

# DATA MANAGEMENT IN EUROFLEETS+

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# EUROFLEETS+



- Open TNA calls to access the European R/V fleet
- 42 operators
- 2019-2023
- Ship calls
  - Regional
  - OCEAN
  - co-PI
  - Remote



# DATA FLOW FOR RESEARCH MANUAL DATA



Eurofleets+ campaigns → core data:

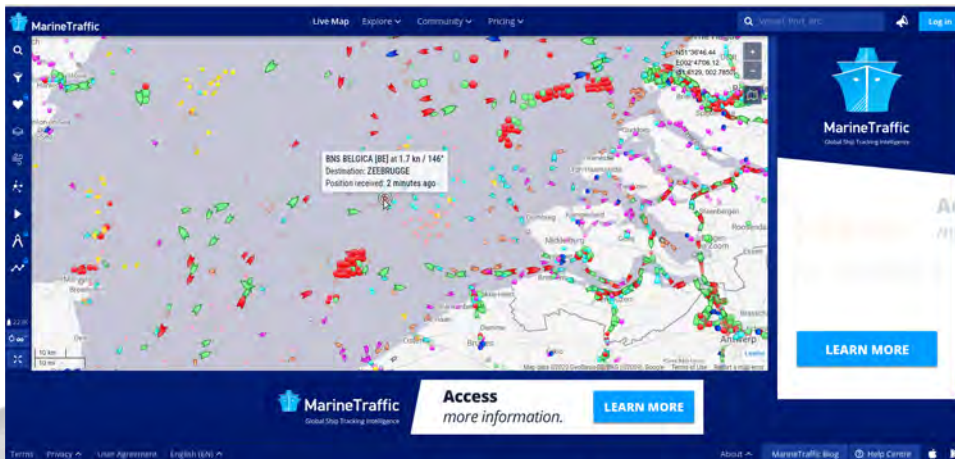
- Data paper, single-use data repository (Zenodo,...)
- Disconnect with institutional systems (?), scale benefits absent
- Data dissemination unclear
- Solutions:
  - Data Management Plans
  - Leverage EF+ DM software (EF1 and 2)



# DATA FLOW FOR EN-ROUTE DATA



## Remote (N)RT displays



MarineTraffic – AIS  
No en-route data



RV Belgica Een dienstverlenend oceanografisch onderzoekschip

**Waar is RV Belgica?**

Informatie van: 12/10/2020 15:40:00 (CET)

Breedtegraad: 51.6235 °    Lengtegraad: 2.7849 °  
 Vaarsnelheid: 2.12 kn    Koers: 149.7 °    Windkracht: 1.13 m/s  
 Windrichting: 314.9 °    Luchttemperatuur: 12.99 °C  
 Watertemperatuur: 15.58 °C    Waterdiepte: -21 m

[Weergeven in applicatie](#)

**RV Belgica Webcam**

12/10/2020 15:26:01 (CET)

**Campagneprogramma**

10/10/2020 → 11/10/2020	Haven
Zeebrugge – Zeebrugge	
12/10/2020 → 16/10/2020	2020/25
Zeebrugge – Zeebrugge	DIVERSE   MONITORING
17/10/2020 → 18/10/2020	Haven
Zeebrugge – Zeebrugge	
19/10/2020 → 19/10/2020	Onderhoud   Meeting
Zeebrugge – Zeebrugge	
20/10/2020 → 23/10/2020	2020/26
Zeebrugge – Zeebrugge	MONITORING

