Royal Netherlands Institute for Sea Research

# Update on NIOZ operations

New build update; farewell to *RV Pelagia*; over NIOZ – MFP

**Zeynep Erdem**

**Science coordinator**

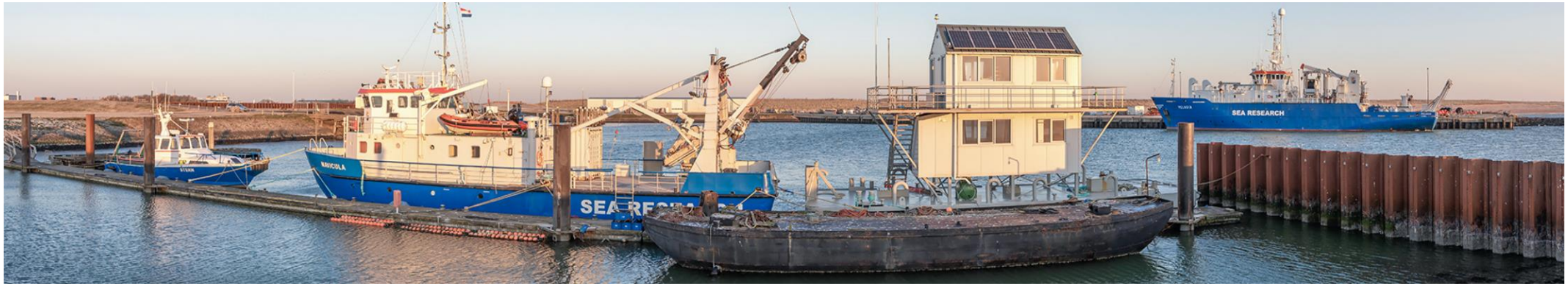
**National Marine Facilities NIOZ**

IRSO 2024,

Vancouver, Canada

# Renewal of Dutch Research fleet

*RV Stern* *RV Navicula* *RV Pelagia*



*RV Adriaen Coenen*

*RV Wim Wolff*

*RV Anna Weber-van Bosse*

# New build updates: *RV Wim Wolff*

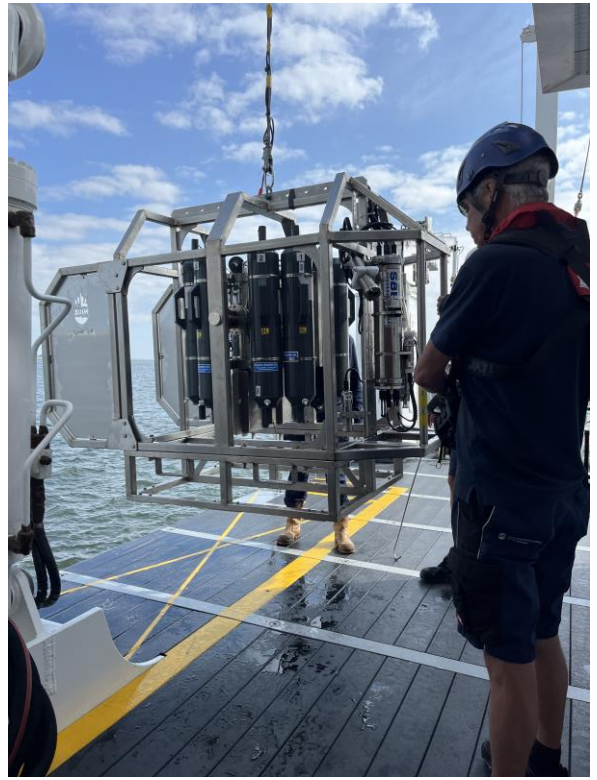
- In full operation since June 2024
- Hybrid propulsion and sustainable fuel
- Operational area coastal sea (within 20nm) and inland waters
- Large deck area

  6 shared cabins for 12 scientists + 4 crew

  Also part of AQUARIUS

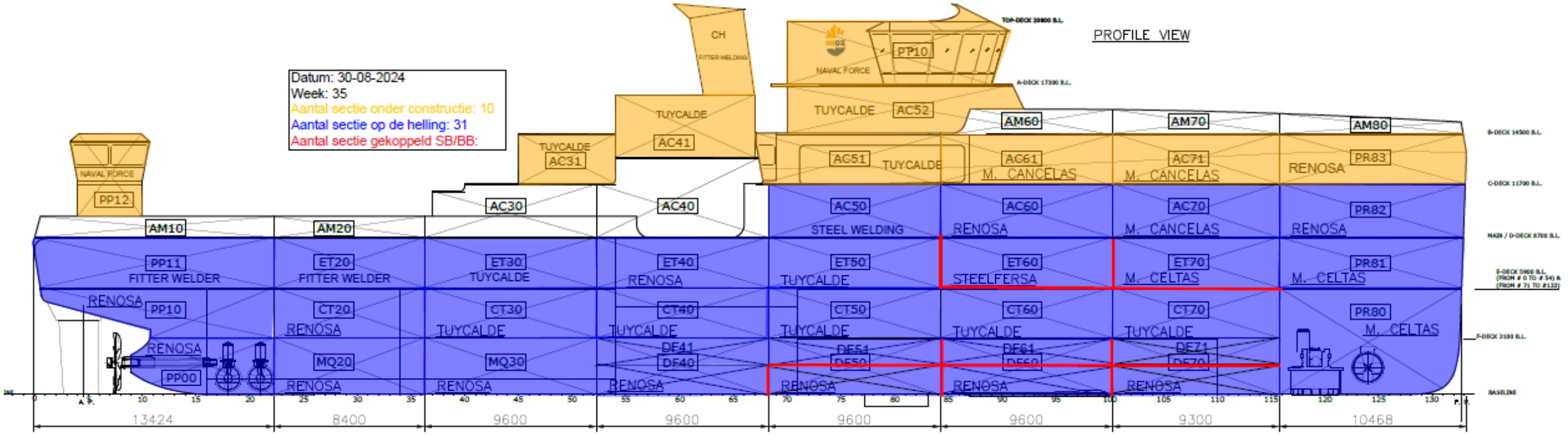
# Some take home messages:

- Delayed delivery; no actual trial period
- Really busy first sampling season; limited time for the shipyard to react to issues
- First-time offshore expedition in a wind park (~15 nm off the coast) in the North Sea; the weather was perfect for this work otherwise the shallow draft is probably not ideal. Good conditions are necessary.
- The vessel is now wide with limited maneuverability for inland waters, however, all went fine this season.
- The underwater ship's surface has a hard coating that is easy to clean.
- The hybrid diesel-electric system is designed for high redundancy and energy-efficient fuel consumption. The internal combustion engines run on HVO.
- Batteries serve as a backup for the generators and help deal with peak power consumption: peak shaving.



