



## Oceanographic data collection: Instrumentation challenges

- Instrumentation
  - Telemetry
- Data requirements

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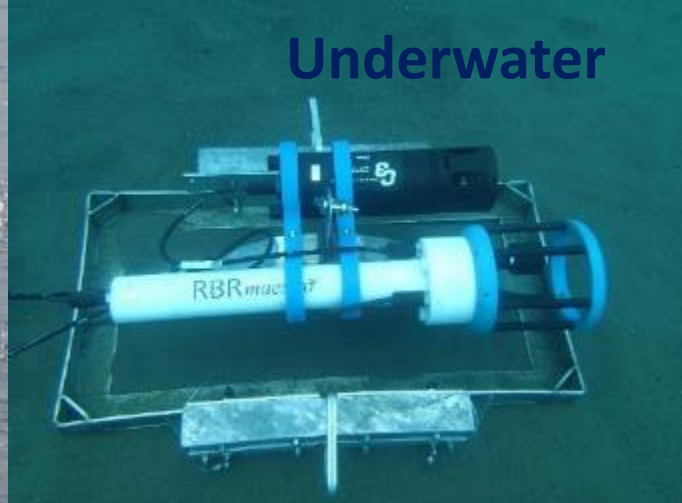
Above water



On water



Underwater



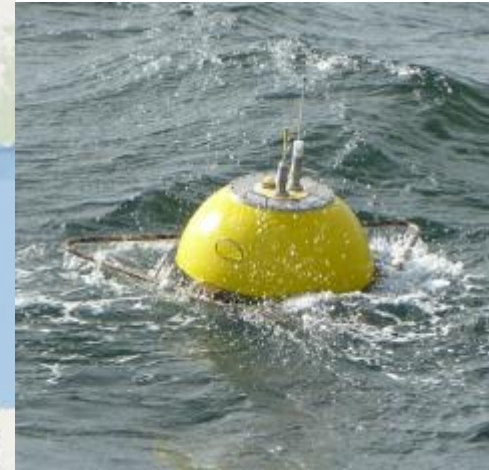
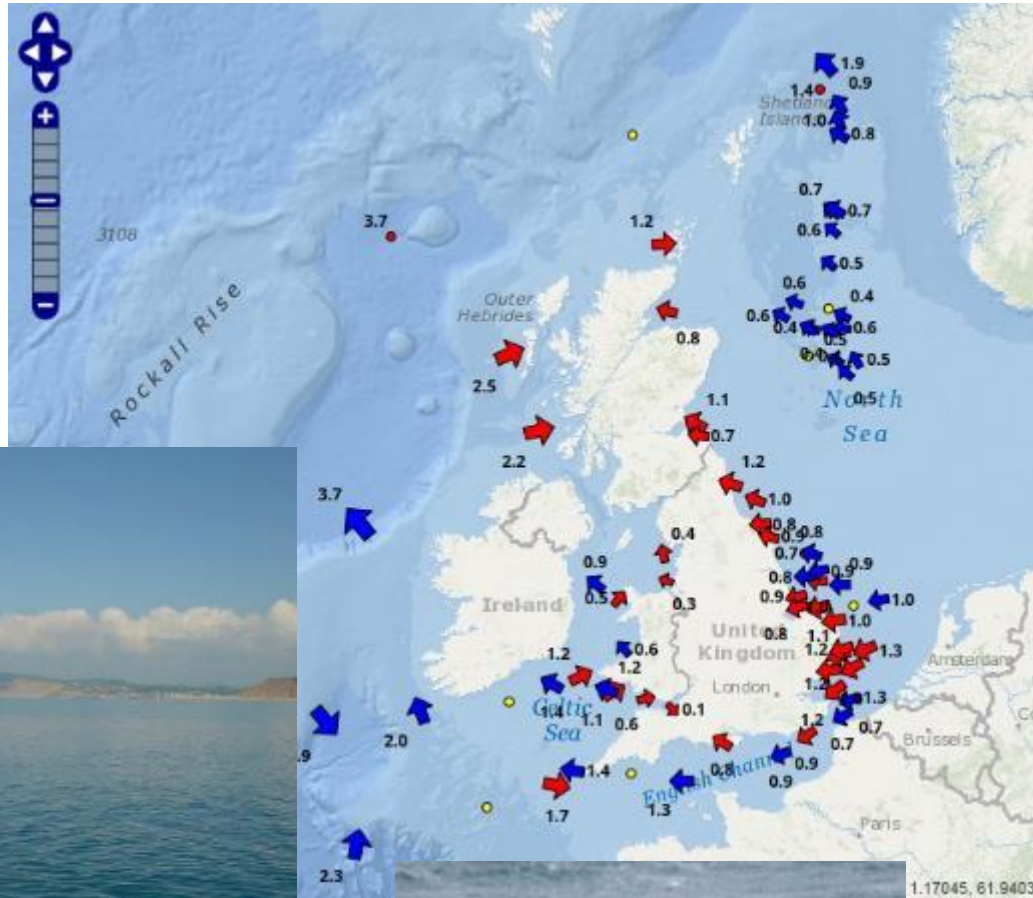
**RS AQUA**  
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# Wave Radar REX

