



PHIDIAS

Prototype of HPC/Data Infrastructure for On-demand Services

PHIDIAS Ocean use case and contribution of HPC to marine studies

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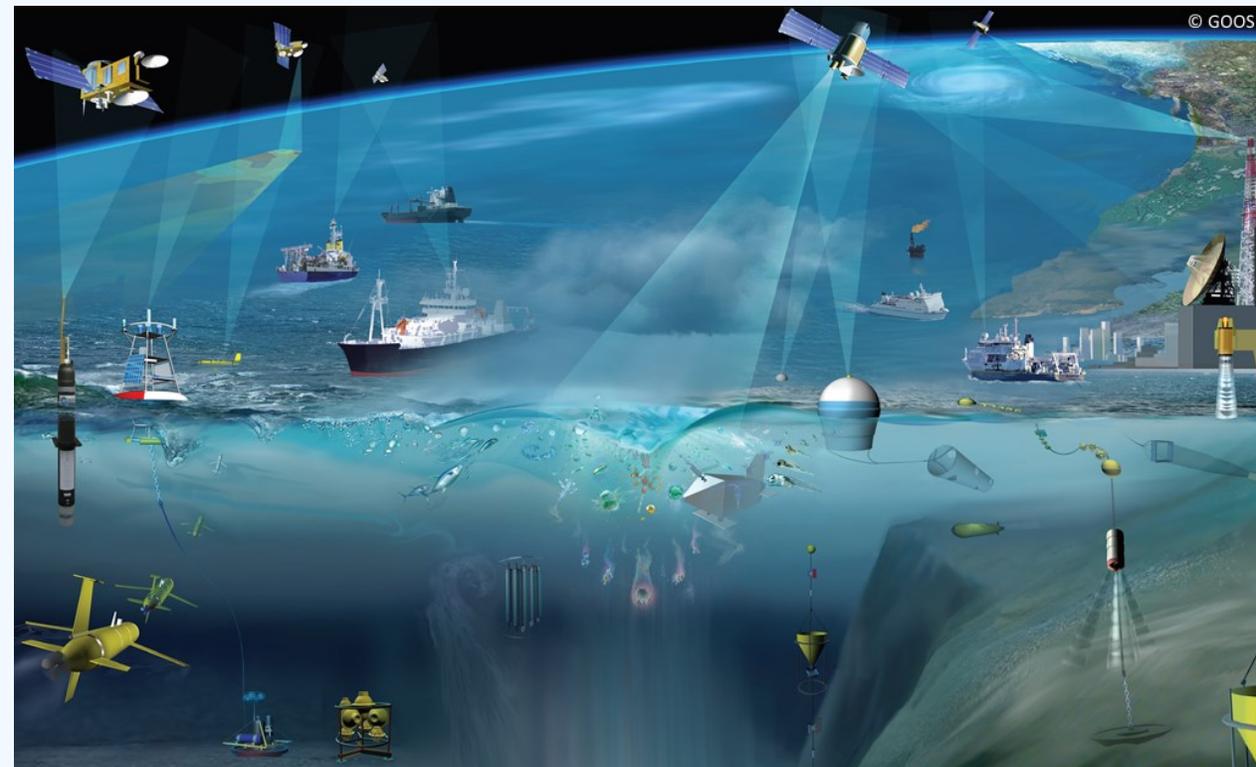


The PHIDIAS project has received funding from the European Union's Connecting Europe Facility under grant agreement n° INEA/CEF/ICT/A2018/1810854.

