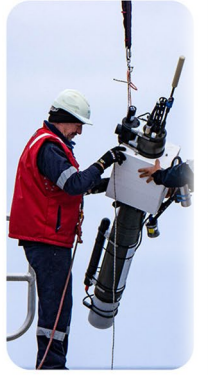


AODN Portal Update

Mark Rehbein

Director, Australian Ocean Data Network
Integrated Marine Observing System



IMOS acknowledges the Traditional Custodians and Elders of the land and sea on which we work and observe, and recognise them as Australia's first marine scientists and carers of Sea Country. We pay our respects to Aboriginal and Torres Strait Islander peoples past and present.

Why a new Portal? Summary of external review processes

Who	Challenge	Action
User	Difficult to find data	Modernise the search experience
User	Too hard to use	Invest in user interface design and user experience interactions Use modern UI frameworks
User	National data catalogue of 14,000 dataset are not accessible	Index catalogue and show in search result
User	Data extraction slow & costly	Use cloud optimised format
User	Visualisations too limited	Add 'pixel' drill on satellite archive Add 'timeseries' preview
AODN	Data ingestion setup effort	Flexible, python-based workflows
AODN	Maintenance effort high	Less catalogues, less system complexity, less forked open-source code

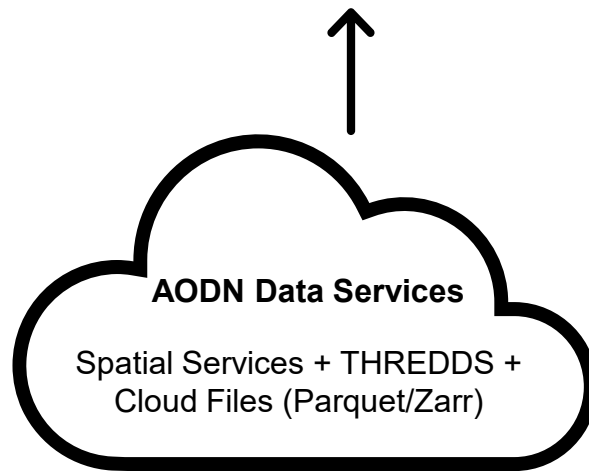
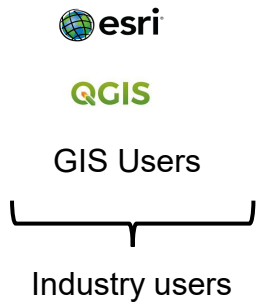
Ultimately, to increase uptake of IMOS and other marine data assets to generate value for Australia

Increasing Uptake: Delivering for user diversity



Non-technical user scenarios

- Data discovery
- Interactive experience
- Visualisations
- Subset download (CSV)
- Data products
- Data to information