*Custom-built CTD system for RV Wim Wolff*

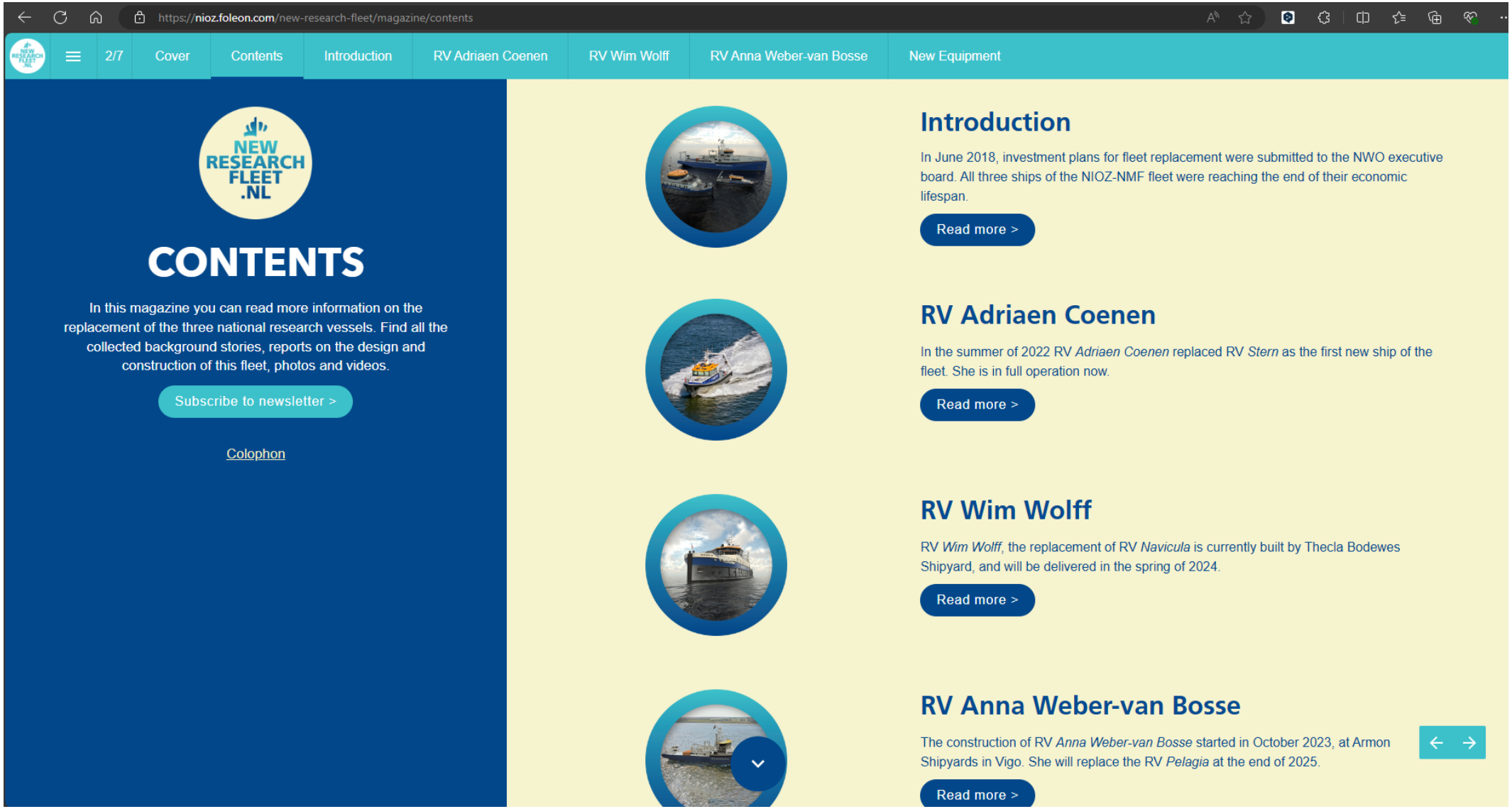
# New build updates: *RV Anna Weber-van Bosse*




Last update from the August newsletter.

# New build updates: *RV Anna Weber-van Bosse*

| Launch | Delivery | Full Operation |
|---|---|---|
| October 2024 | Autumn 2025 | Summer 2026 |




[Contents - New Research Fleet (foleon.com)]

# Retirement of *RV Pelagia:* end of September 2025

# *RV Pelagia* over the years

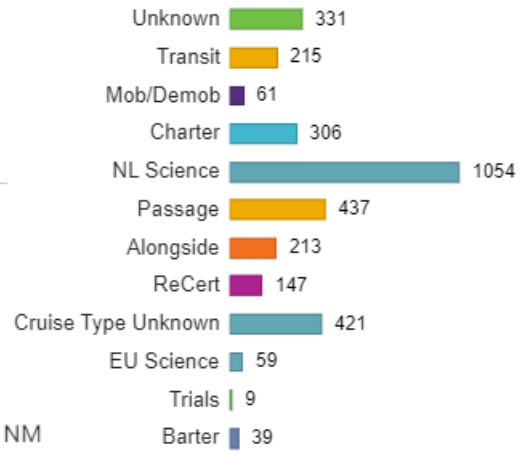
- Built in 1991 in the Netherlands for research in the North Sea
- Been mostly in the North Sea and over the years the operation expanded to the North Atlantic but also the Mediterranean and Black Sea, the Pacific and Indian Ocean.

Foto: Archief Schuttevaer - Pelagia

# *RV Pelagia* over the years

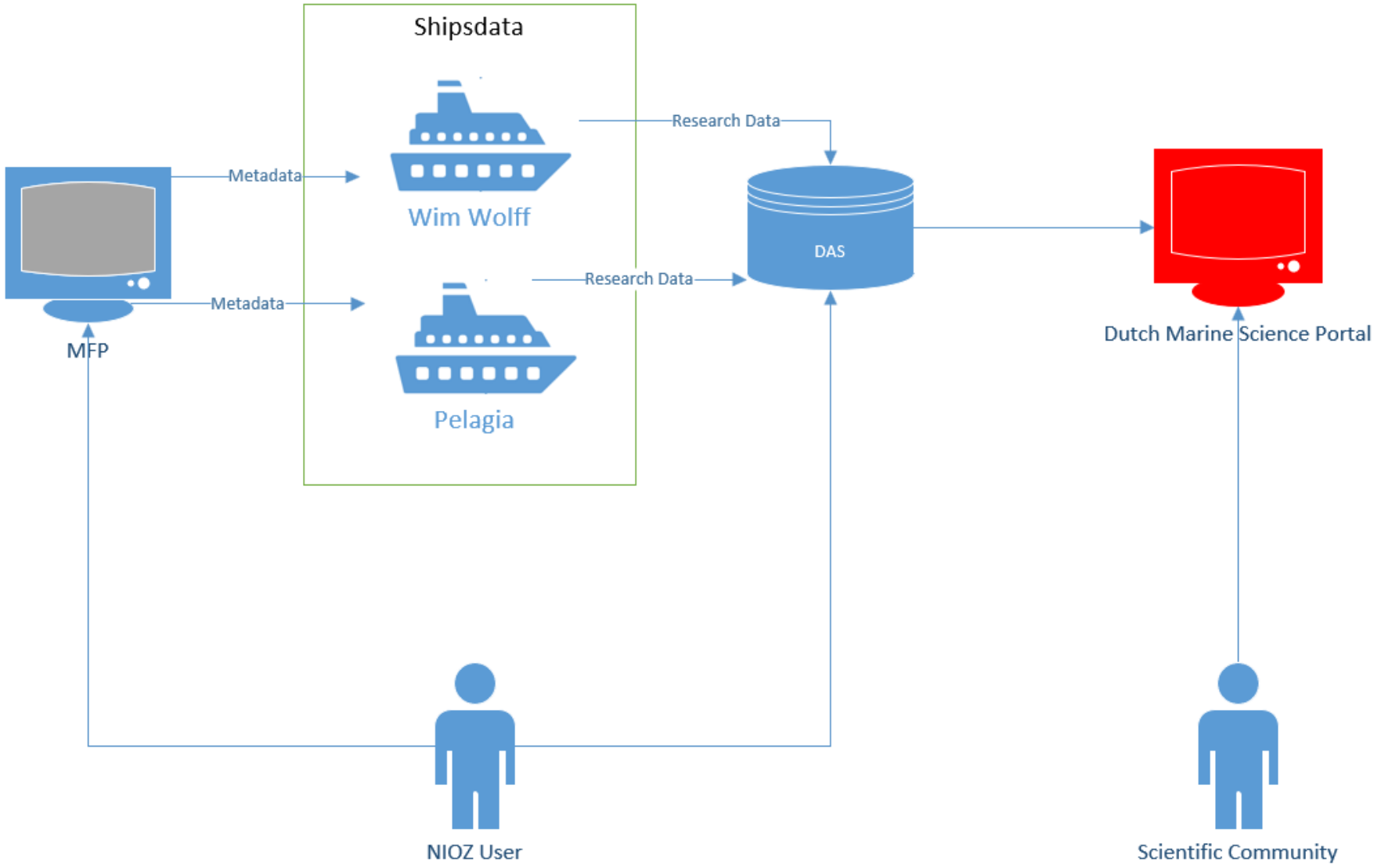
Since 2016 the planning is via MFP

| | |
|---|---|
| **Days at sea:** | **1999.4** |
| NL EEZ: | 263.6 |
| Foreign EEZ : | 1041.9 |
| International waters: | 693.9 |
| MPA : | 226.5 |
| **Docked :** | **810.3** |
| NL ports : | 418.6 |
| International ports : | 391.6 |
| **Total distance covered :** | 275.681 NM |