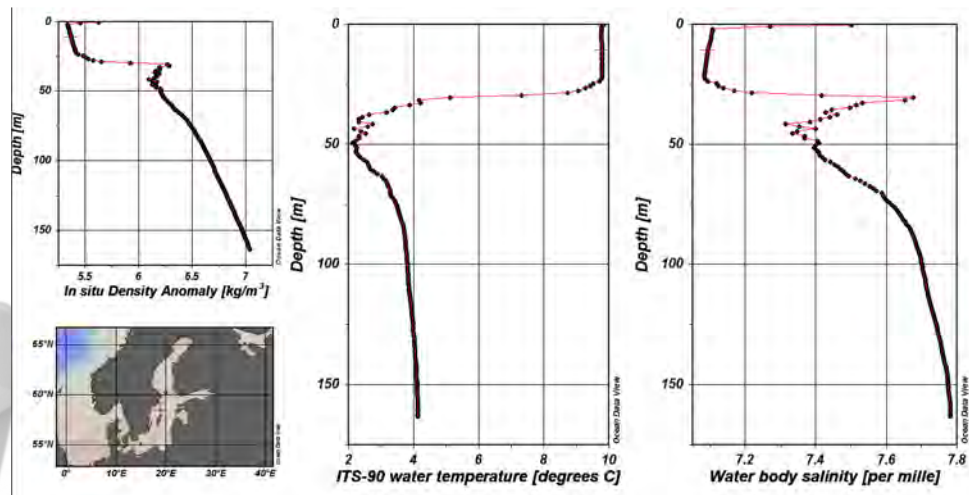
[Volledige campagnetabel](#)

Institutional website – internal system  
Not interoperable

# DATA FLOW FOR EN-ROUTE DATA



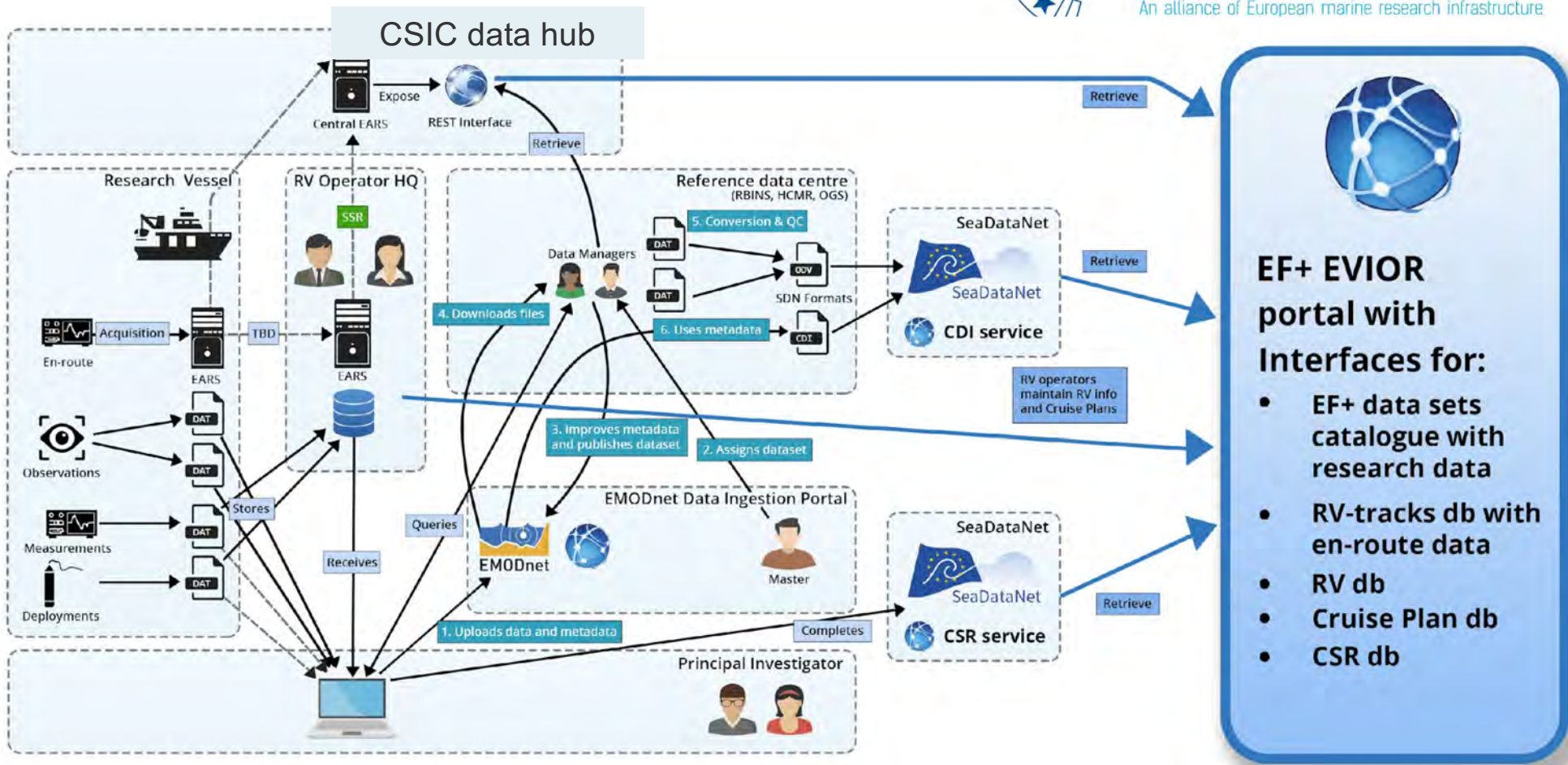
Validation using community tools (ODV, DIVA,...)  
Local storage