Example Jupyter Notebooks



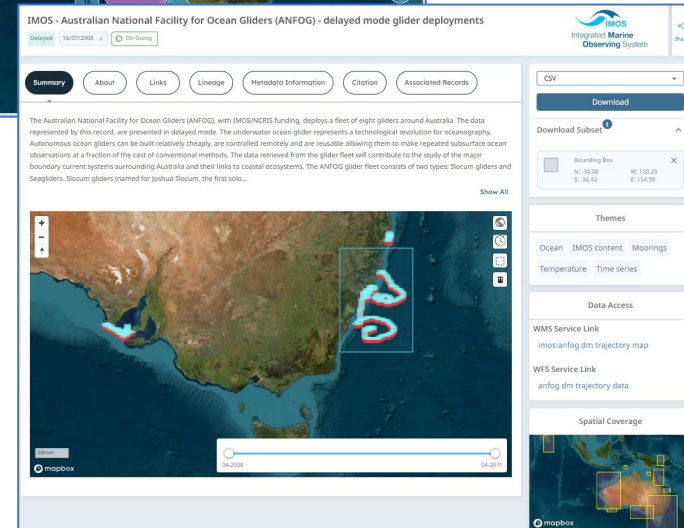
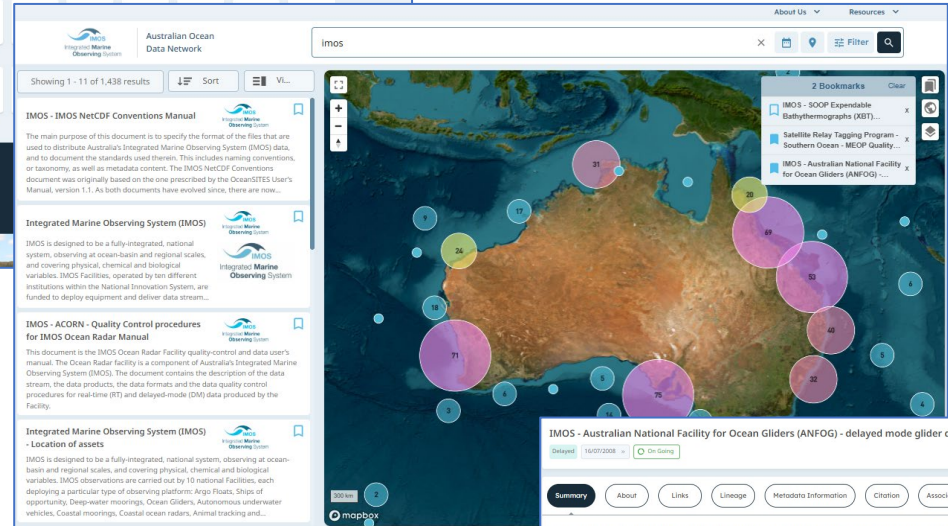
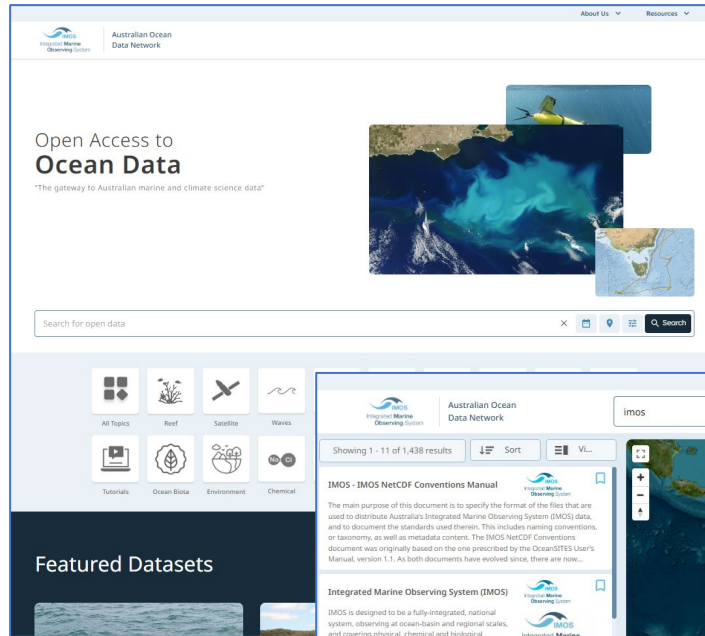
Oceanographers & Modellers
(THREDDS / NetCDF)

Data experts

- Programmatic access
- Data analysis
- Data science use-cases
- (Parquet & Zarr)

Typical Usage Pattern

1. Search/Discovery
2. Refine/Explore
3. Understand
 - Information
 - Preview (if available)
 - Subset download (if available)
 - Data services (data expert)
 - Other repository (non-IMOS)



Status: Pre-launch: there are a few features that we need to completed before a soft launch.