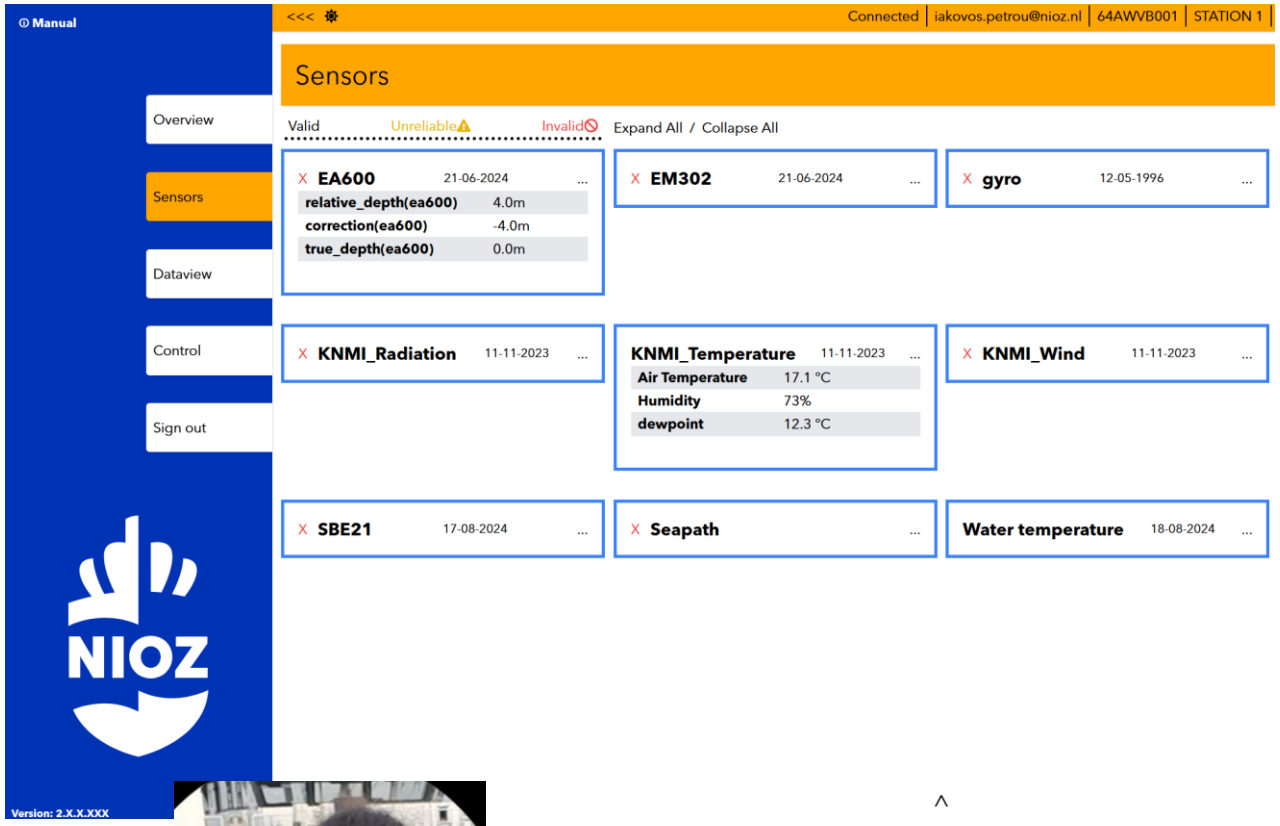


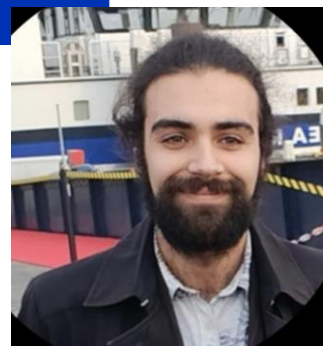
*Screenshots taken on September 10th, 2024. MFP – reporting module*

# From MFP to NIOZ ships data to the Database (DAS)

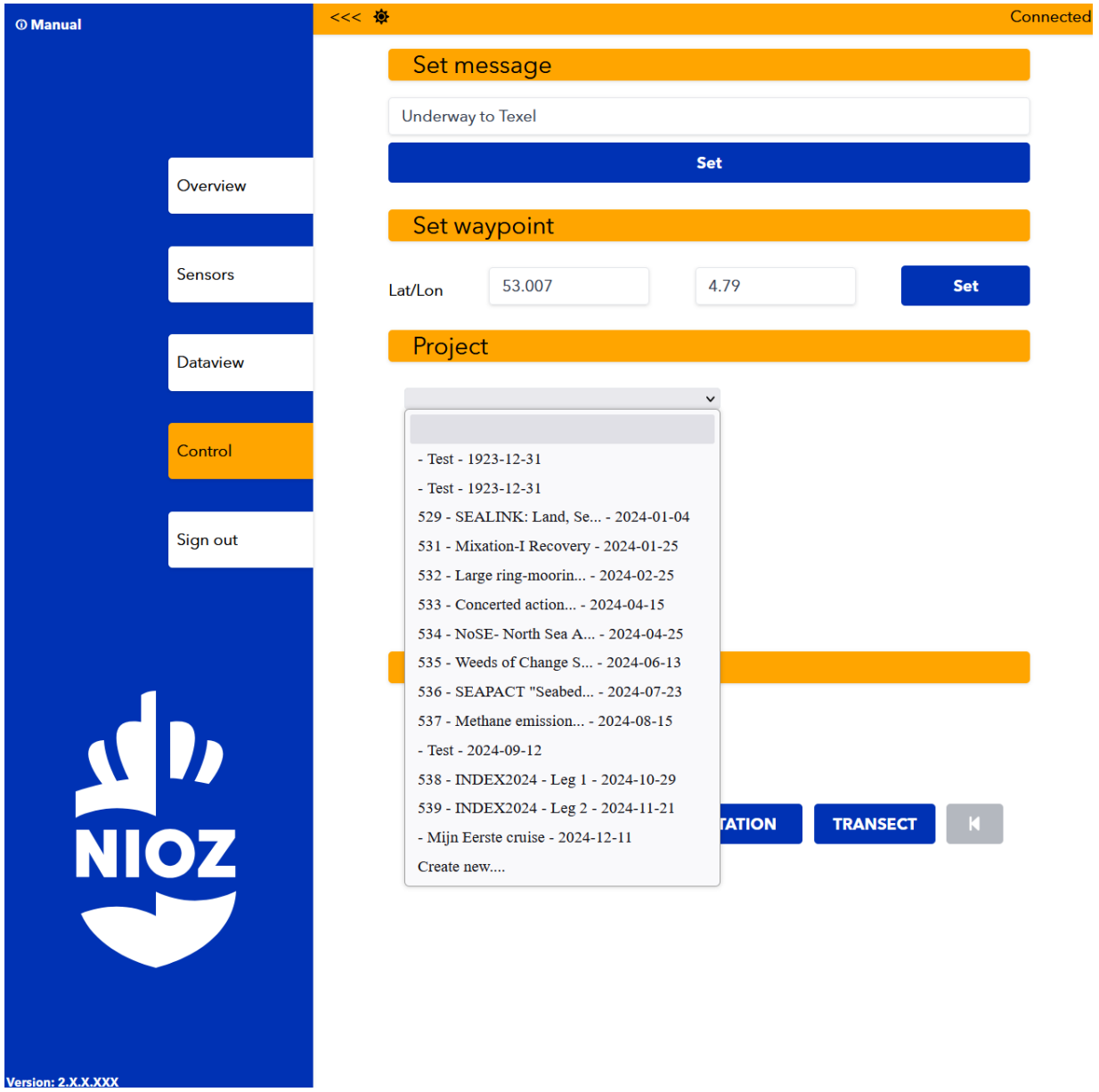


# The Ships data & cruise log



Iakovos Petrou, NIOZ ICT



# The Ships data & cruise log

## Start action

**Edit actions**

Multibeam

| | |
|---|---|
| **Action Name:** | Multibeam |
| **Action ID:** | 2 |
| **Action Description:** | Deep sea multibeam echo sounder |

