

# **Appendix C to Tender Specifications**

## **SSN Ecosystem GUI Wireframes**

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## 1. Document Overview

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This document describes the wireframes that have been created based on the business requirements and that will be the base to implement the SSN Ecosystem Graphical User Interface (GUI).

The level of fidelity in the wireframes is medium fidelity, meaning that the wireframes are “close but not quite close” to the final product. The icons, colour schemes and colour coding are to be confirmed and decided at a later stage.

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## 2. Design principles

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### **Design for the users and their tasks**

The principles of user centred design have been used to meet the business objectives and create an interface that supports users in performing their real-world work tasks in an easy and effective way.

### **Consistency**

The behaviour of the common interface elements (buttons, dropdown lists, sliders, icons, tooltips, text and date fields etc.) and dialog boxes are as consistent as possible to minimize the learning requirement and effort for the users to learn and get used to the GUI

### **Simple and natural dialogue**

Only necessary information is presented to the user and all messages and instructions are in plain English, no codes. Terminologies are defined in the same way throughout the system.

### **Reduced unnecessary mental effort by the user**

Functions that are used frequently are simplified to minimize the need of memorizing information between different parts of the system. Instructions for the use of system are clearly visible, tooltips are used for buttons, icons and other feedback.

### **Feedback**

Feedback is provided at several level of interaction giving users the confidence that their actions have been successful.

### 3. The wireframes

In this chapter the wireframes are presented with detailed information.

**Note** that the icons, colour schemes and colour coding are at this stage informative.

#### 3.1 Overview

This overview shows how the layout looks like. The consistency of operation and data flow is very important as can be seen in Figure WF1.

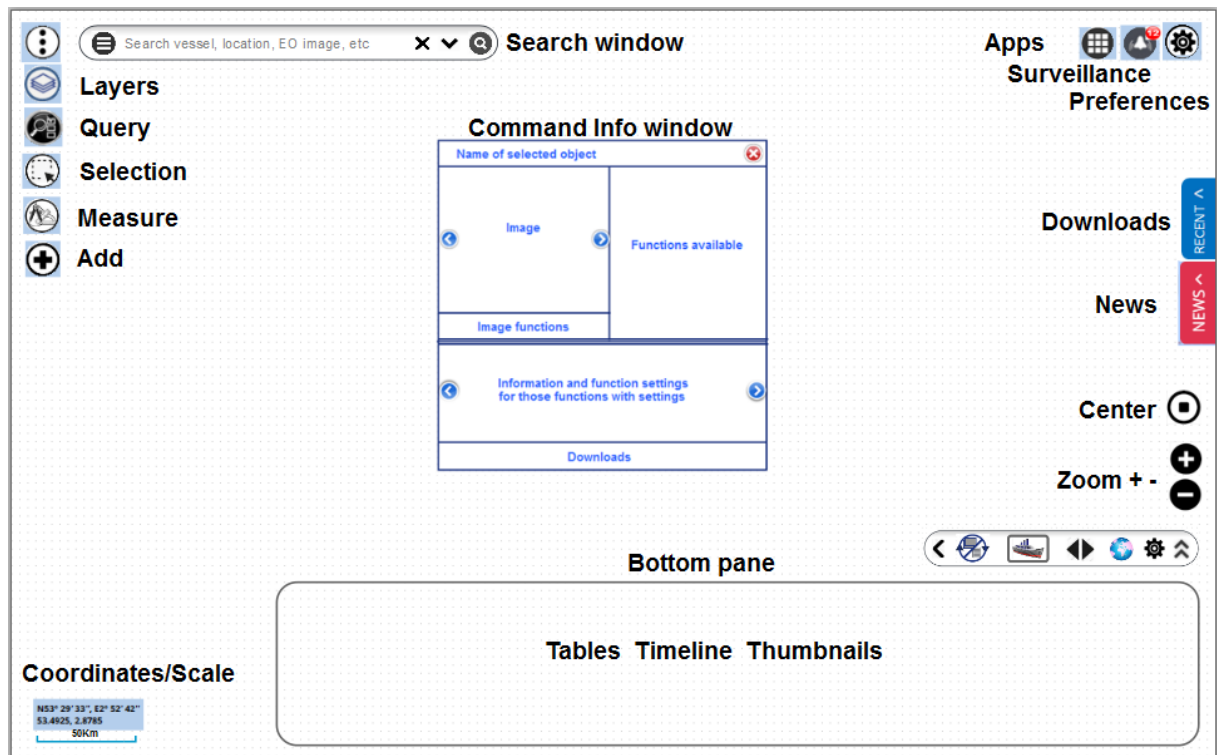


Figure WF1: Overview of the SSN Ecosystem GUI.

### 3.2 The main screen

Figures WF1 and WF2 show the main screen of the SSN Ecosystem where no object is selected.

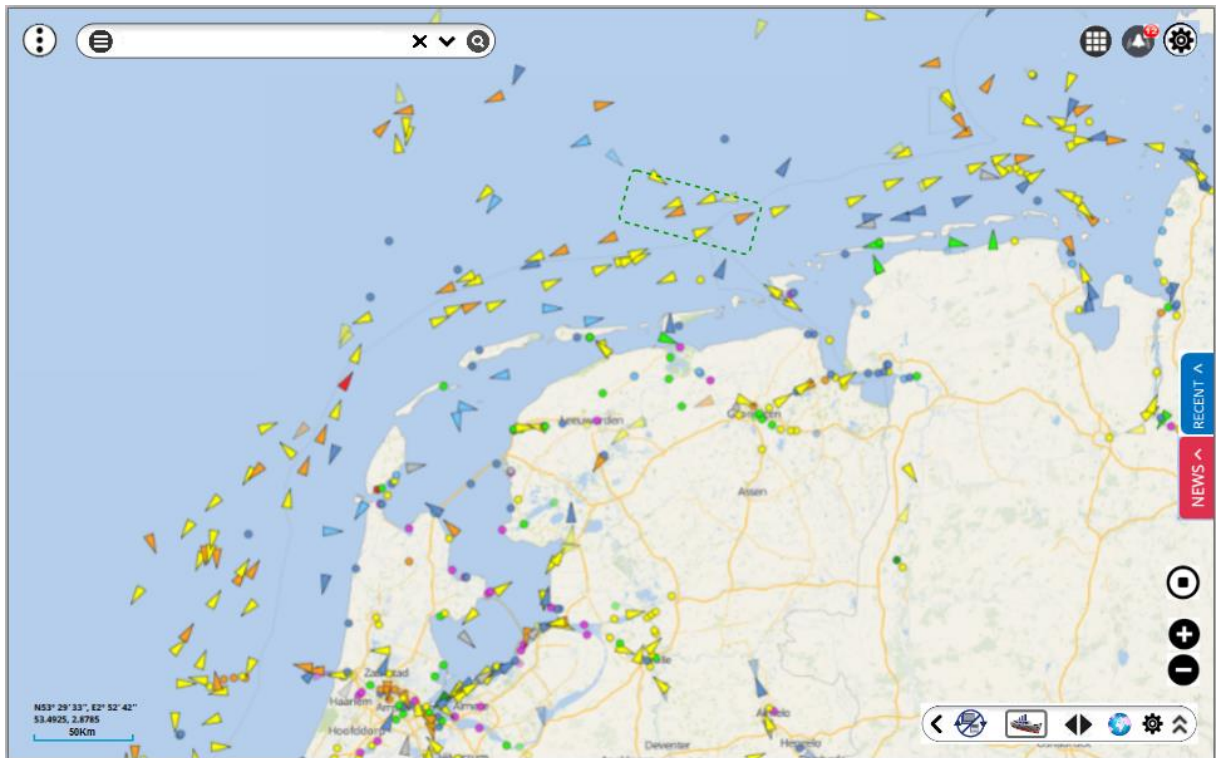


Figure WF2: Overview of the SSN Ecosystem GUI, no object selected.