The demo today are videos of the new Portal as of Friday

Landing page

1. Simple search text base

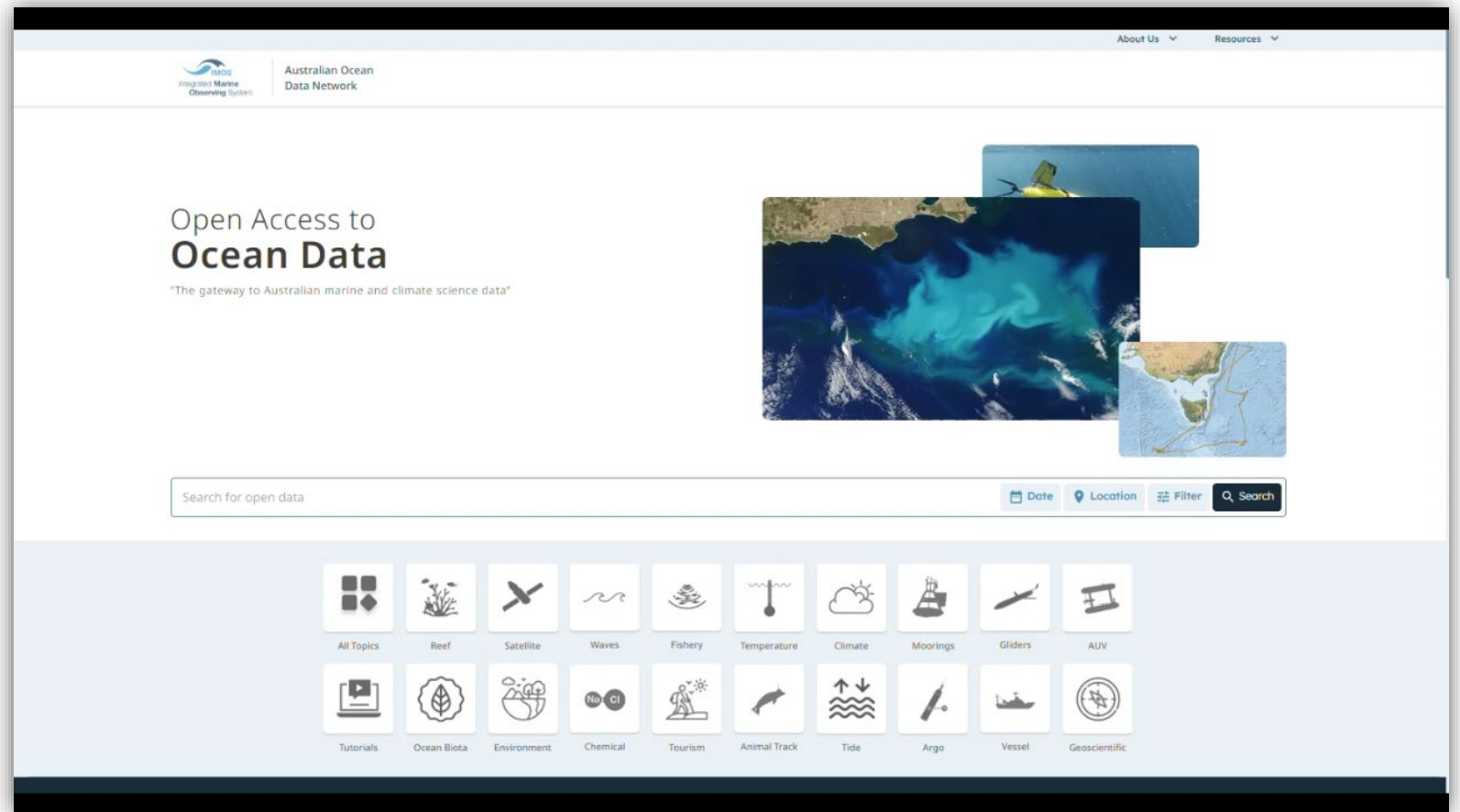
- Search term suggest
- Fuzzy search
- Popular filters (date, location)
- Additional filters

2. Topic search

- For the casual user or for us to highlight

3. Featured datasets

- Highlight datasets



Refine & Explore

1. Interactive map and list
 - Visualise location
 - What is in area of interest
 - Show layers (marine parks)
2. Refine search
3. Bookmark
4. Map vs list preference

The screenshot displays the Australian Ocean Data Network website. At the top, the IMOS logo and 'Australian Ocean Data Network' are visible. The main heading reads 'Open Access to Ocean Data' with the tagline 'The gateway to Australian marine and climate science data'. A large satellite-style image of the ocean is featured, with a smaller inset map of Australia. Below the main image is a search bar with the placeholder text 'Search for open data' and filters for 'Date', 'Location', and 'Filter'. At the bottom, there is a grid of 20 icons representing various data categories: All Topics, Reef, Satellite, Waves, Fishery, Temperature, Climate, Moorings, Gliders, AUV, Tutorials, Ocean Biota, Environment, Chemical, Tourism, Animal Track, Tide, Argo, Vessel, and Geoscientific.