Devices:

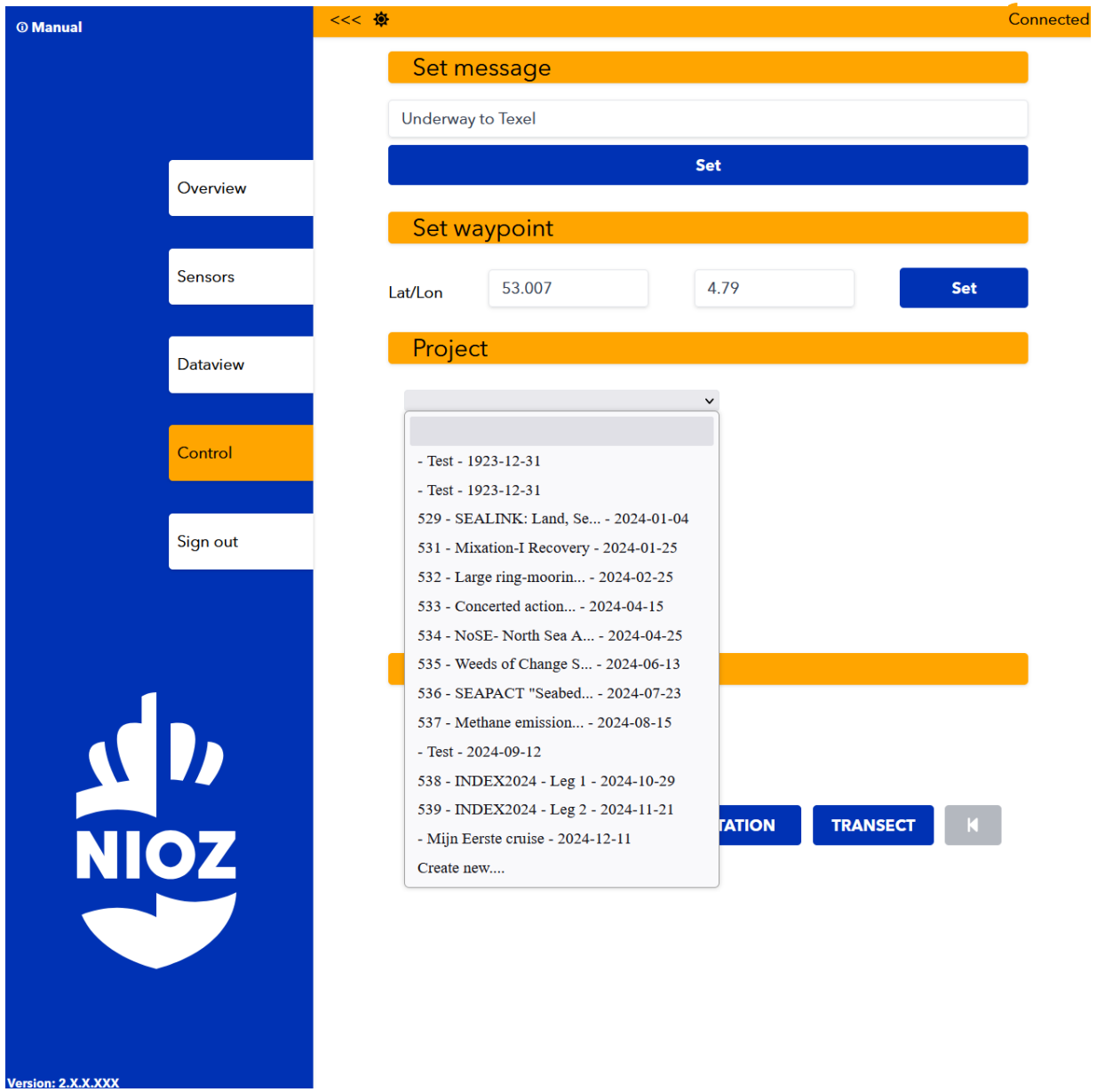
Henk's MB **Start action**

## Running actions

| Action | Device | Cast | Status | Started | Controls |
|---|---|---|---|---|---|
| Multibeam | #212687 | 4_1 | Start | 2024-09-17 18:09:27 | BOT |
| CTD | #00009607 | 1_1 | Start | 2024-09-09 15:09:55 | BOT |