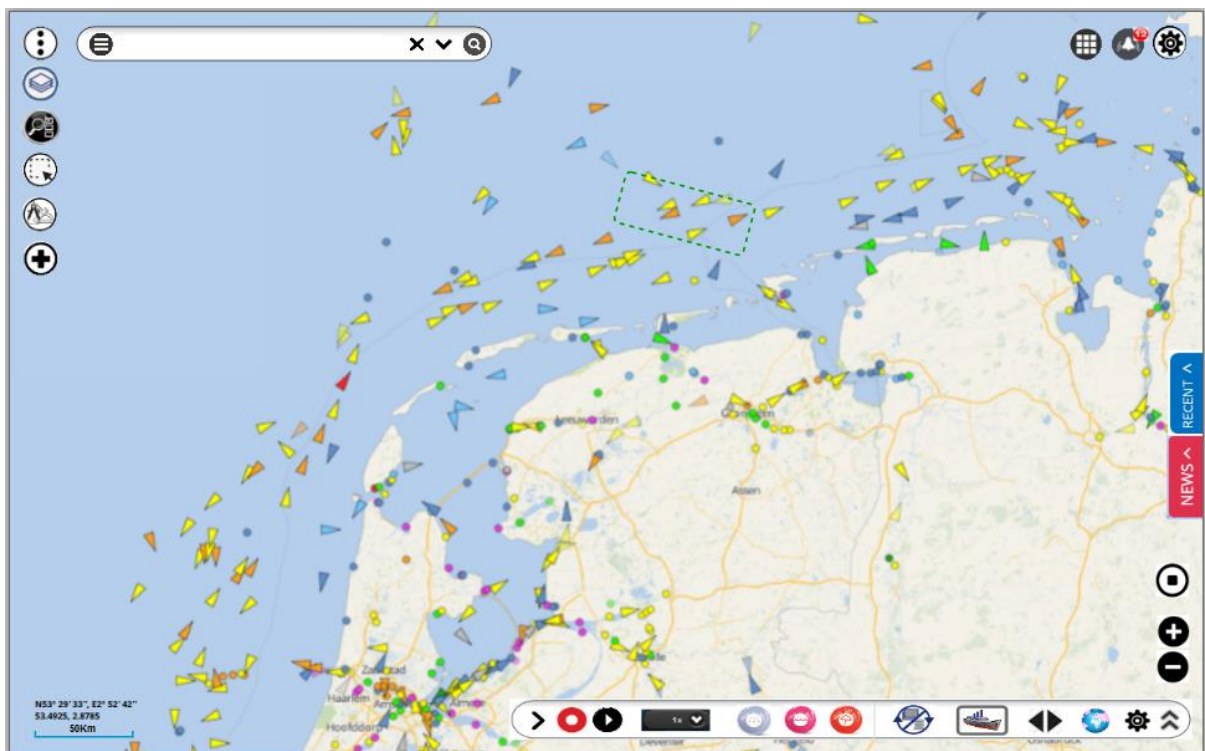


Figure WF3: Overview of the SSN Eco system GUI, no object selected, function button and bottom pane expanded.

### 3.3 The Command and Info window

The command and info window, as can be seen in Figures WF4 to WF7, is a general window with certain architecture to show image, information, downloads and functions of any object selected in the map.

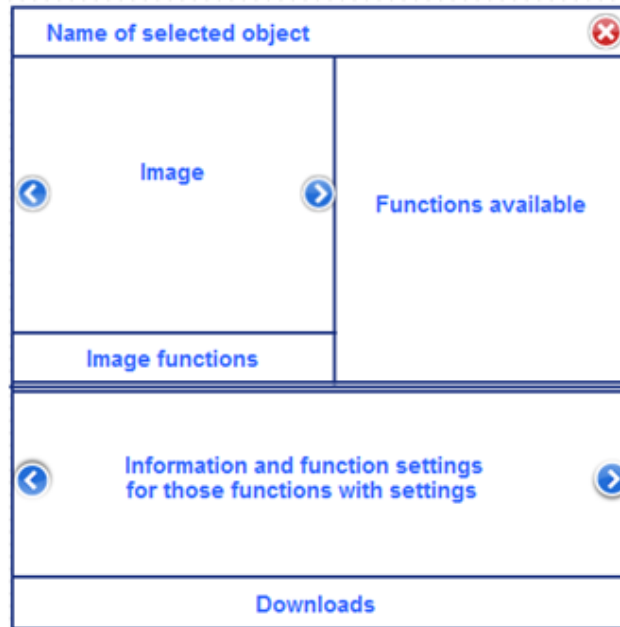


Figure WF4: The Command and Info window architecture.



Figure WF5: The Command and Info window, where a vessel is selected.



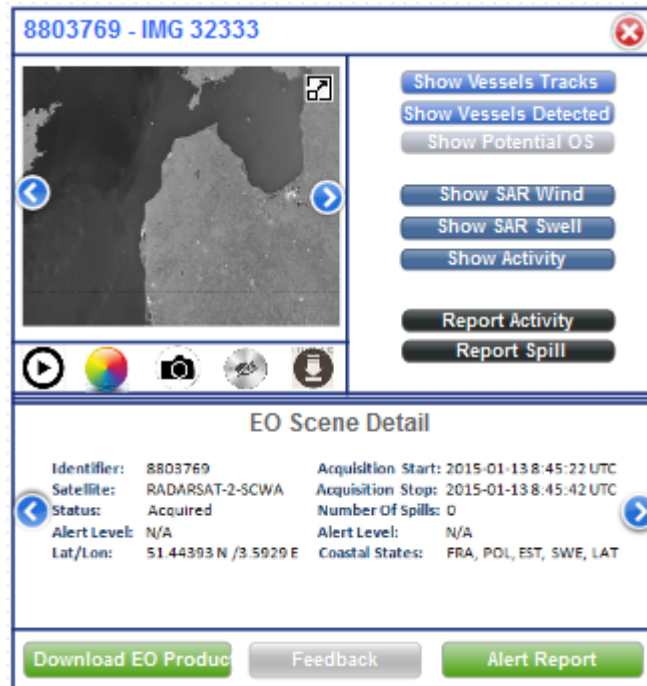


Figure WF6: The Command and Info window, where an Earth Observation image is selected.

