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MINKE

minke.eu
22 Partners from 10 Countries

Metrology for Integrated Marine Management and Knowledge-Transfer Network
Kick Off Meeting (KoM)
Virtual, June 2021

MINKE

Presentation derived from a presentation of *Jaume Piera*

CSIC
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

Metrology for Integrated Marine Management and Knowledge-Transfer Network
Kick Off Meeting (KoM)
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The project

PROGRAMME: H2020-EU.1.4.1.2. - Integrating and opening existing national and regional research infrastructures of European interest

CALL: INFRAIA-02-2020-1 . **Topic:** *Integrating Activities for Starting Communities*

Integrating Activities shall combine, in a closely co-ordinated manner 3 types of activities:

- **Networking Activities (NA)**, to foster a culture of co-operation between research infrastructures, scientific communities, industries and other stakeholders as appropriate, and to help develop a more efficient and attractive European Research Area;
- **Trans-national Access (TNA) or Virtual Access (VA) Activities**, to support scientific communities in their access to the identified key research infrastructures;
- **Joint Research Activities (JRA),** to improve, in quality and/or quantity, the integrated services provided at European level by the infrastructures.

The main goals

MINKE will integrate key European **Marine Metrology Research Infrastructures**, to coordinate their use and development and propose an innovative framework of ***quality of oceanographic data***
In the objective to encrease the production of FAIR data **F**indable, **A**ccessible, **I**nteroperable, and **R**eusable

How to promote the idea of the « Metrology as a service » for the European Research Infrastructures?

Identifying the **Essential Ocean Variables** (EOVs) as the key parameters to monitor

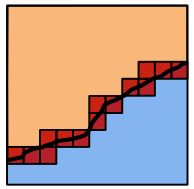
Adopting a multidimensional framework of data quality:

- **Accuracy:** Minimising the **measurement errors**
- **Completeness:** Minimising the **interpolation errors**
- **Timeliness:** Providing the observations as fast as requiered

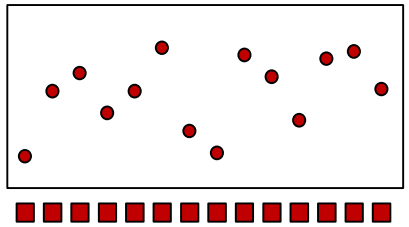
Purpose: *To retrieve (at least) the large scale features, both temporal and spatial, of the EOVs*