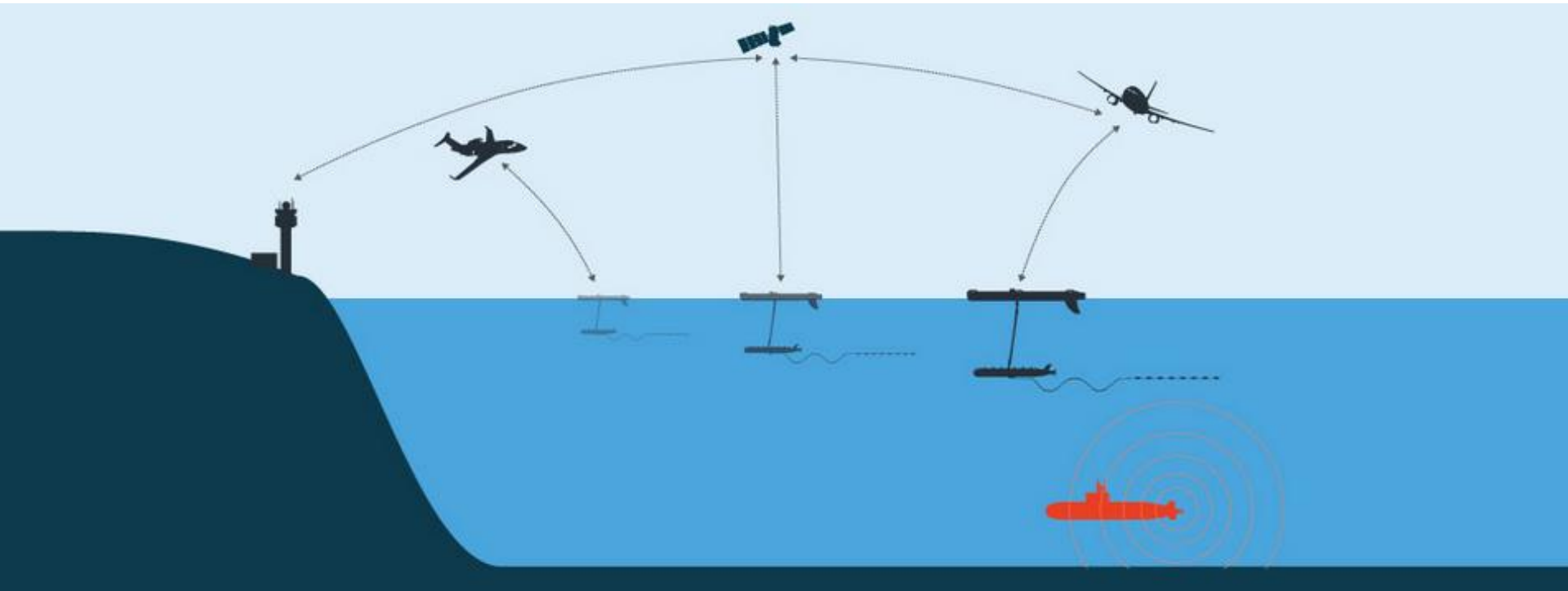


# Datawell directional waverider (DWR) buoys

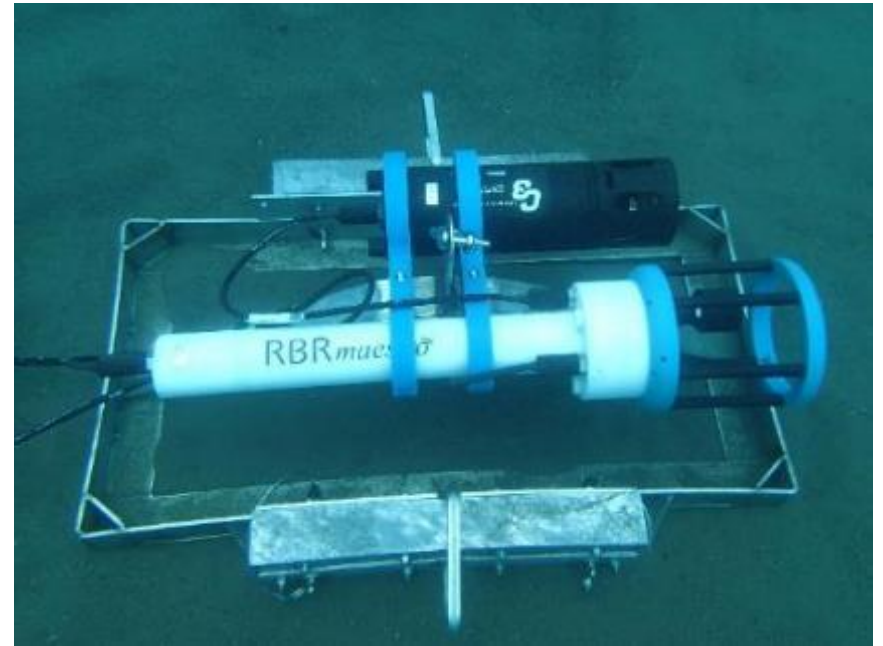




# Wave Glider – autonomous surface vehicle



# Underwater sensors



# Telemetry

Self contained

Cabled to logger / computer / modem

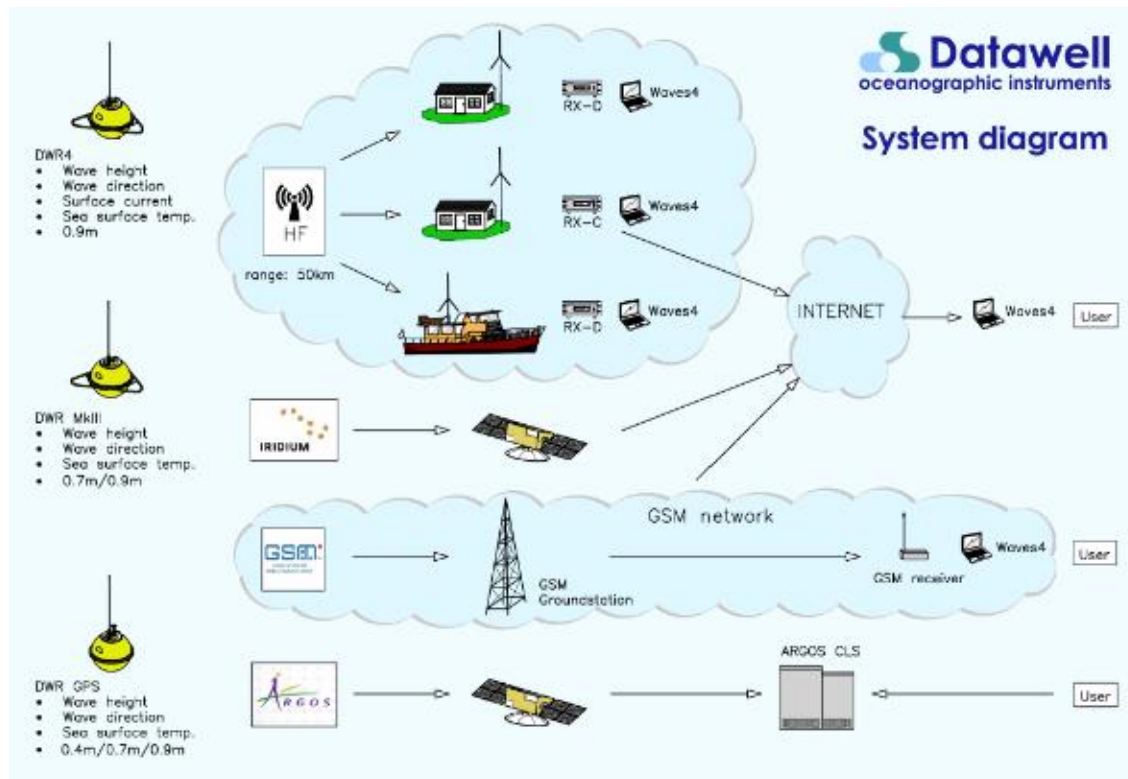
Local OTA

Radio

Cellular

Satellite

*Ultimately, must get data on the internet!*



# Data Requirements

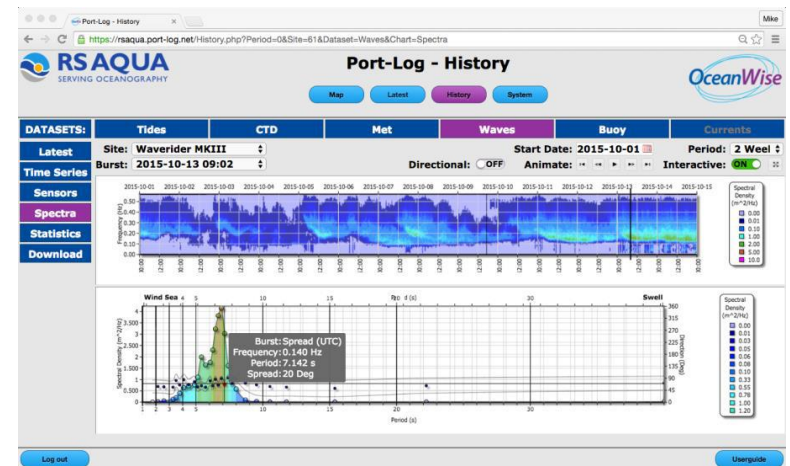
## Maritime Operational Users

- Continuous “real time”
- Single display – processed data
- Low precision
- Automatic QC
- Redundancy



## Scientific / Engineering Users

- Continuous, non real time
- Various output options & “raw” data
- High precision
- Rigorous QC and calibration
- Minimal changes in data collection platform / method





# Summary

1. Many different data gathering platforms, instruments and data formats
2. Multiple telemetry methods – product and application specific
3. Different user groups need different types of data
4. Versatility and accessibility is key!

