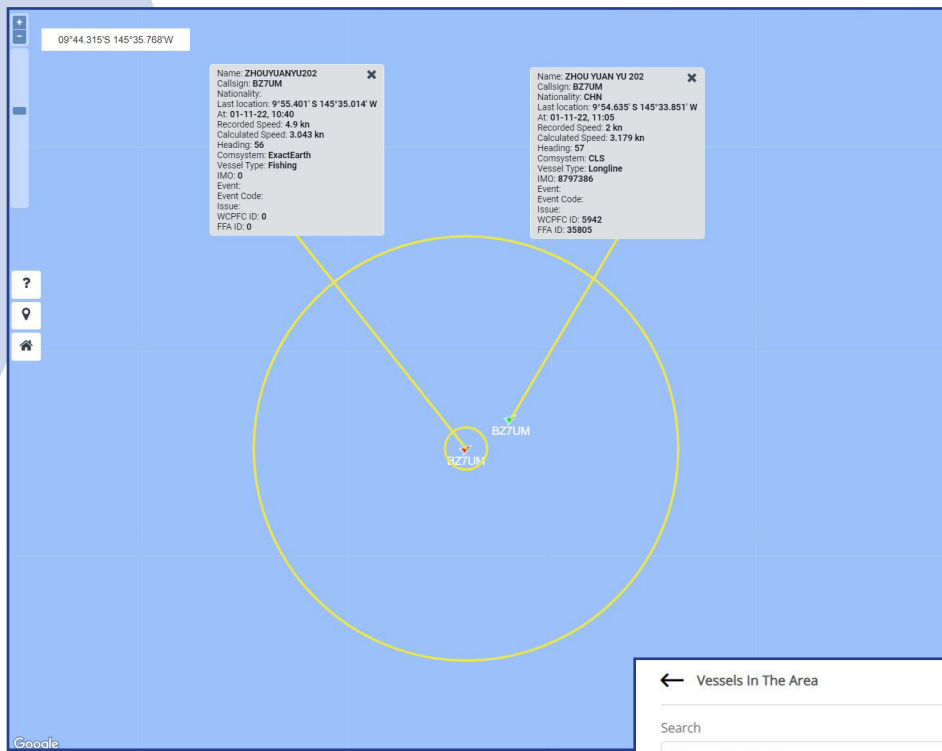
Data Exchange

The system is fully compatible with protocols and message formats required by the EU, the regional fisheries offices (e.g. NEAFC, NAFO, SEAFO, ICCAT and more) and in bilateral agreements commonly made between countries.

The software supports connectivity and data export to external systems as needed.



Device & AIS Integration



AIS Data Integration

Automatic Identification System (AIS) positional data is generated by the AIS units that are installed on most large vessels in the world. Trackwell VMS software can integrate this AIS data to complement the data from VMS devices, and in some cases the VMS system can be based solely on AIS data if no VMS units are installed in the vessels. The AIS data feed is provided as a service by global AIS third party providers and/or from the countries' own AIS land network.

Device Compatibility

Trackwell VMS software is not dependant of any one type of MTU (on-board devices) and it is a standard well-known procedure for Trackwell to add support for new types of transponder models and/or service provider's gateways. This accounts for all type of VMS units (Satellite, GPRS/GSM and hybrid) and data service providers.

← Vessels In The Area →

Search: Name or Boat mrk. Time in UTC: 32 hrs ago Live ☒

☐ Filter map on search

Controlling Authority: Comsystem: Vessel Group:

Vessel Type: OR Vessel Type 2:

Vessel count: 1555 Clear all filters

<input type="checkbox"/> Name	Location	Time(UTC)	Hdg.	Com.
<input type="checkbox"/> 3096	23° 8.2130' S 150° 44.3030' E	01-11-2022 11:48	330°	PoleStar-SkyWave ...
<input type="checkbox"/> 3160	26° 40.1940' S 153° 2.8320' E	01-11-2022 11:50	359°	Rock Seven ...
<input type="checkbox"/> 3323	23° 49.9970' S 151° 14.4940' E	01-11-2022 11:50	311°	PoleStar-SkyWave ...
<input type="checkbox"/> 612	17° 24.1690' S 150° 11.6440' E	01-11-2022 11:49	271°	PoleStar-SkyWave ...
<input type="checkbox"/> 8585	35° 1.0260' S 117° 54.4680' E	01-11-2022 11:02	269°	CLS ...
<input type="checkbox"/> 883	24° 53.2660' S 152° 23.2590' E	01-11-2022 11:41	165°	PoleStar-SkyWave ...
<input type="checkbox"/> 883	22° 8.1540' S 150° 2.1050' E	01-11-2022 11:47	340°	PoleStar-SkyWave ...
<input type="checkbox"/> 910	17° 24.1580' S 150° 11.2780' E	01-11-2022 11:51	274°	PoleStar-SkyWave ...
<input type="checkbox"/> A107	34° 58.1160' S 117° 58.9680' E	01-11-2022 11:52	0°	CLS - GPRS ...



Powerful insights, sustainable results!

Backed up with more than **25 years of experience** in mobile resource management and vessel monitoring systems, **Trackwell FiMS** responds to these challenges with its 3 independent but complementary standalone systems that can integrate to provide a **comprehensive fisheries management solution!**



trackwell
FiMS

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