Data quality approach

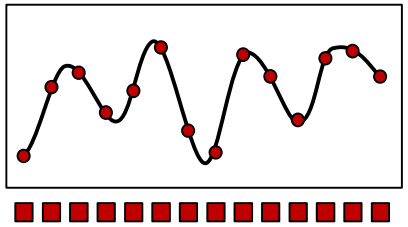
IDEAL CASE



Accurate **measurements**
in all **stations**



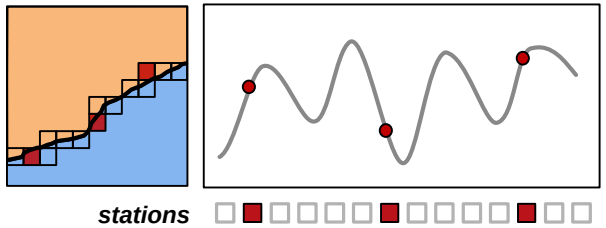
Spatial pattern of reference



REAL OPTIONS

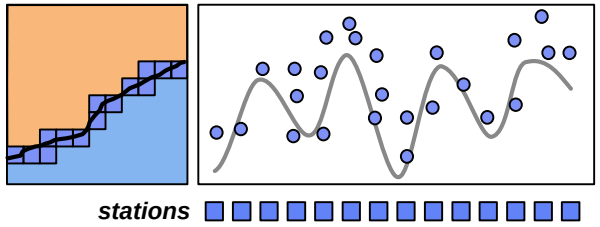
Accuracy-based approach

Accurate measurements in (few) selected stations



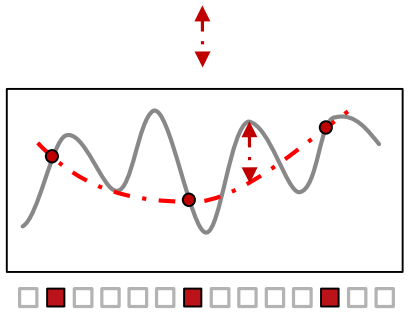
Completeness-based approach

Measurements in all stations with low cost systems

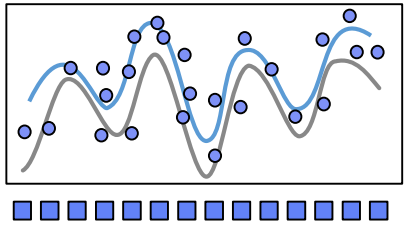


ASSOCIATED ERRORS

Interpolation error



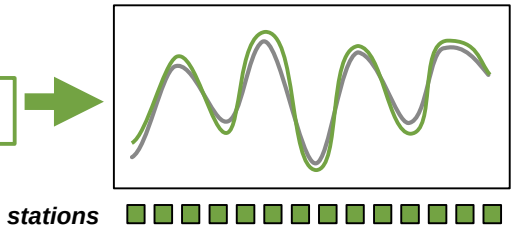
bias



OPTIMAL PRODUCT

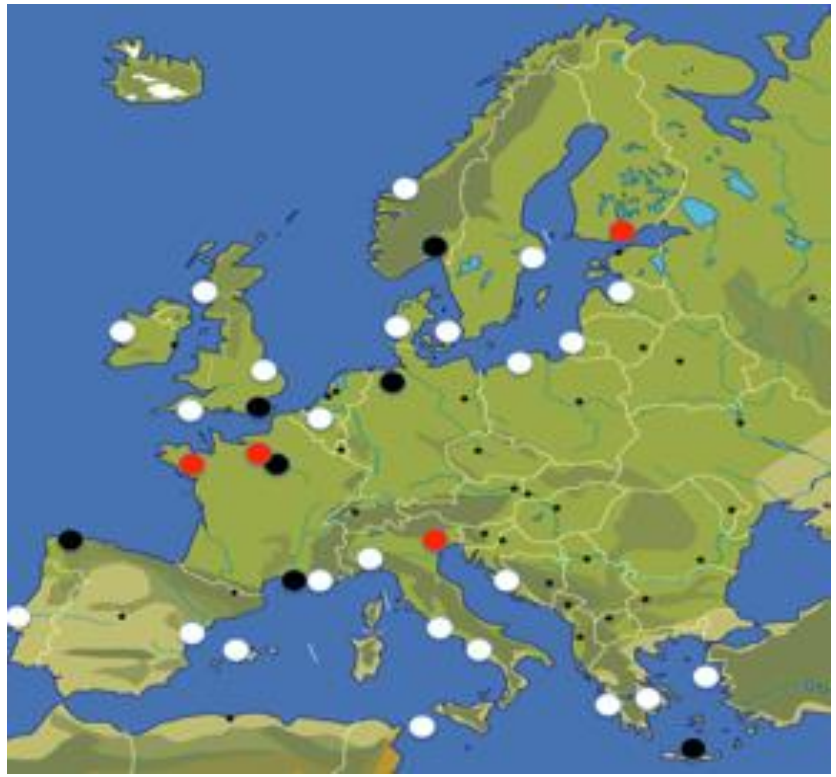
data fusion

Fusion data solution

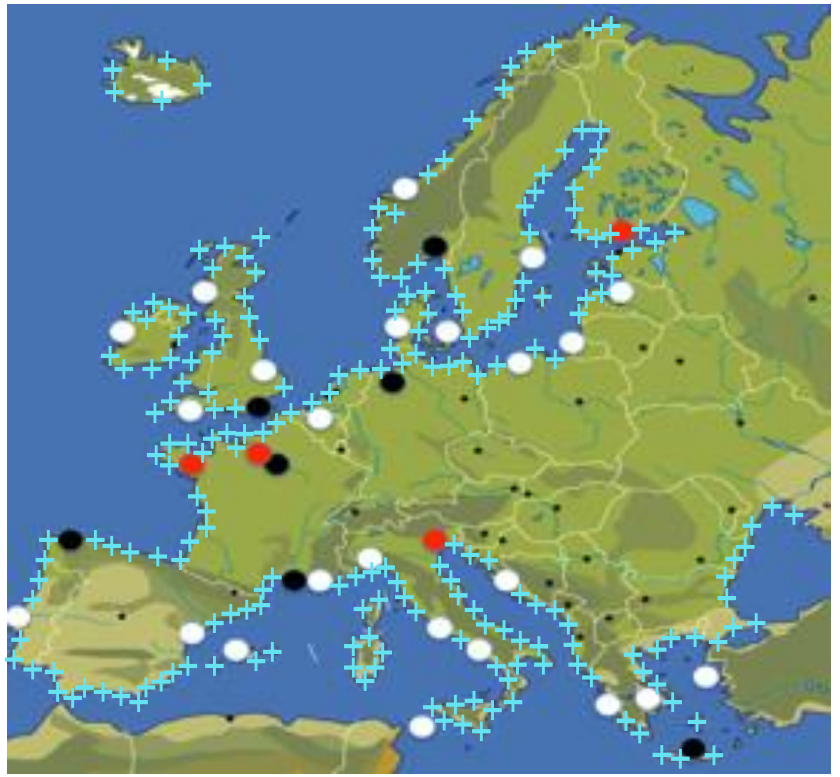


Vision

Accuracy



Accuracy + Completeness

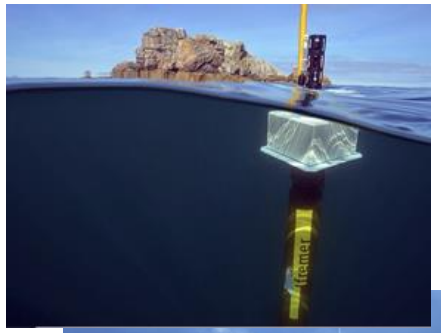


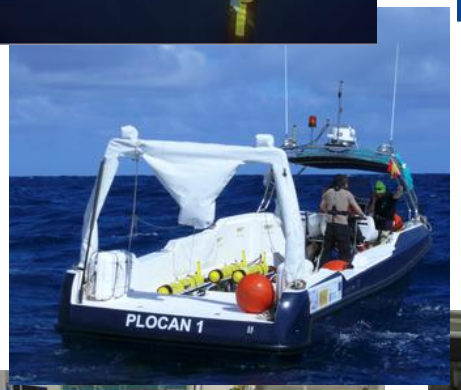
- Primary reference nodes
- Secondary reference nodes
- Scientific users Operators
- Participatory nodes

MINKE Research Infrastructures

Accuracy

Advanced instrumentation & Calibration centres





Completeness

Citizen observatories **Crowdsource?**& Fablabs

Integrative Activities & WP structure