## Failed actions

| Action | ID | Controls |
|---|---|---|
| ADCP Track | 1_1 | |



# The Ships data & cruise log

<< Connected | master | No active cruise | 2024-09-17 16:47:17 UTC

## Dataviewer _20220819_64PE509_I_NANO

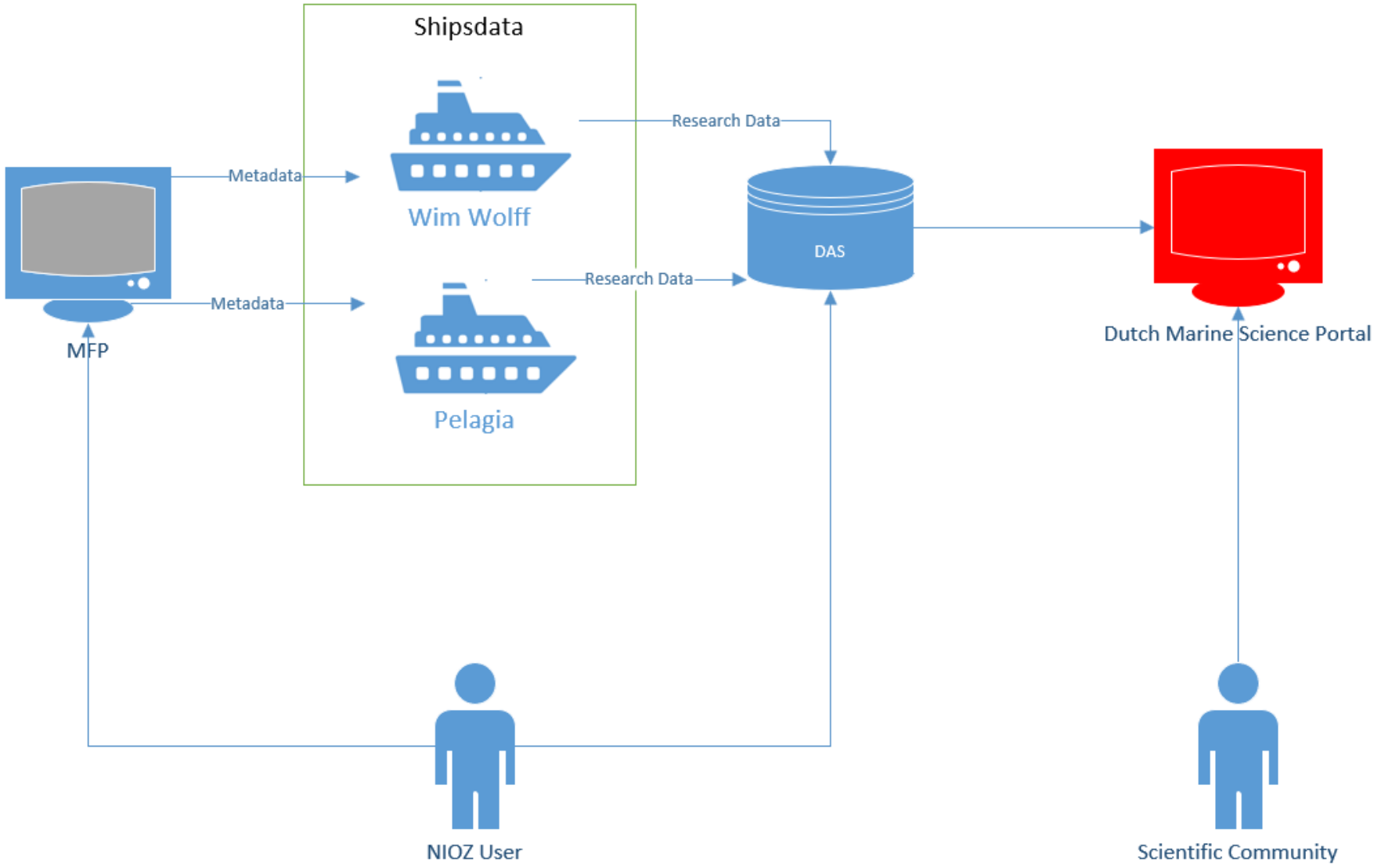
Select other cruise

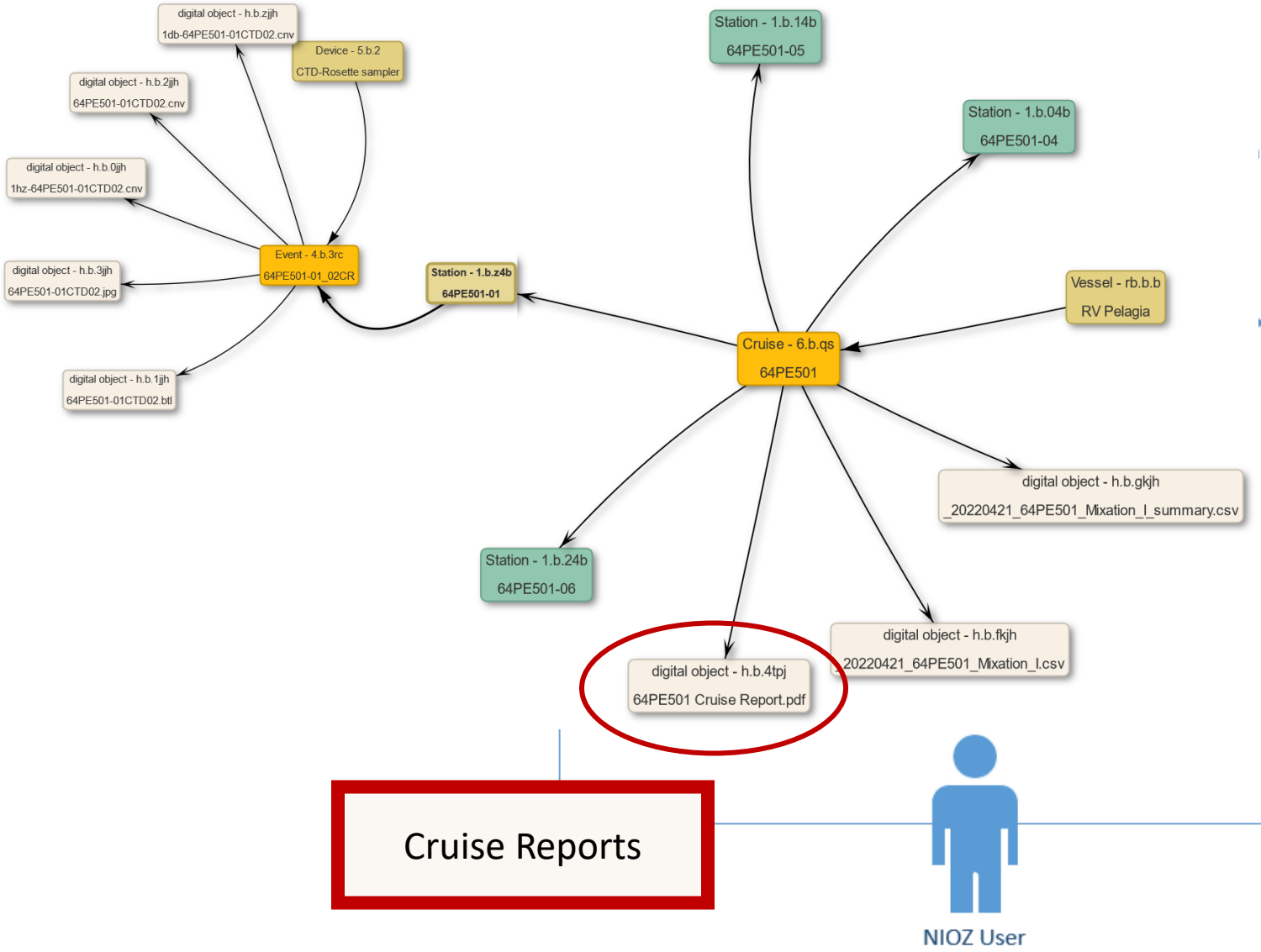
### Event summary

CTD Editor Note Export as CSV / ODV

| | Seapath | Seapath | | | | | | Seapath | Seapath | Seapath | Seapath | Seapath | Seapath | Seapath | Seapath | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Date* | *latitude* | *longitude* | *Phase name* | *Device name* | *Action name* | *Operation Id* | *Cast* | *time* | *latitude direction* | *longitude direction* | *year* | *month* | *day* | *speed over ground* | *course over ground* | *sea* |
| YYYY-MM-DD hh:mm:ss | ° north | ° east | | | | | | | | | | | | kn | | |
| 2022-08-23 09:35:47 | 36.2302 | 33.9005 | STATION 2 | CTD with Samples | BOT | 64PE509CTDBOT2 | 2_5 | 93547 | | | 2022 | 8 | 23 | 0.4 | 284.07 | |
| 2022-08-23 08:52:28 | 36.2292 | 33.9012 | STATION 2 | CTD with Samples | BEGIN | 64PE509CTDBOT2 | 2_5 | 85225 | | | 2022 | 8 | 23 | 0.2 | 60.39 | |
| 2022-08-23 08:32:33 | 36.2292 | 33.901 | STATION 2 | In Situ Pump | END | 64PE509ISP2 | 2_4 | 83231 | | | 2022 | 8 | 23 | 0.3 | 63.13 | |
| 2022-08-23 08:05:48 | 36.2297 | 33.9005 | STATION 2 | In Situ Pump | STOP | 64PE509ISP2 | 2_4 | 80546 | | | 2022 | 8 | 23 | 0.5 | 171.40 | |
| 2022-08-22 20:34:29 | 36.2293 | 33.9008 | STATION 2 | In Situ Pump | START | 64PE509ISP2 | 2_4 | 203427 | | | 2022 | 8 | 22 | 0.2 | 166.28 | |
| 2022-08-22 20:30:36 | 36.2292 | 33.9007 | STATION 2 | In Situ Pump | BEGIN | 64PE509ISP2 | 2_4 | 203033 | | | 2022 | 8 | 22 | 0.5 | 37.13 | |
| 2022-08-22 19:46:11 | 36.2288 | 33.8942 | STATION 2 | CTD with Samples | END | 64PE509CTDBOT2 | 2_3 | 194610 | | | 2022 | 8 | 22 | 0.7 | 163.38 | |
| 2022-08-22 16:20:00 | 36.2298 | 33.9023 | STATION 2 | CTD with Samples | BOT | 64PE509CTDBOT2 | 2_3 | 161958 | | | 2022 | 8 | 22 | 0.5 | 164.14 | |
| 2022-08-22 15:34:02 | 36.2292 | 33.9033 | STATION 2 | CTD with Samples | BEGIN | 64PE509CTDBOT2 | 2_3 | 153400 | | | 2022 | 8 | 22 | 0.5 | 120.26 | |
| 2022-08-22 15:15:09 | 36.2292 | 33.9105 | STATION 2 | HD Video | END | 64PE509HD2 | 2_2 | 151508 | | | 2022 | 8 | 22 | 0.1 | 105.86 | |
| 2022-08-22 14:30:59 | 36.2278 | 33.9097 | STATION 2 | HD Video | ENDTRACK | 64PE509HD2 | 2_2 | 143057 | | | 2022 | 8 | 22 | 1.1 | 271.45 | |
| 2022-08-22 13:27:45 | 36.23 | 33.8987 | STATION 2 | HD Video | STARTTRACK | 64PE509HD2 | 2_2 | 132746 | | | 2022 | 8 | 22 | 0.5 | 282.50 | |
| 2022-08-22 12:49:44 | 36.2297 | 33.8982 | STATION 2 | HD Video | BEGIN | 64PE509HD2 | 2_2 | 124943 | | | 2022 | 8 | 22 | 0.6 | 339.07 | |
| 2022-08-22 12:34:19 | 36.2285 | 33.891 | STATION 2 | HD Video | END | 64PE509HD2 | 2_1 | 123418 | | | 2022 | 8 | 22 | 0.5 | 289.81 | |