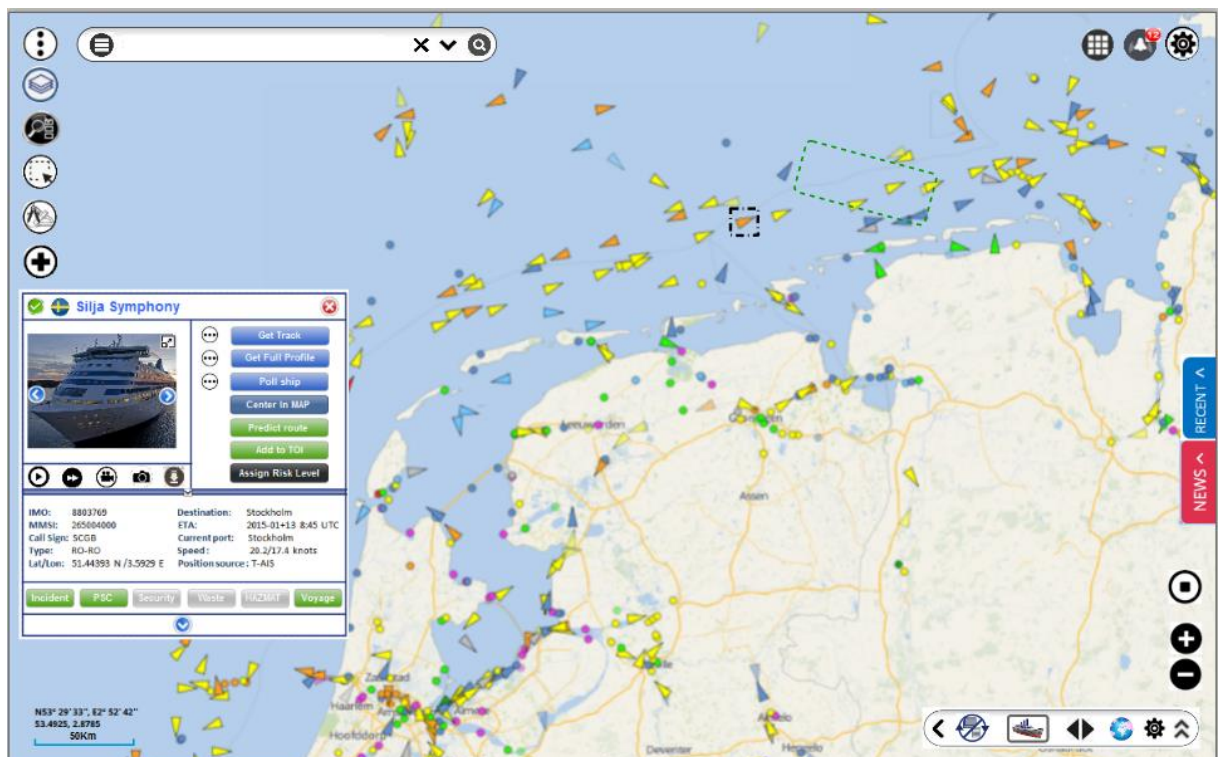


Figure WF7: The Command and Info window in the map, where a vessel is selected.



### 3.4 The Intelligent Search function

The “Intelligent Search” function permits the user to: enter a keyword; get hits back grouped and summarized (based on the content in the map), and; select the desired category to list the content. Whatever is selected is reflected in the “command and info” window giving the user the power to view and choose different options as can be seen in Figures WF8 and WF9.

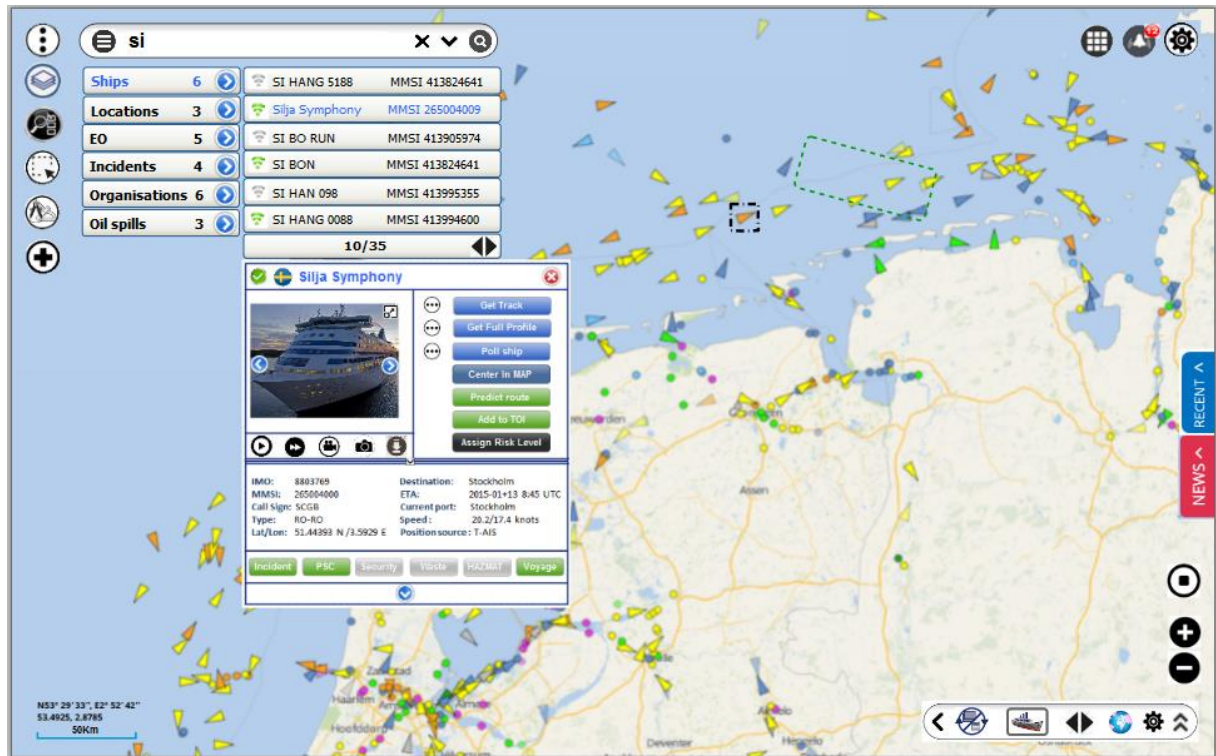


Figure WF8: Intelligent search letters “si” entered, category Ships and “Silja Symphony” is selected.

The user can select a category before entering the keyword, the selected ones are colour coded. All multiple selection options have the “All” select/deselect button and it is consistent throughout the system.

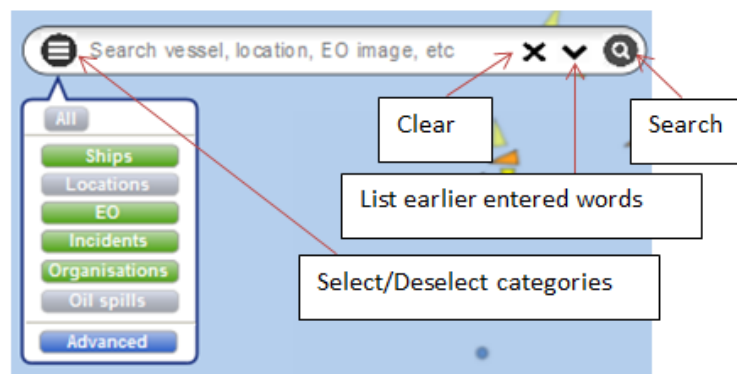


Figure WF9: Details of the “Intelligent Search” field.