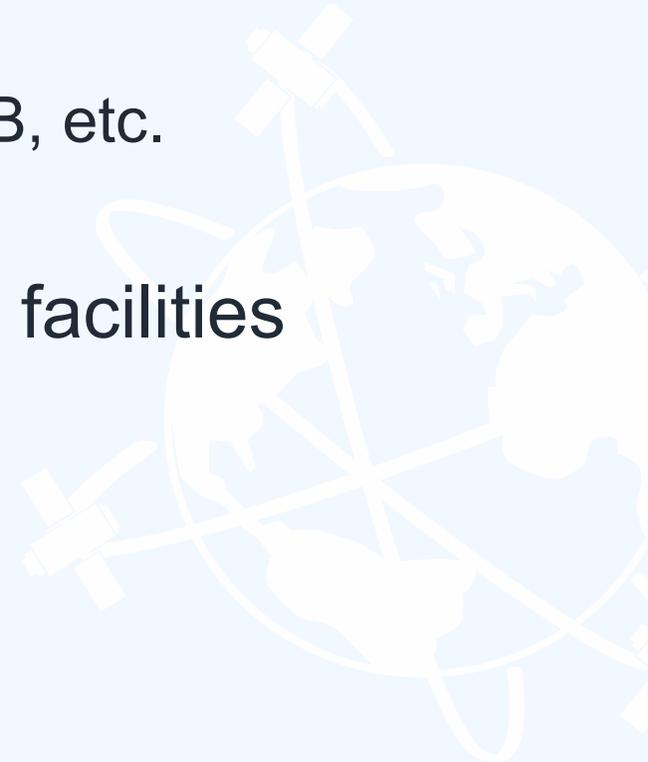
Combine and collocate data from several data sources (*in situ* & satellite)

🌐 Enhancing data archiving (most observation cannot be reproduced) → facilitate data reuse

🌐 Facilitate and speed up co-localisation of data from different sources

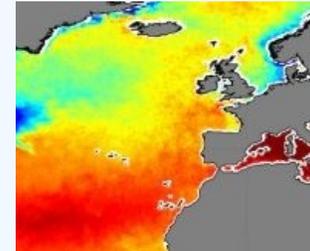
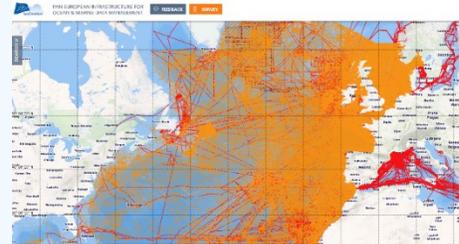


- ✿ Combine and collocate data from several data sources (*in situ* & satellite)
- ✿ Adopting new data structures (based on big-data technologies)
 - ✿ DataCubes
 - ✿ NoSQL databases (numerical data) : Cassandra, MongoDB, etc.
 - ✿ Semantic Web (text data)
- ✿ Providing on demand data browsing and processing facilities



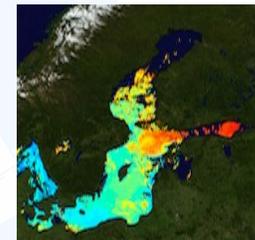
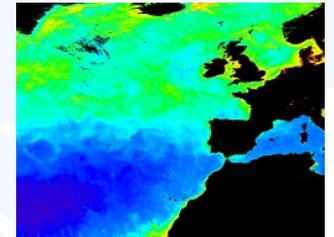
Surface Salinity in North Atlantic