# From MFP to NIOZ ships data to the Database (DAS)






Stage

Technical cruise assessment form
Upload summary cruise report
Confirm data submission to BODC
Upload final scientific cruise report

Upload final scientific cruise report

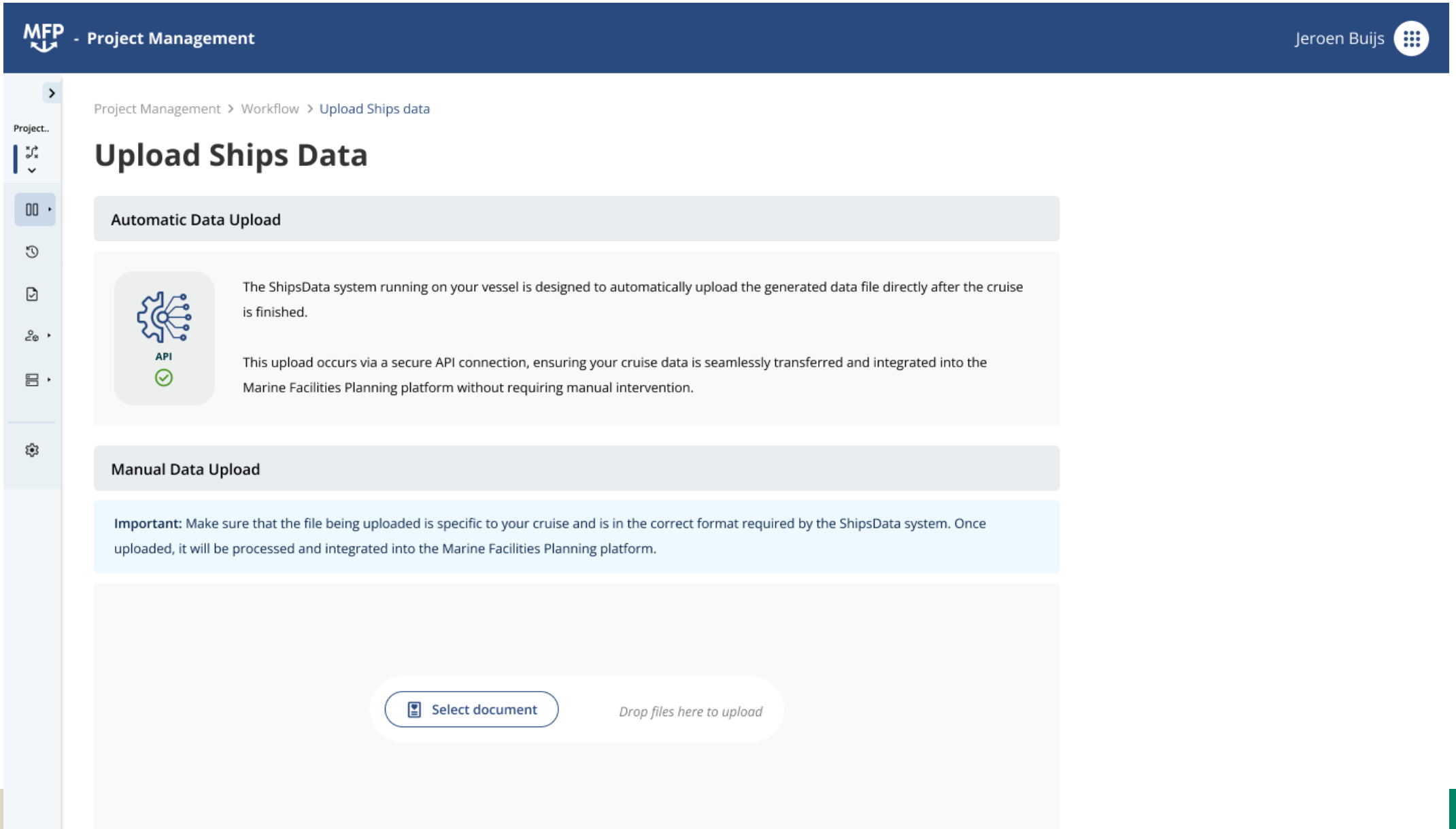
Technical cruise assessment form
Upload final scientific cruise report

Upload summary cruise report
Confirm data submission to BODC
Upload final scientific cruise report