### 3.5 The advanced search function

The advanced search window (search beyond the map content) can be expanded based on the combination of categories to show two categories at the same time. See Figure WF10.

The screenshot shows the 'Advanced Search' window. At the top, there are tabs for 'Vessels', 'Locations', 'Organisation', 'EO', and 'SAM'. The 'SAM' tab is selected. Below the tabs, there are three sub-tabs: 'Particulars', 'SSN Data', and 'THETIS'. The 'Particulars' sub-tab is selected. Under 'Ship Particulars', there are input fields for 'Enter Vessel Name', 'Enter Call Sign', 'Enter IMO Number', 'Enter MMSI Number', and 'Enter IR Number', each with a '+' button. There are also dropdown menus for 'Select Flag', 'Select Position Source', 'Select Ship Type', and 'Select Risk Assessment'. Additionally, there are buttons for 'Select Vessel Age', 'Select Vessel Tonnage', 'EU Fishing Vessel', and 'General Arrangement Plan'. Below the 'Ship Particulars' section, there is an 'Accidents/Incidents' section with dropdown menus for 'Select Data Type', 'Select Event Type', 'Select Pollution Type', 'Select Owner Country', 'Select Mgmt Country', and 'Select Clas Society'. There are also buttons for 'Select PSC Type', 'Select Accident Type', 'Select Lost of Life', 'Only Vessels In Accidents', and 'Show In Table'. A green 'Search' button is located at the top right of the window.

Figure WF10: The Advanced search window, SAM is selected which includes even ship particulars.

**Note** the following features:

- The name of the field is inside the field
- Instead of check boxes, buttons are used with colour coding to show if they are pressed or not
- Multiple selections are presented as dropdown menus
- The feedback to the user is done via tooltip. See figure WF11
- With the "+" sign in the data fields, the user can add more than one number or name
- Data in the input field is validated (checked on the browser level) before it is sent to the database not to overload it

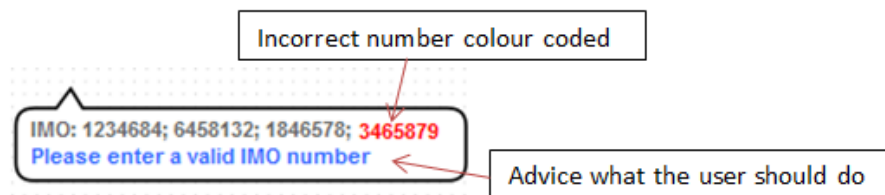


Figure WF11: Tool tip feedback from the “Enter IMO number” data field.

### 3.6 The query function

The query function enables the user to query for vessel tracks, integrated ship profile and area centric based on selection options, time range and services. See Figures WF12 to WF14.

Figure WF12: Query window, vessel track query option

**Note** that the selection options presentation is consistent with the advanced search function.

Query

Query Types:

Vessel Track Query

Integrated Ship Profile

Area Centric Query

Selection Options:

Select Area Type

Saved AOIs

Saved Area 7

Saved Area 2

Saved Area 4

Saved Area 44

Time Range:

From To

2010-02-11 22:10

2010-02-11 23:12

Services:

AIS

Other sources

Search

Figure WF13: Query window, Area Centric Query option.

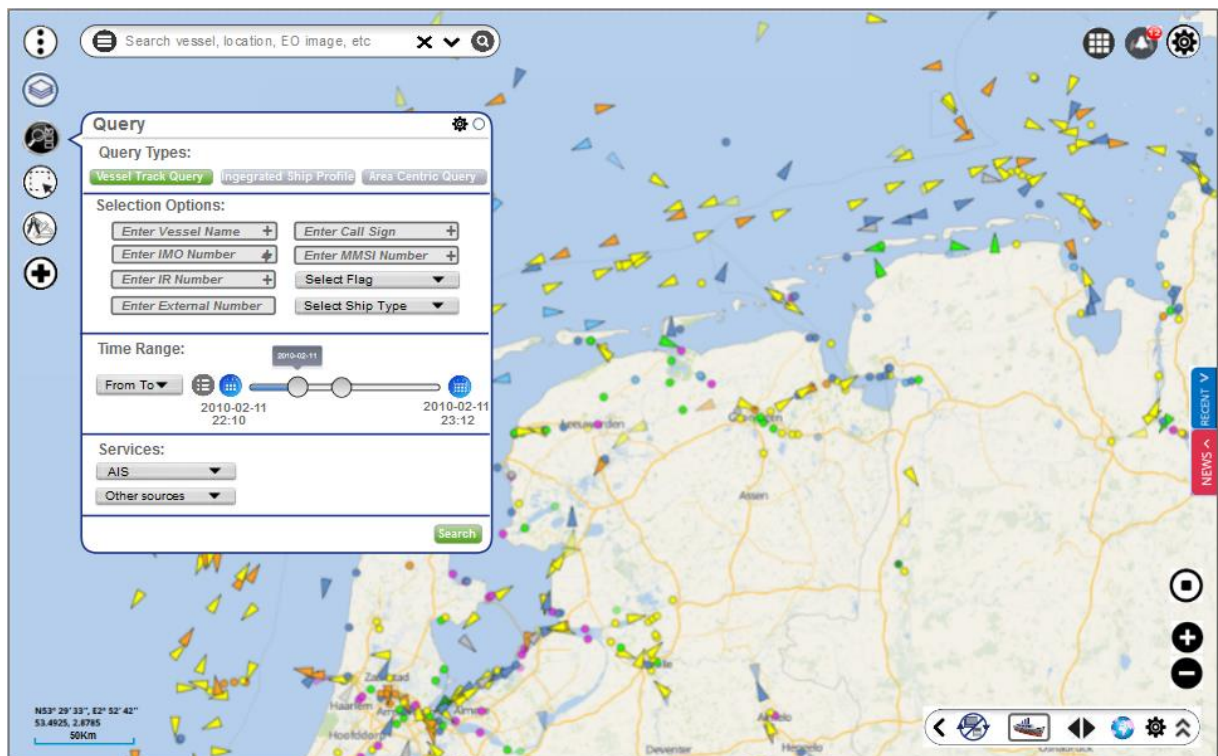


Figure WF14: Query window, Vessel Track Query in the map.

### 3.7 The tables

All the tables have the same functionality. They can be exported, searched, sorted, undocked in a tab and columns added/removed. Figure WF15 shows a view of a table.