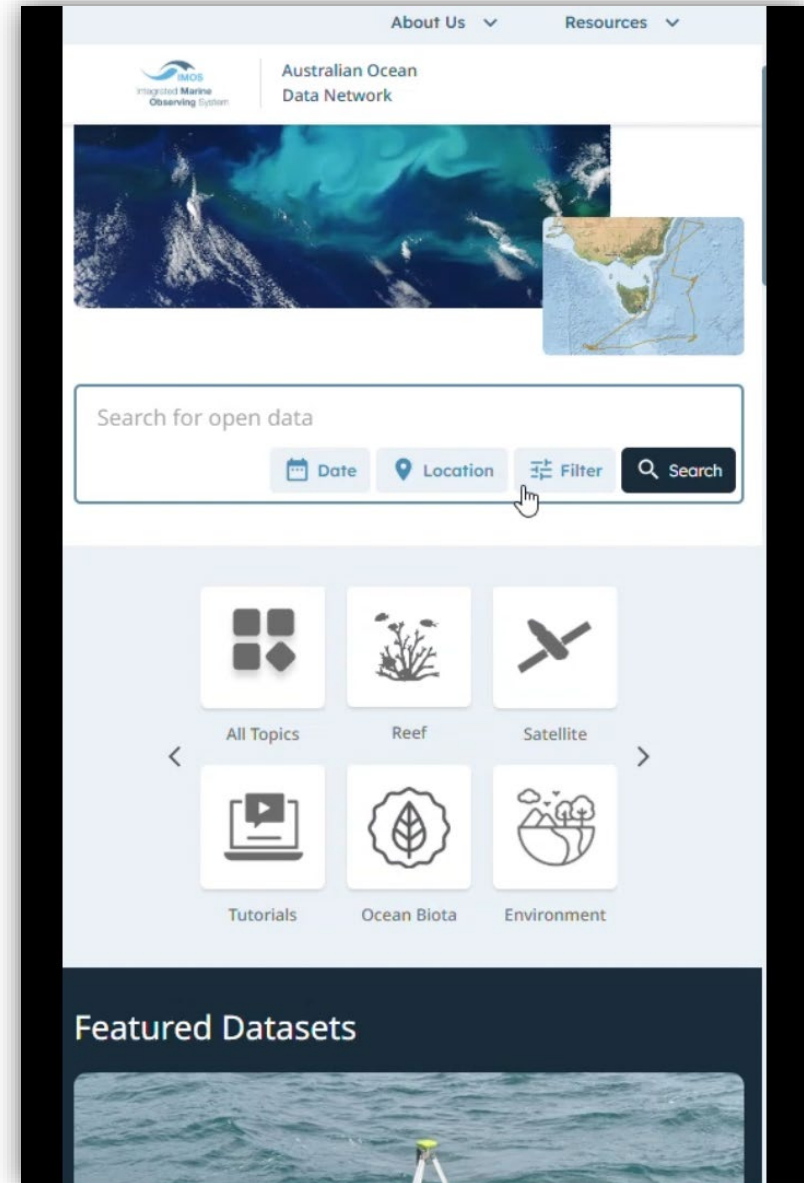
Understand & Access

1. Information about dataset
2. Data preview (soon)
3. Subset dataset
4. Other data access methods
 - THREDDS
 - Cloud optimised
 - File links
 - Other sources

The screenshot displays the Australian Ocean Data Network website. At the top left is the IMOS logo (Integrated Marine Observing System) and the text 'Australian Ocean Data Network'. On the top right are links for 'About Us' and 'Resources'. The main heading reads 'Open Access to Ocean Data' with the tagline 'The gateway to Australian marine and climate science data'. Below this is a search bar with the placeholder text 'Search for open data'. To the right of the search bar are filter buttons for 'Date', 'Location', 'Filter', and 'Search'. At the bottom, there is a grid of 20 icons representing various data categories: All Topics, Reef, Satellite, Waves, Fishery, Temperature, Climate, Moorings, Gliders, AUV, Tutorials, Ocean Biota, Environment, Chemical, Tourism, Animal Track, Tide, Argo, Vessel, and Geoscientific.

Mobile friendly

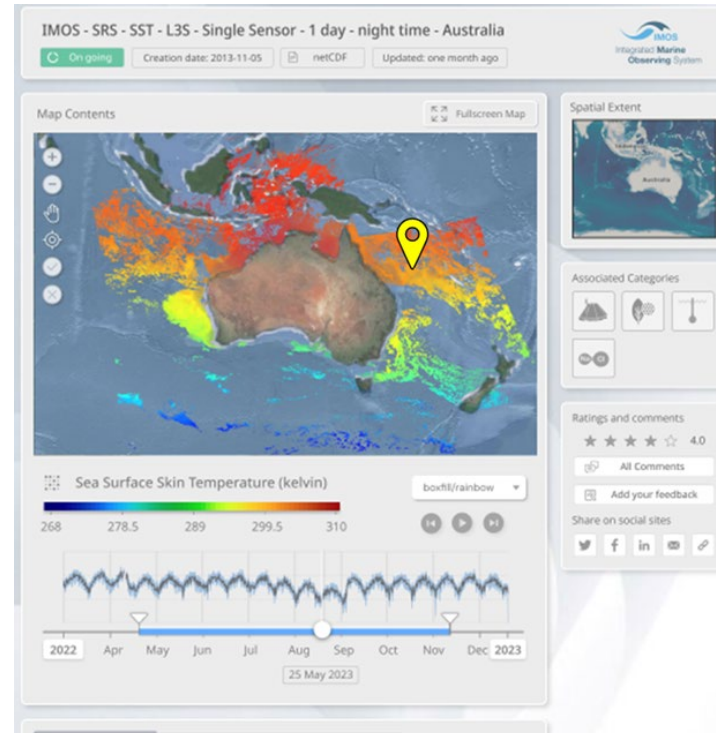
- Flex layout adjusts to screen sizes
- Can still use all the functionality
- Subset and download sends you an email with a link, so you can download it when next at your workstation