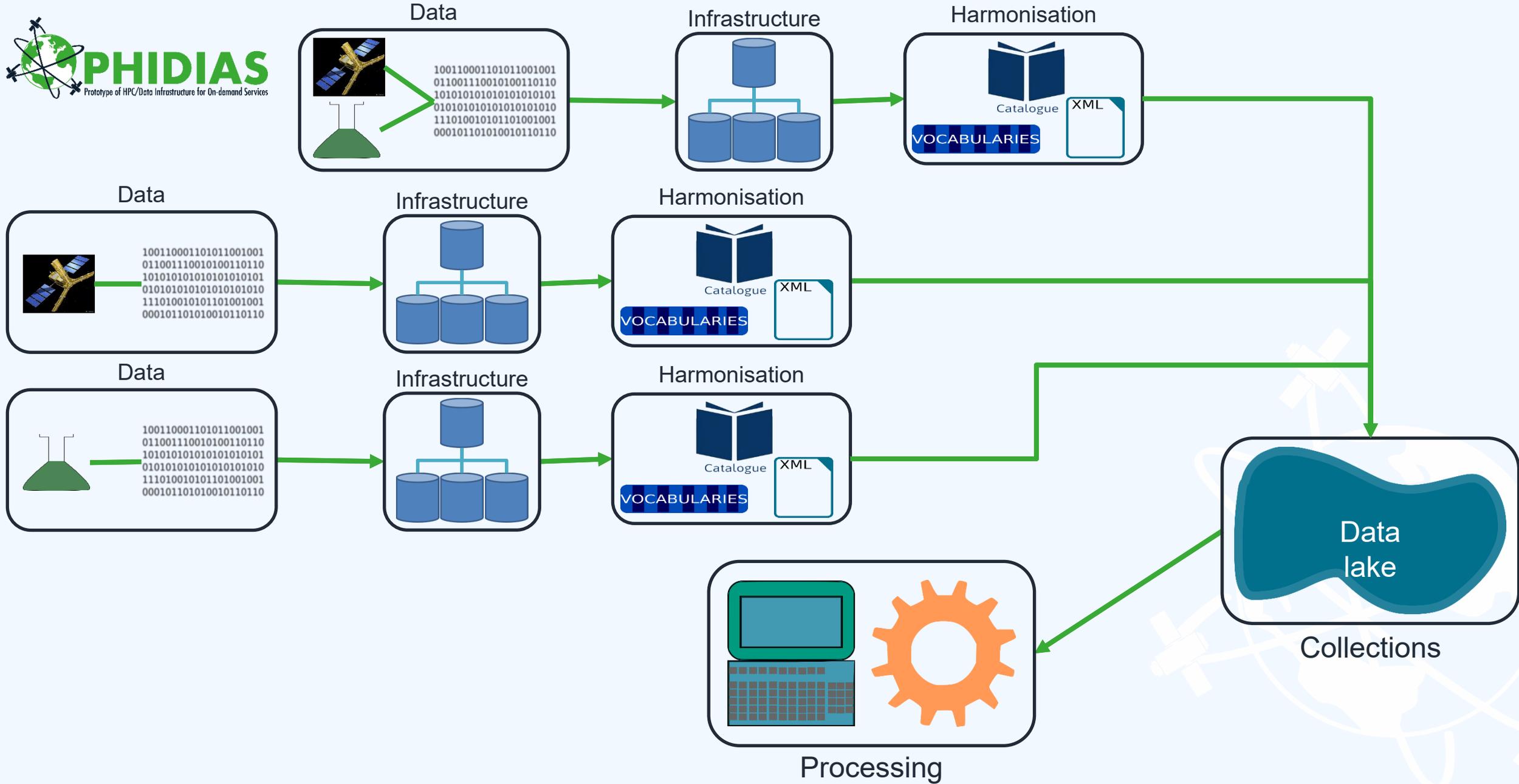
-  CTD (SeaDataNet),
-  Argo Floats (CMEMS),
-  SMOS satellite.