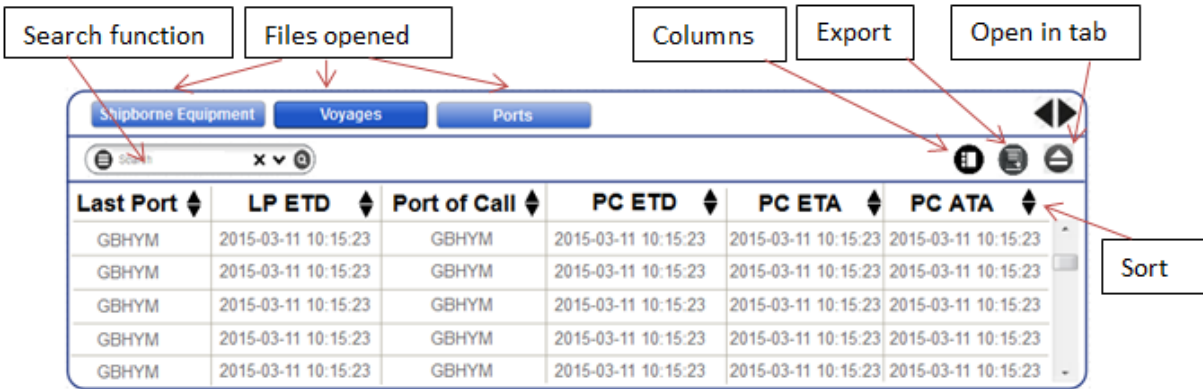


Figure WF15: A table with three files opened: Shipborne Equipment, Voyages and Ports

**Note** that the search function is consistent with the intelligent search inside the map which means that the user can select which columns to search through, the same as categories in the map. See Figures WF8 and WF16.

Identifier	IMO	MMSI	Verified	LoCode	Area
1243343545	1254343545	1243111535	Yes	REOOG	
1243343535		1243343535	Search	REOOG	RLDK
		1242343535	Yes	REOOG	Search
		1243348305	Yes	Search	

Figure WF16: A search case, the word “Search” is found and colour coded in the table.



### 3.8 Layers

The layer window is expandable to three levels and when a layer is selected it is colour coded. Configuration can be made on the first level only. Instead of tree view buttons are used for consistency and to be more tablet friendly. See Figures WF17 and WF18.

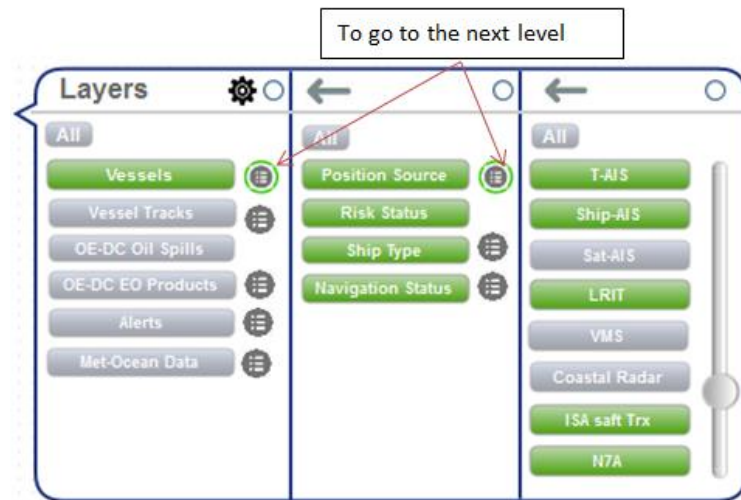


Figure WF17: Layer window, Selected: Vessels all three levels.

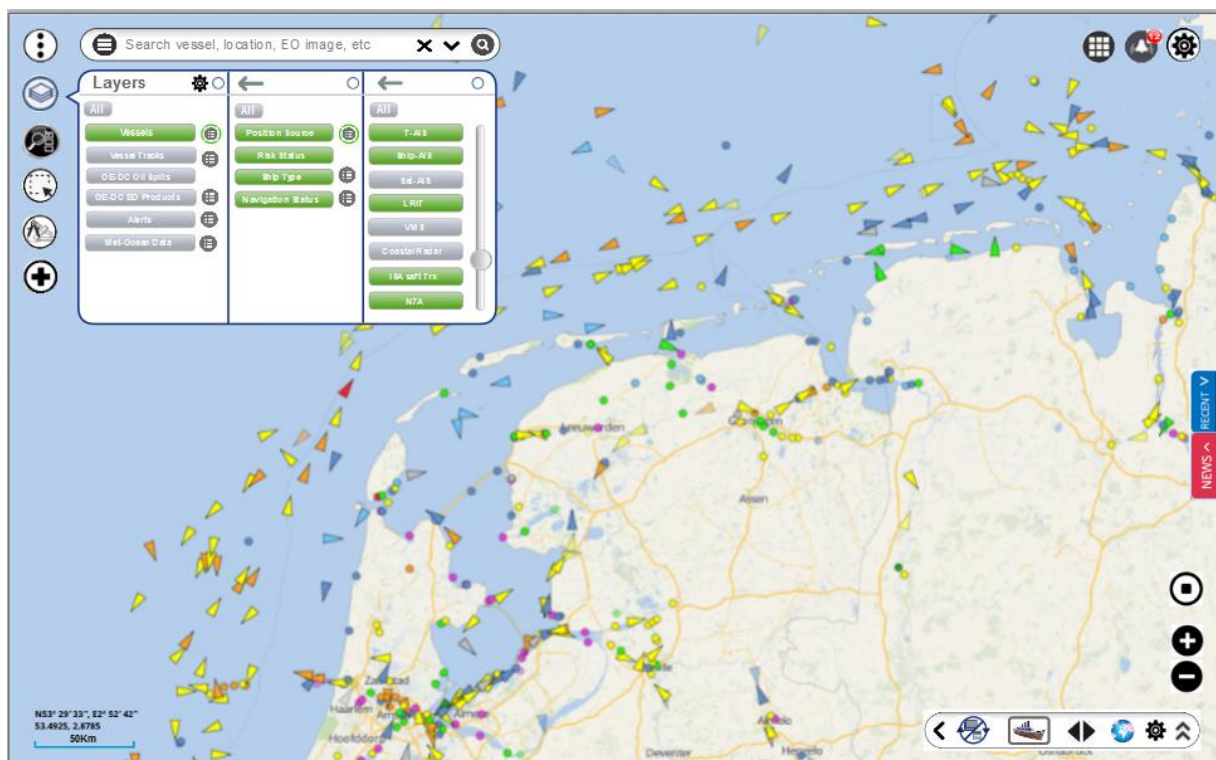


Figure WF18: Layer window, all three levels in the map.

### 3.9 Timeline, tables and thumbnails

The bottom pane can be switched between Thumbnails, Tables and Timeline (TTT) and whatever selected is updated in the command and info window and selected in the map.

The bottom pane pops up automatically with certain functions such as “Integrated ship profile” or in cases to show results in tables. The user can manually show/hide the bottom pane via the double arrows in the bottom pane bar. See Figure WF19.

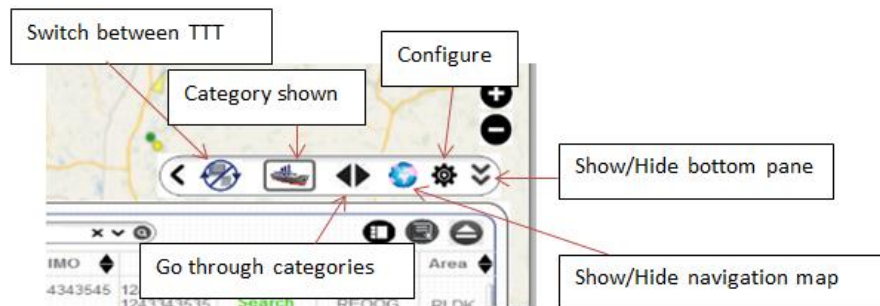


Figure WF19: The bottom pane bar.

The list of “My fleet”, target of interest (TOI), earth observation images and more, can be displayed as thumbnails or tables. See figure WF20-21.