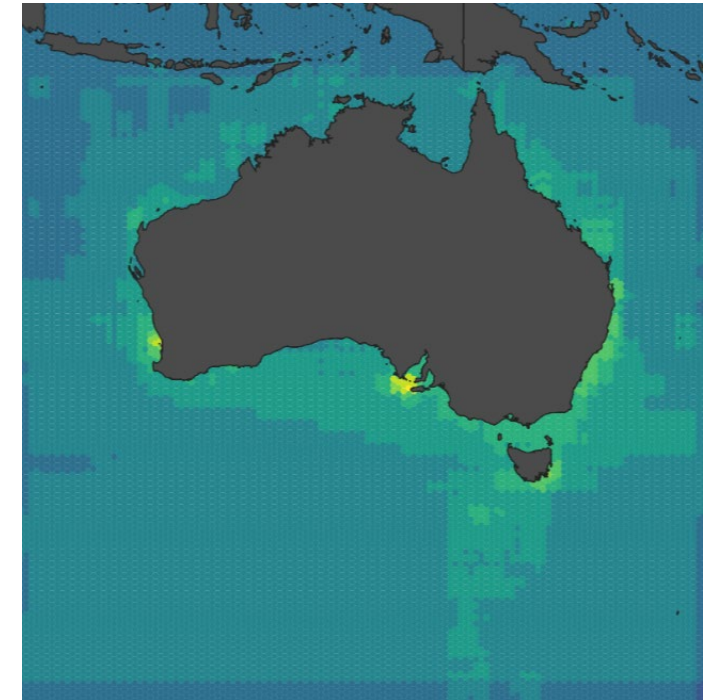
Next steps – critical pre-launch features

Preparing for 'soft' launch

1. Sub-setting for all IMOS datasets
2. Data preview
 - Gridded map
 - With 'pixel drill' through time
3. Improved search results visualisation
 - With data density overlay
4. Usage tracking
 - On subset/download
 - Engagement & interaction metrics
 - Typical website usage metrics



Concept: Gridded data visualisation with 'pixel' drill timeseries



Concept: Data density overlay

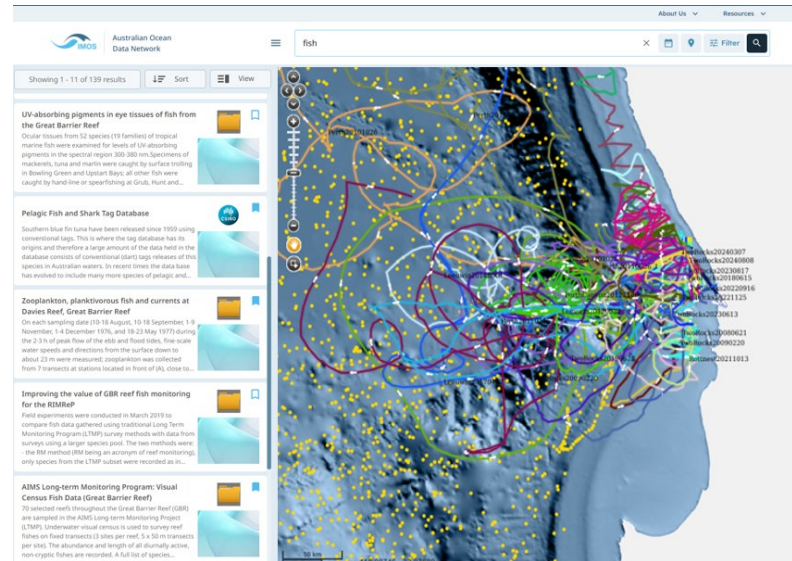
Next steps – post soft launch

1. Post soft launch features

- Data preview
 - Timeseries in-situ (example pictured)
- Allow multi-dataset preview overlay (like in existing portal)
- Improvements as per feedback

2. Old portal and new portal run parallel

3. Decommission old portal



Concept: Multi-dataset overlay: select from search results



Concept: Click site, pick parameter – visualise timeseries

Essential feature implementation

New Portal soft launch

Old Portal decommission

Increasing user engagement

Thank you

Mark Rehbein

Director, Australian Ocean Data Network
Integrated Marine Observing System



mark.rehbein@utas.edu.au



0410477731



20 Castray Esplanade
Battery Point TAS 7004

imos.org.au