Delayed uptake into Coriolis, SeaDataNet,...



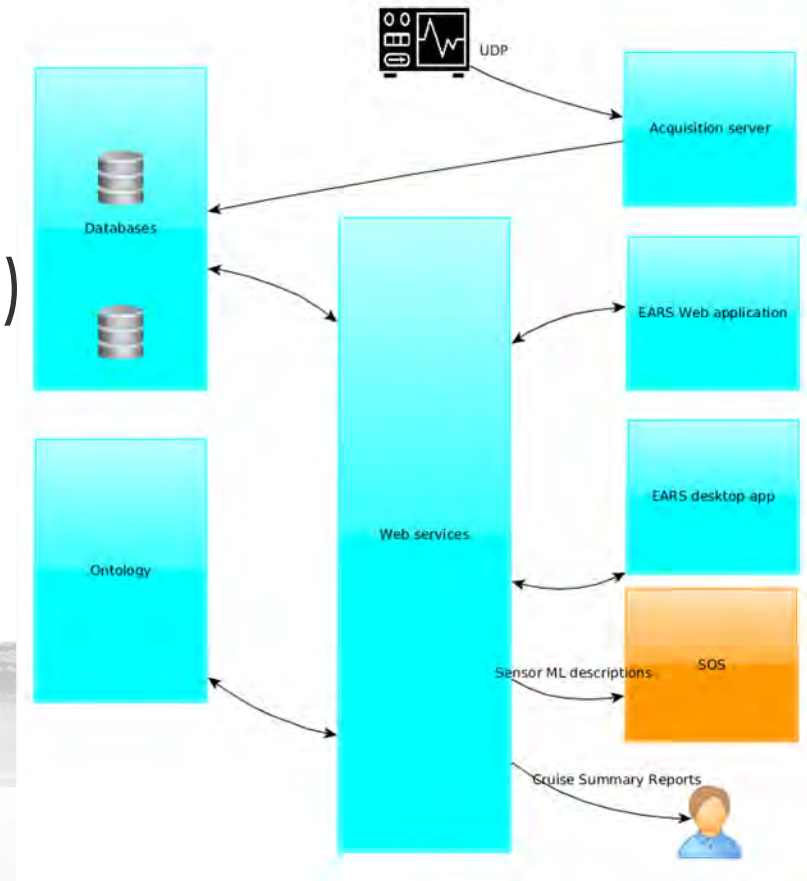
# DATA FLOW FOR MANUAL AND EN-ROUTE DATA



# EF+ AUTOMATIC REPORTING SYSTEM



- EARS = event logger
  - be semantically aware (vocababs!)
  - enrich event with en-route data
  - create complex metadata (CSR and SensorML)



# INTERACT WITH EARS



The screenshot shows a complex desktop application interface with multiple panes. The main pane displays a table of events with columns for Date, Time, Times, Tool category, Tool, Process, End, Action, Actor, Program, Label, and Properties. The table lists various activities such as 'berthos samplers', 'current profilers', and 'Sea-Dir SBE 1plus S4CAT'.