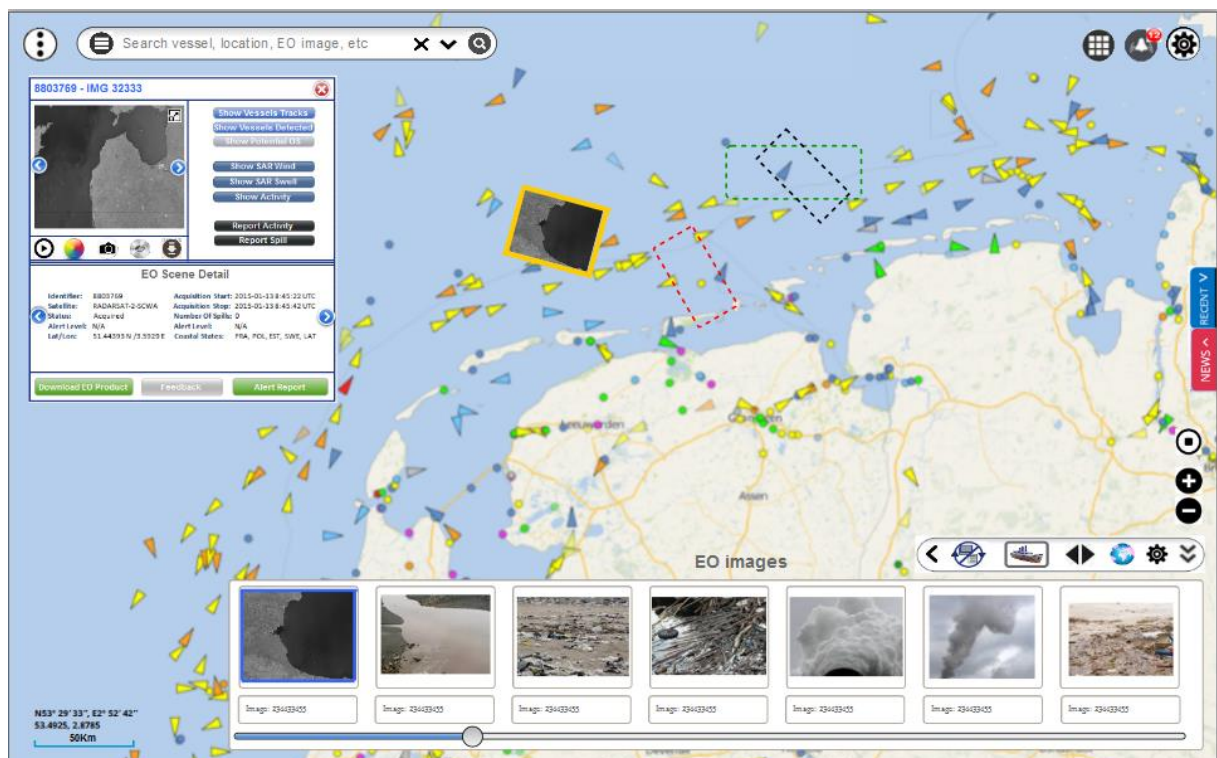


Figure WF20: The bottom pane in thumbnails mode, the image selected can be seen on the map and selection and info window.



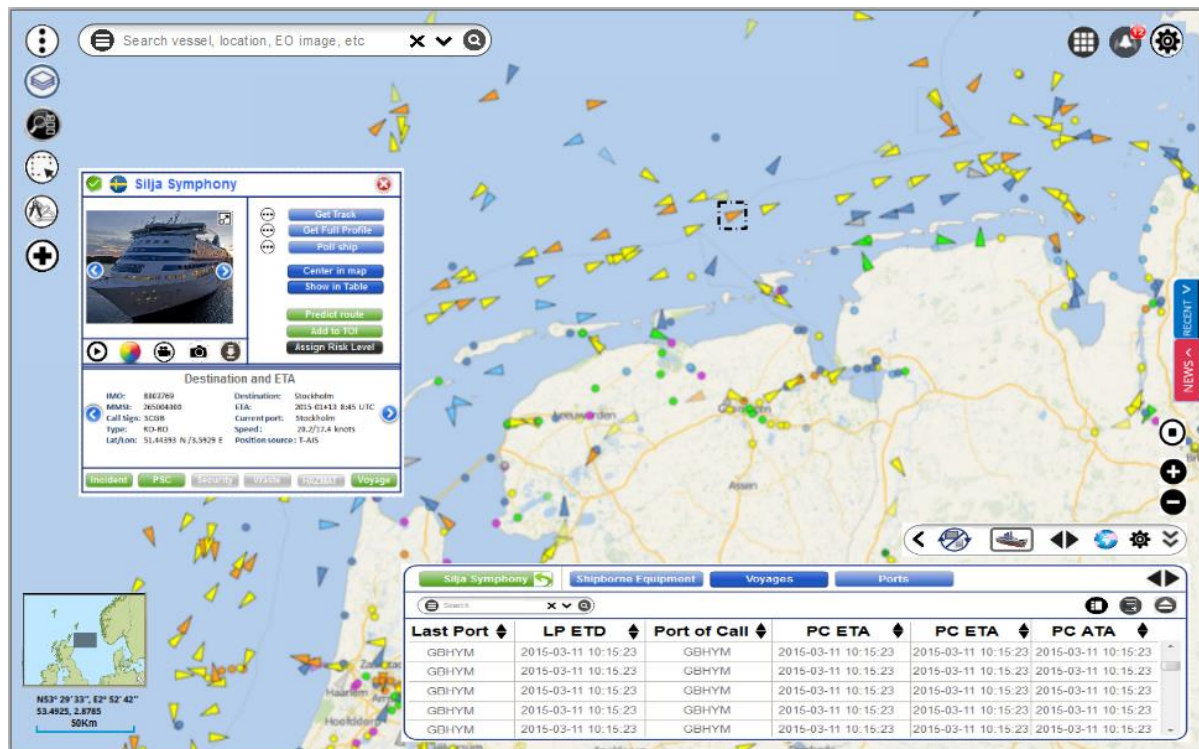


Figure WF21: The bottom pane in table mode, the vessel selected can be seen on the map and selection and info window

### 3.10 Recently and News

All downloaded products (e.g. a pdf doc) per session will be temporarily stored in the recent side pane. The user can when opening them opt to save the file/files.

All news about the incidents or accidents and accidents/incidents are contained in the news side pane.