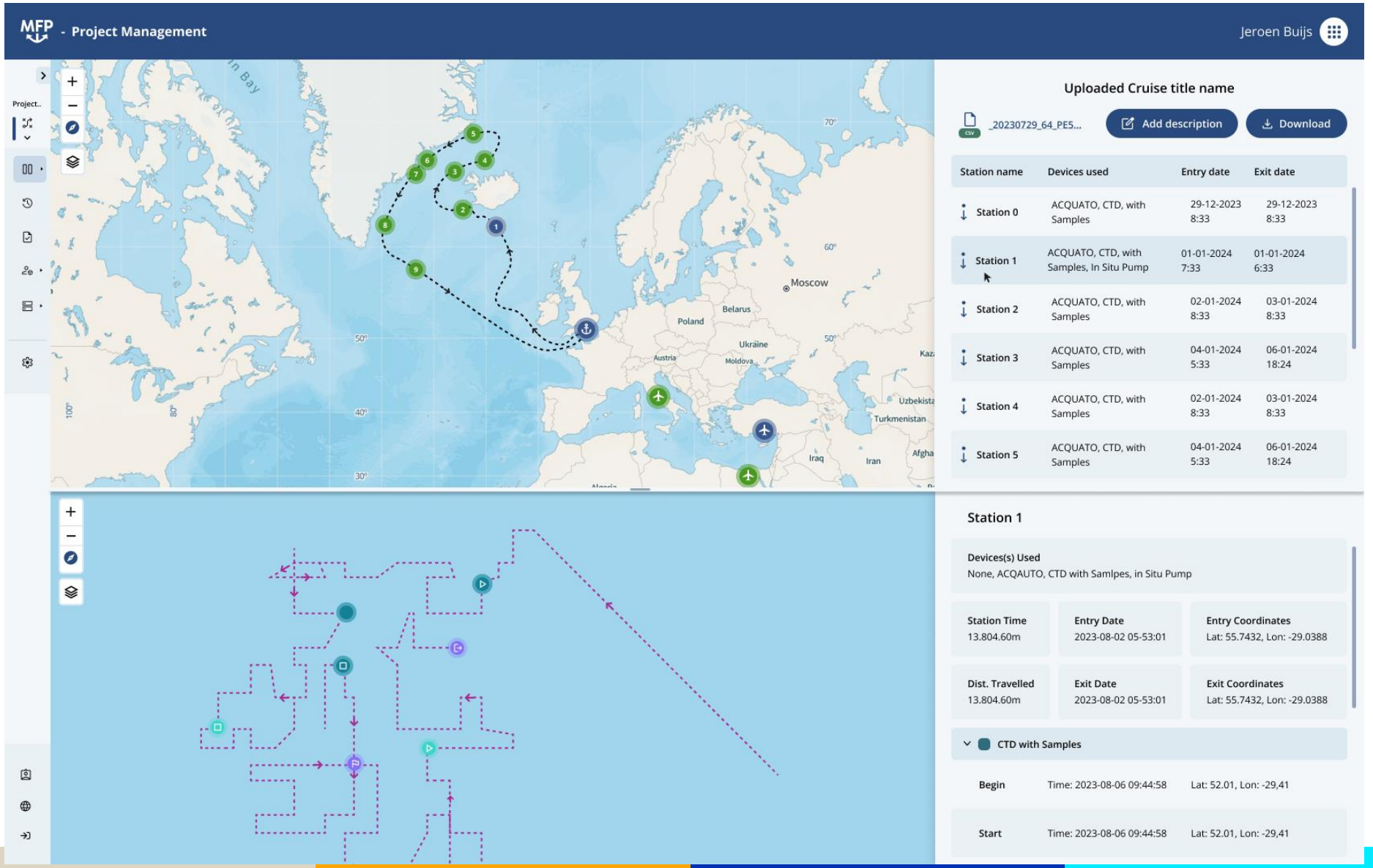
# The Ships data & cruise log

| | Date | Seapath\|latitude\| | Seapath\|longitude\| | Phase name | Device name | Barcode | Action name | Operation Id | Cast | EA600\|relative_depth(ea600)\|m |
|---|---|---|---|---|---|---|---|---|---|---|
| 26 | 4/27/2024 10:28 | 58.4 | 5.0993 | STATION 4 | None | | PHASE START | 64PE534 | None | 304.4 |
| 27 | 4/27/2024 11:03 | 58.4002 | 5.1002 | STATION 4 | Boxcore d=300 | | BEGIN | 64PE534BOX3004 | 4_1 | 305.6 |
| 28 | 4/27/2024 11:12 | 58.4002 | 5.1002 | STATION 4 | Boxcore d=300 | | BOT | 64PE534BOX3004 | 4_1 | 304.6 |
| 29 | 4/27/2024 11:25 | 58.4003 | 5.1002 | STATION 4 | Boxcore d=300 | | END | 64PE534BOX3004 | 4_1 | 304.8 |
| 30 | 4/27/2024 11:42 | 58.3998 | 5.1 | STATION 4 | None | | PHASE END | 64PE534 | None | 304.6 |
| 31 | 4/27/2024 11:42 | 58.3998 | 5.1 | TRANSIT 5 | None | | PHASE START | 64PE534 | None | 304.6 |
| 32 | 4/27/2024 11:42 | 58.3998 | 5.1 | TRANSIT 5 | None | | PHASE END | 64PE534 | None | 304.6 |
| 33 | 4/27/2024 11:42 | 58.3998 | 5.1 | STATION 5 | None | | PHASE START | 64PE534 | None | 304.6 |
| 34 | 4/27/2024 11:42 | 58.3998 | 5.1 | STATION 5 | Multi Corer | | BEGIN | 64PE534MC125 | 5_1 | 304.4 |
| 35 | 4/27/2024 11:53 | 58.4003 | 5.0995 | STATION 5 | Multi Corer | | BOT | 64PE534MC125 | 5_1 | 304.2 |
| 36 | 4/27/2024 12:01 | 58.4 | 5.0993 | STATION 5 | Multi Corer | | END | 64PE534MC125 | 5_1 | 304.8 |
| 37 | 4/27/2024 12:49 | 58.4002 | 5.0997 | STATION 5 | None | | PHASE END | 64PE534 | None | 304.8 |
| 38 | 4/27/2024 12:49 | 58.4002 | 5.0997 | TRANSIT 6 | None | | PHASE START | 64PE534 | None | 304.6 |
| 39 | 4/27/2024 12:49 | 58.4002 | 5.0997 | TRANSIT 6 | None | | PHASE END | 64PE534 | None | 304.6 |
| 40 | 4/27/2024 12:49 | 58.4002 | 5.0997 | STATION 6 | None | | PHASE START | 64PE534 | None | 304.6 |
| 41 | 4/27/2024 12:53 | 58.4002 | 5.0998 | STATION 6 | Pistoncorer d=110 | | BEGIN | 64PE534PC1106 | 6_1 | 304.6 |
| 42 | 4/27/2024 13:18 | 58.3998 | 5.1005 | STATION 6 | Pistoncorer d=110 | | BOT | 64PE534PC1106 | 6_1 | 304.6 |
| 43 | 4/27/2024 13:36 | 58.4 | 5.0997 | STATION 6 | Pistoncorer d=110 | | END | 64PE534PC1106 | 6_1 | 304.4 |
| 44 | 4/27/2024 14:03 | 58.399 | 5.0997 | STATION 6 | None | | PHASE END | 64PE534 | None | 305.6 |
| 45 | 4/27/2024 14:03 | 58.399 | 5.0997 | TRANSIT 7 | None | | PHASE START | 64PE534 | None | 305.6 |
| 46 | 4/27/2024 14:35 | 58.4005 | 5.0992 | TRANSIT 7 | None | | PHASE END | 64PE534 | None | 303.8 |
| 47 | 4/27/2024 14:35 | 58.4005 | 5.0992 | STATION 7 | None | | PHASE START | 64PE534 | None | 303.8 |
| 48 | 4/27/2024 14:37 | 58.4005 | 5.0993 | STATION 7 | Hopper Camera | | BEGIN | 64PE534HOPCAM7 | 7_1 | 304 |
| 49 | 4/27/2024 14:39 | 58.4007 | 5.0992 | STATION 7 | Hopper Camera | | START | 64PE534HOPCAM7 | 7_1 | 304.2 |
| 50 | 4/27/2024 14:46 | 58.4015 | 5.0987 | STATION 7 | Hopper Camera | | BOTTOM | 64PE534HOPCAM7 | 7_1 | 304.2 |
| 51 | 4/27/2024 15:44 | 58.4108 | 5.0905 | STATION 7 | Hopper Camera | | STOP | 64PE534HOPCAM7 | 7_1 | 302.3 |
| 52 | 4/27/2024 15:51 | 58.4112 | 5.0893 | STATION 7 | Hopper Camera | | END | 64PE534HOPCAM7 | 7_1 | 302.3 |
| 53 | 4/27/2024 15:54 | 58.4113 | 5.0888 | STATION 7 | None | | PHASE END | 64PE534 | None | 302.5 |
| 54 | 4/27/2024 15:54 | 58.4113 | 5.0888 | TRANSIT 8 | None | | PHASE START | 64PE534 | None | 302.5 |
| 55 | 4/27/2024 16:31 | 58.4003 | 5.0998 | TRANSIT 8 | None | | PHASE END | 64PE534 | None | 304.4 |
| 56 | 4/27/2024 16:31 | 58.4003 | 5.0998 | STATION 8 | None | | PHASE START | 64PE534 | None | 304.4 |
| 57 | 4/27/2024 16:31 | 58.4005 | 5.0997 | STATION 8 | Multibeam | 212687 | BEGIN | 64PE534EM3028 | 8_1 | 304 |
| 58 | 4/28/2024 4:03 | 59.1332 | 4.457 | STATION 8 | Multibeam | 212687 | COCH | 64PE534EM3028 | 8_1 | 248 |