Date	Time	Times	Tool category	Tool	Process	End	Action	Actor	Program	Label	Properties
2020-02-19	11:38:25	Z	berthos samplers	Gibson dredge	Sampling	Start		Vanindjan Alex	OD NATURE-MF, O...		Edit error
2020-02-19	12:02:40	Z	current profilers	Teledyne RD Workhorse Mar...	Track	Start		Albert Jean-Chris...	OD NATURE-MF		Edit error
2020-02-19	16:29:22	+01:00	CTD	Sea-Dir SBE 1plus S4CAT	Profile	AtDepth		Albert Jean-Chris...	OD NATURE-MF		Edit error

Desktop application – synoptic view

## EARS

The screenshot shows a web application interface for EARS. It features a search bar for 'Event Events' and a list of filters. The filters include ToolCategory (observers), Tool (Telescope or binocular), Process (Observation), and Action (Start). A 'Submit' button is located below the filters. Below the filters, there is a 'Recent Events' section with a table of recent entries, each with a 'Submit' button.

ToolCategory	Tool	Process	Action
observers	Telescope or binocular	Observation	Start

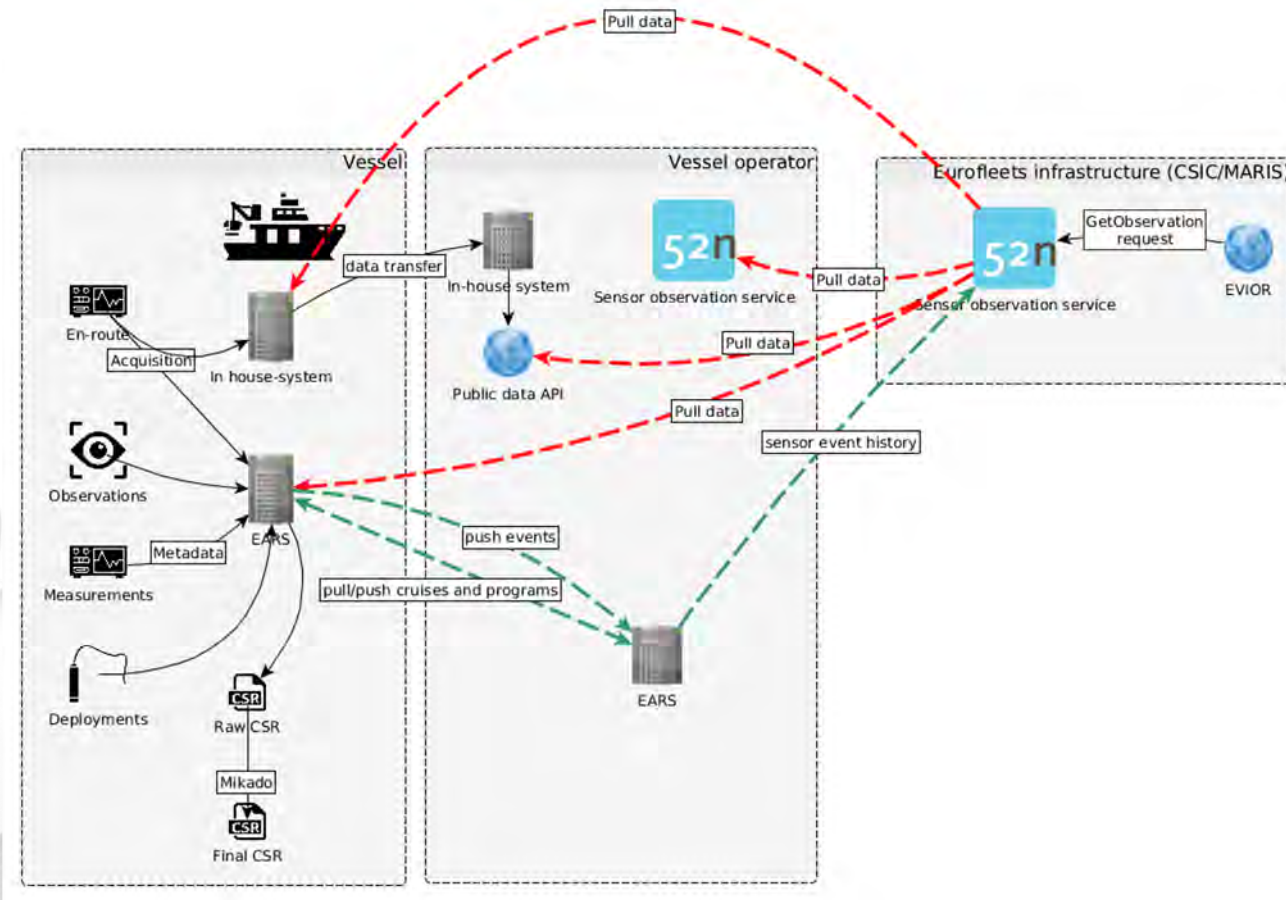
  

mooring	observers	research vessel	observers	centrifuges
Tripod	Telescope or binocular	Belgica	Telescope or binocular	Flow-through centrifuge
Deployment	Observation	Cruise	Observation	Initialisation
Start	Start	Start	End	Start
Submit	Submit	Submit	Submit	Submit