Se figure WF22-23

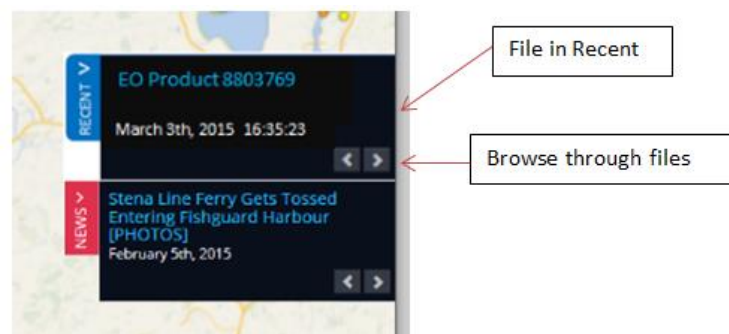


Figure WF22: Recent and News expanded in the map

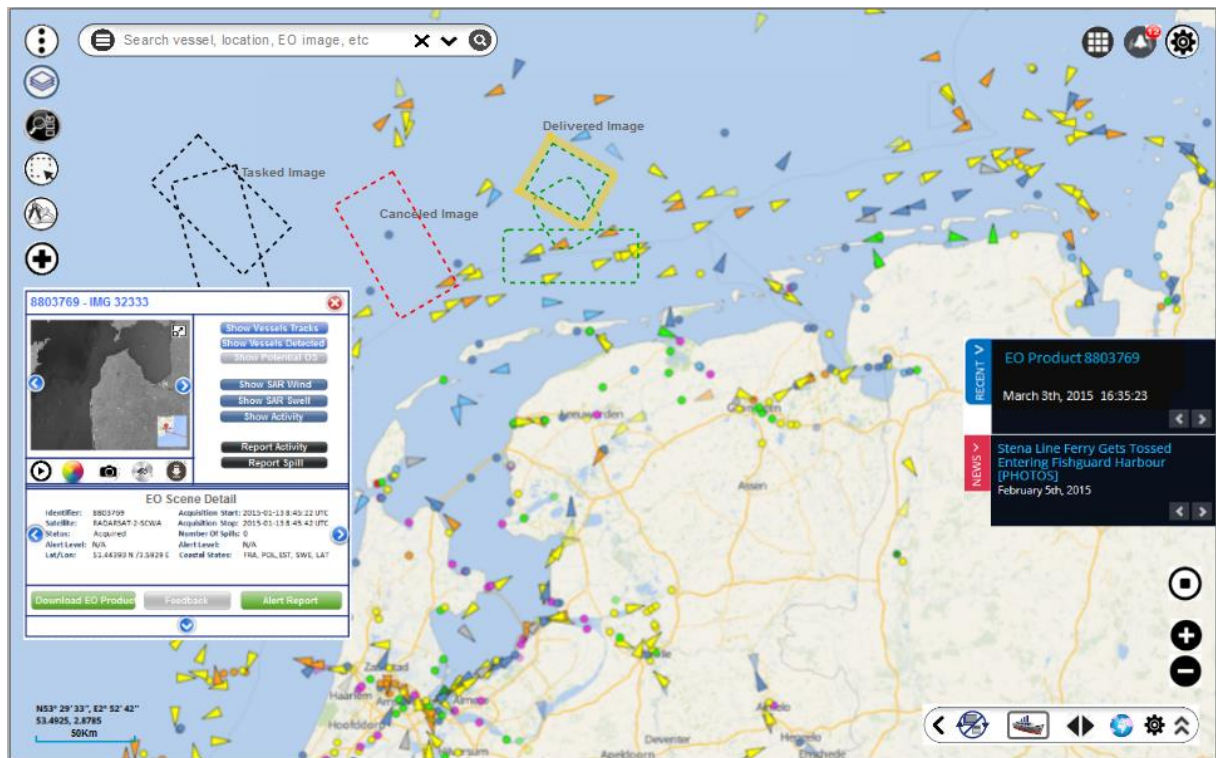


Figure WF23: Recent and News expanded in the map, the whole picture.

### 3.11 Consolidation of Vessel Registry information

The vessel registry information and tables are consolidated in on single widow with dynamic content instead of witching between tabs with static content. See Figures WF24 to WF27.

The screenshot displays the 'SSN Vessel Registry' interface. It features a search icon, settings, and a home button at the top. The main content is organized into several sections:

- Vessel Data:** Includes fields for Name (RDEIM), IMO (9041643), MMSI (245000000), Call Sign (PADB), and LLOYDS Ship Type (general cargo w container capacity). It also shows a ship image and a map.
- Shipborne Equipment Data:** Displays Call Sign (PCAB), Cargo Type (Unknown), Latitude (43°26'40"N), Longitude (003°49'33"W), Course (280°), Length (88 m), Width (12 m), Draught (3.2 m), Speed (1.1 knots), and EPFD Status (Normal Mode).
- SSN Enrichment:** Shows Ship Call Information, Port (Santander), ETA to PoC (2015-02-10 04:00:00), Destination (SANTADER), and ATA to PoC (2015-02-10 00:20:00). It also includes buttons for SSN Voyages, Reported Incident, and Hazmat on Board.
- Voyages/Accidents/Incidents:** A section with tabs for Voyages, Accidents/Incidents, Current Port Haz, and Last Port Haz. It contains a search bar and a table of vessel data.

A red arrow points from the 'Call Sign: PCAB' field in the Shipborne Equipment Data section to a text box on the right:

Shipborne Equipment data is only expanded because of inconsistency of data, the red Call Sign.

Identifier	IMO	MMSI	Verified	LoCode	Area
1243343545	1254343545	1243111535	Yes	RE00G	
1243343535		1243343535	Search	RE00G	RLDK
		1242343535	Yes	RE00G	Search
		1243348305	Yes	Search	

Figure WF24: Safe Sea Net vessel registry

**Note** that the table presentation is consistent with the table presentation of the rest of the system.

SSN Vessel Registry

🔍
⚙️ ⬆️

Search  
Flag ▼  
Vessel Type ▼

IMO   
MMSI

Name   
Call Sign

▼ Vessel Data

Name: RDEIM  
IMO: 9041643  
MMSI: 245000000  
Call Sign: PADB  
LLOYD'S Ship Type: general cargo w container capacity

▼ Shipborne Equipment Data

Call Sign: **PCAB**  
Contact DT: 2015-02-11 12:12:29  
Destination: SANTADER  
Speed: 1.1 knots  
EPFD Status: Normal Mode

Cargo Type: Unknown  
Length: 88 m  
Width: 12 m  
Draught: 3.2 m

Latitude: 43°26'40"N  
Longitude: 003°49'33"W  
Course: 280°

▼ SSN Enrichment

[Ship Call Information](#)
[Hazmat on Board](#)
[Reported Incident](#)
[SSN Voyage Details](#)

▼ Voyages Accidents/Incidents

Voyages
Accidents/Incidents

✕
🔍

📄
📄
⬆️

Identifier	IMO	MMSI	Verified	LoCode	Area
1243343545	1254343545	1243111535	Yes	REOG	
1243343535		1243343535	<b>Search</b>	REOG	RLDK
		1242343535	Yes	REOG	<b>Search</b>
		1243348305	Yes	<b>Search</b>	

^ Ports

Figure WF25: Safe Sea Net vessel registry search



SSN Vessel Registry

Name: STENA PRECISION

Call Sign: 2FM18

Flag: IOM

IMO: 9506239

MMSI: 235092453

Status: Valid

AIS Ship Type: Undefined

LLOYDS Ship Type:

PSC Ship Type:

Banned: No

SHT:No

SSN Enrichment

Ship Call Information: [Yes](#)

Hazmat on Board: Yes

Reported Incident: No

SSN Voyage Details: [Yes](#)

Shipborne Equipment Data

Name: STENA PRECISION

Call Sign: 2FM18

Contact DT: 2015-03-11 11:00:46

Destination: HEYSHAMBELFAST

Speed: 16.4 knots

EPFD Status: Differential Mode

IMO: 9506239

Cargo Type: Major Hazard (Haz A)