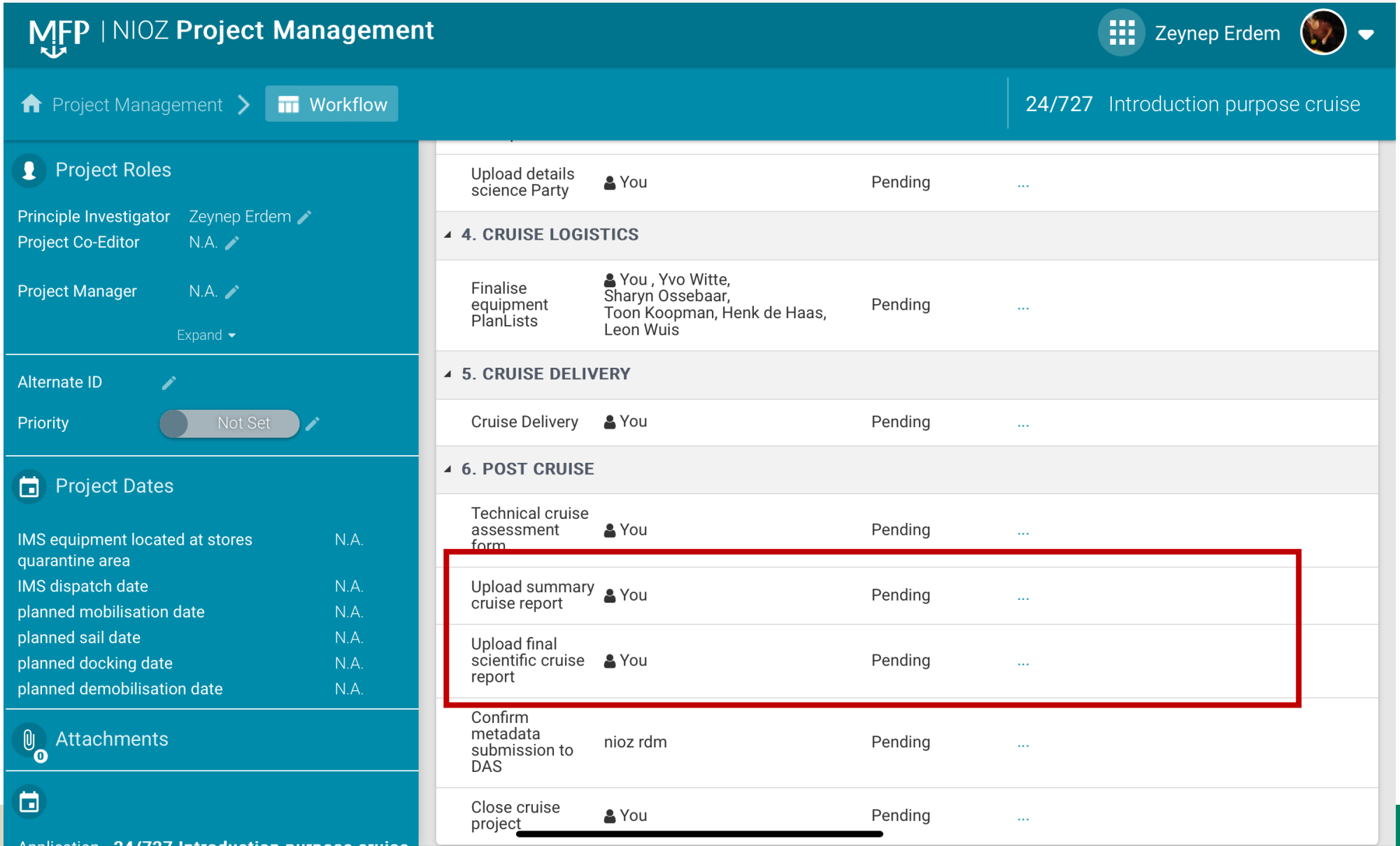
# Cruise log to MFP > reports



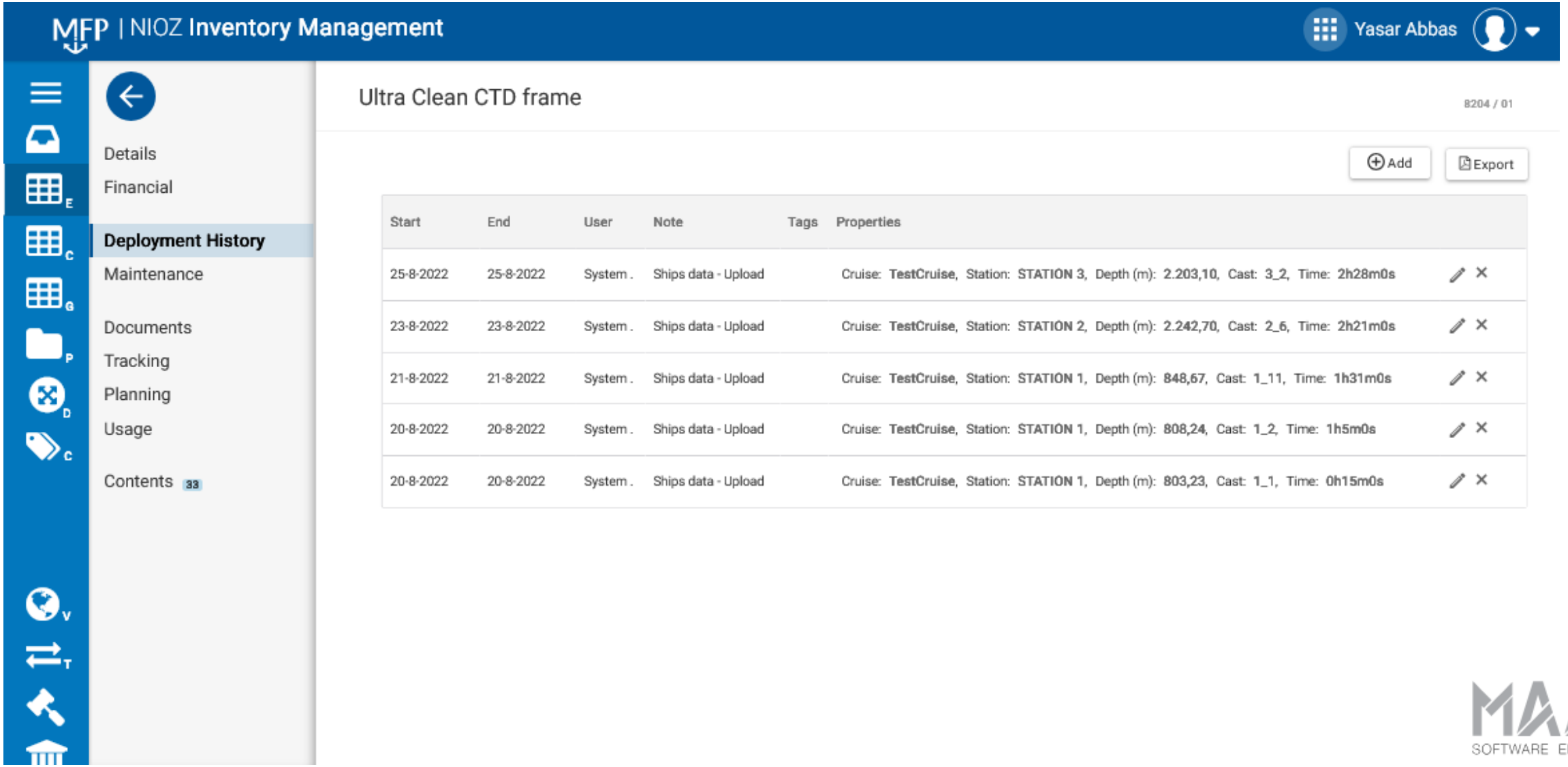
# Cruise log to MFP > reports



# Cruise log to MFP > reports



# Cruise log to MFP > equipment history



# Thank you for your attention!

Zeynep.Erdem@nioz.nl

**Follow the project at: www.newresearchfleet.nl**

Royal NIOZ National Marine Facilities (NMF) manage and operate the national research vessels and equipment for the benefit of the marine and maritime research community

Mark the date:
RV Pelagia will be open to visit
March 10 to 17th 2025
Las Palmas, Canaries