Simple, mobile-friendly web application – on-deck entry



# VESSEL-TO-SHORE FLOW



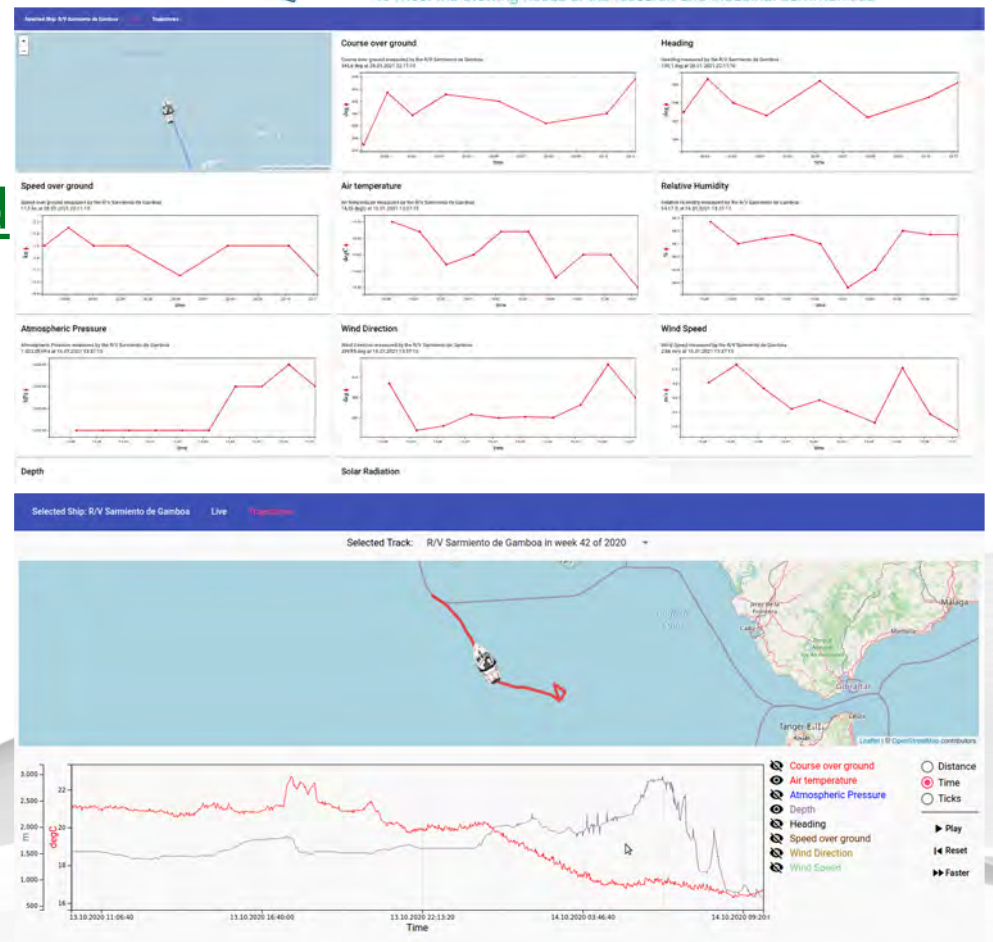
# VIEWING SERVICES ON SHORE

An alliance of European marine research infrastructure to meet the evolving needs of the research and industrial communities

## UTM-CSIC DATA HUB

<http://eurofleets.utm.csic.es/dashboard>

- 52°N Sensor Observation Service
- Navigation, Thermosal, Meteo data
- **The way to go:**
  - FAIR and nice (+INSPIRE)
  - Data flow to EVIOR portal
- Plug in EF+ R/V
- CSIC configures SOS feeder



# SENSOR WEB INTEGRATION