Latitude: 53°56'28"N

Course: 240°

Width: 24 m

EPFD Type: Global Positioning System (GPS)

MMSI: 235092453

AIS Class: Class A

Longitude: 003°07'22"W

Eta: 2015-03-11 18:00:51

Length: 142 m

Draught: 5.3 m

Current and Previous Voyages

Accidents/Incidents

Select format

CSV

ShipCallId	Last Port	LP ETD	Port of Call	PC ETA	PC ATA	PC ATD	Hazmat	Type
6a622774-0a0c-4b49	GBHYM	2015-03-11 10:15:00	GBBEL	2015-03-11 18:00:00			Yes	Reported
	GBHYM	2015-03-11 10:15:00	GBBEL	2015-03-11 18:00:00			Yes	Reported
d8f205ff-502e-470e-e	GBBEL	2015-03-10 21:50:00	GBHYM	2015-03-11 05:30:00	2015-03-11 05:50:00	2015-03-11 10:15:00	No	Reported
	GBBEL	2015-03-10 21:50:00	GBHYM	2015-03-11 05:30:00			Yes	Reported
b0433f46-9ebb-4ff3-4	GBHYM	2015-03-10 10:02:00	GBBEL	2015-03-10 17:30:00	2015-03-10 17:30:00	2015-03-10 21:50:00	No	Reported
2bb0df8e-1019-4ad8	GBBEL	2015-03-09 08:45:00	GBHYM	2015-03-09 17:00:00	2015-03-09 22:20:00	2015-03-10 10:02:00	No	Reported
500e7e7c-a92f-40b3	GBHYM	2015-03-08 21:15:00	GBBEL	2015-03-09 06:00:00	2015-03-09 05:50:00	2015-03-09 08:45:00	No	Reported
75d8dc64-1aad-45b7	GBBEL	2015-03-07 11:20:00	GBHYM	2015-03-07 21:00:00	2015-03-07 21:00:00	2015-03-08 21:15:00	No	Reported
4c3ee36c-435c-4bfa-	GBHYM	2015-03-06 23:30:00	GBBEL	2015-03-07 08:00:00	2015-03-07 07:50:00	2015-03-07 11:20:00	No	Reported
2f3f1a5a-31a3-40c0-	GBBEL	2015-03-06 11:00:00	GBHYM	2015-03-06 20:30:00	2015-03-06 20:35:00	2015-03-06 23:30:00	No	Reported

1 - 10 of 14 items

Figure WF26: The current presentation of the vessel registry data.

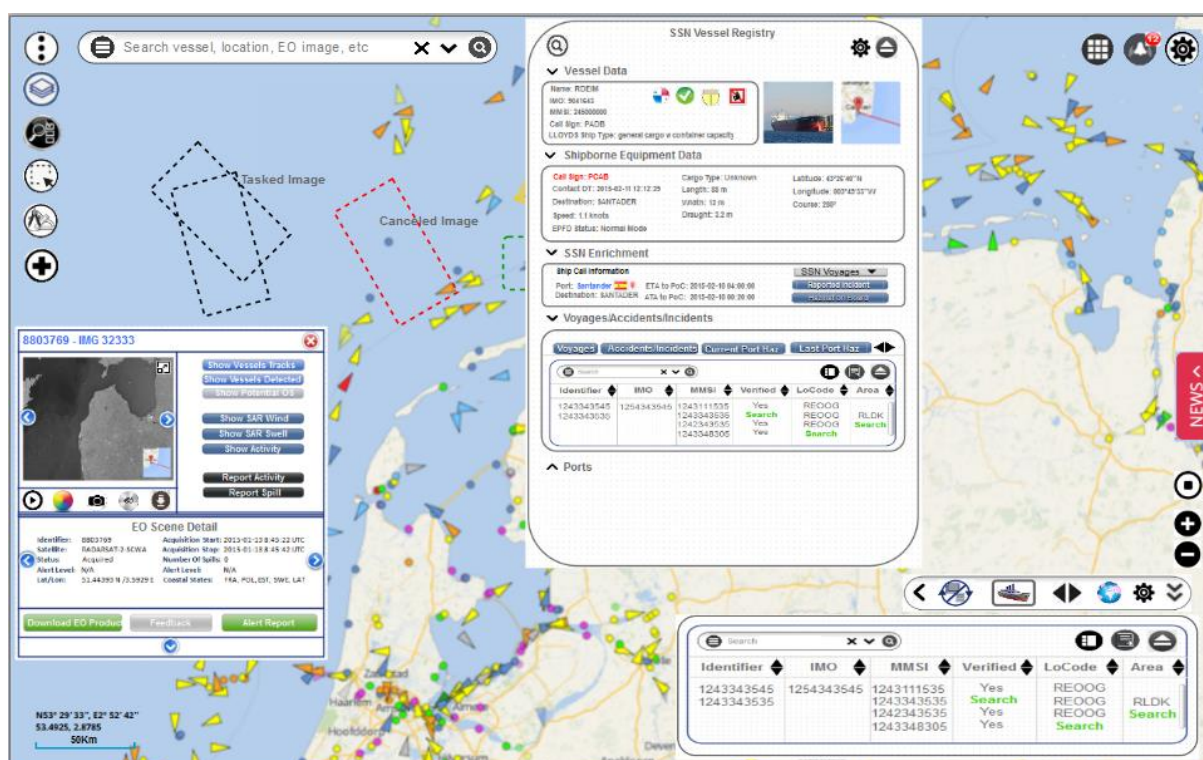


Figure WF27: Application SSN vessel registry started from the Apps window and presented in the map.

### 3.12 The Applications

Applications and common databases are added to the application window (see figure WF28). The user can choose to access an application such as SSN vessel registry (see also Figures WF24, WF25 and WF27) directly from the map.

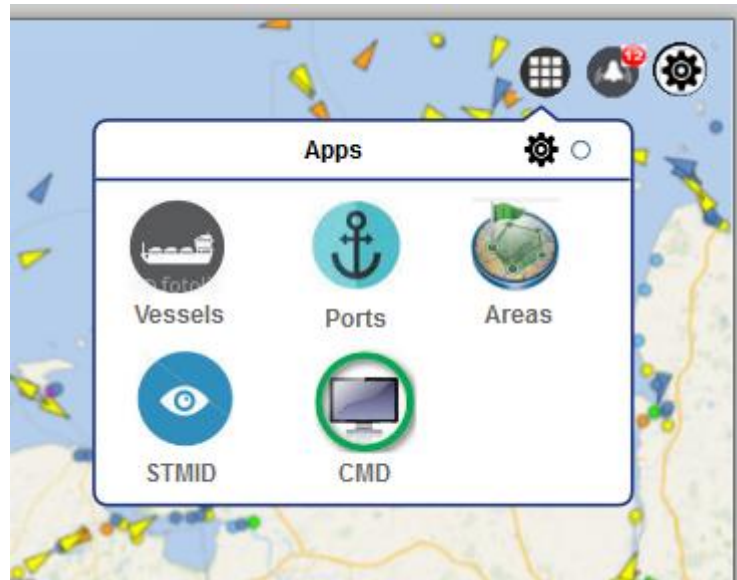


Figure WF28: Applications in the Apps window.