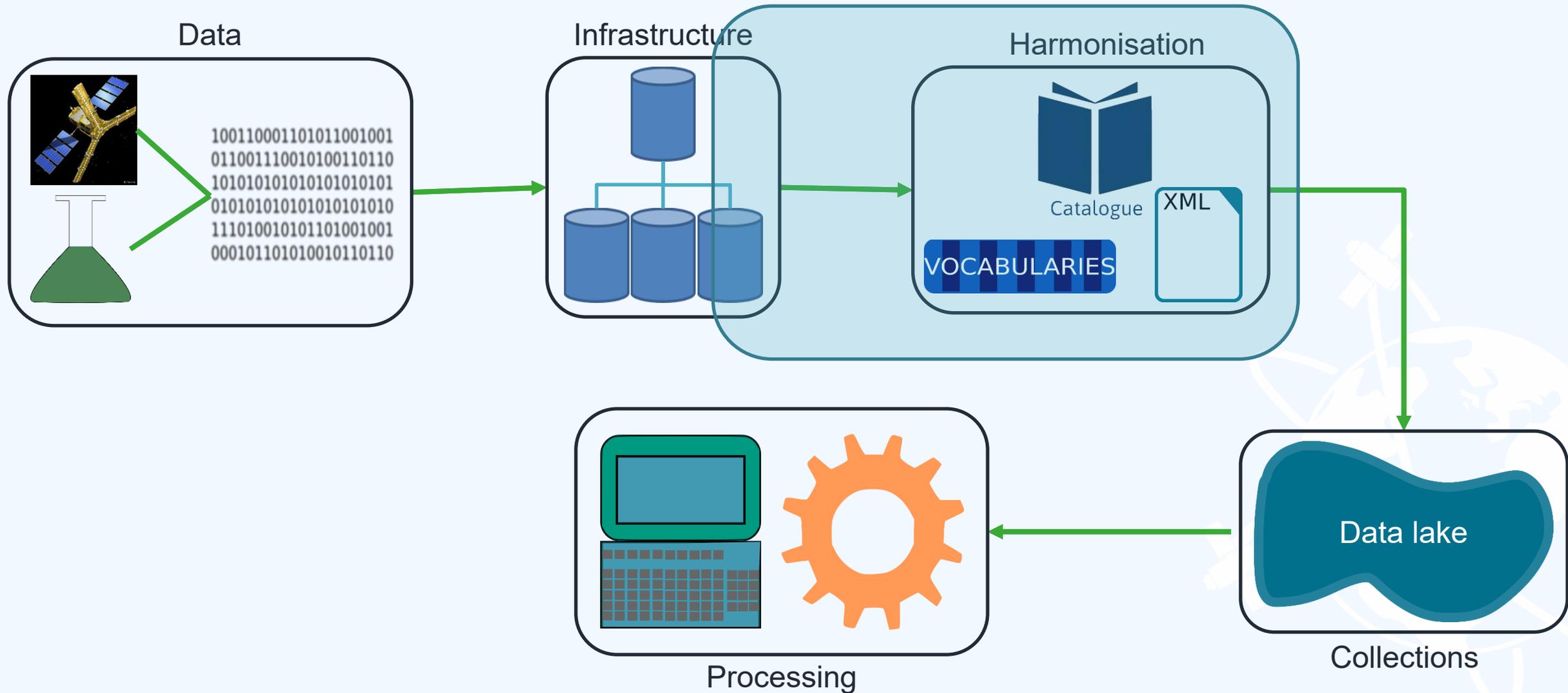


Chlorophyll in North-East Atlantic and Baltic Sea

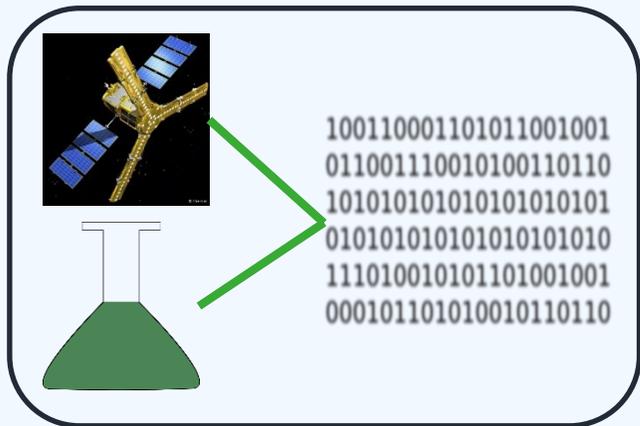
-  CTD and bottles (SeaDataNet),
-  BGC Argo floats (ARGO GDAC),
-  Ferrybox,
-  Sentinel 2 images (DIAS WEkEO).



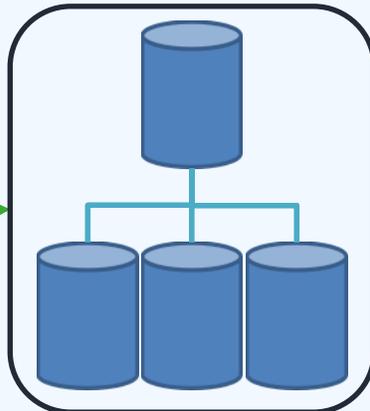




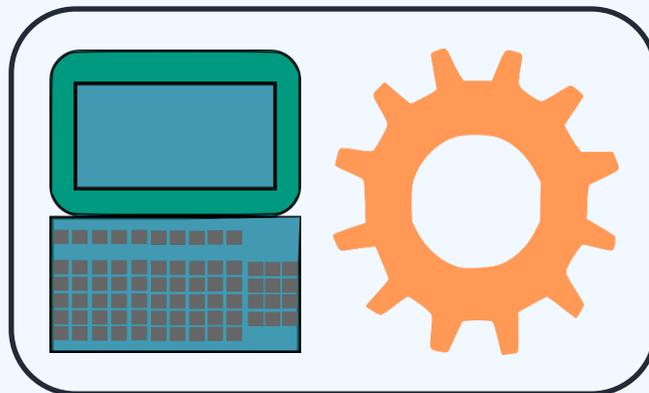
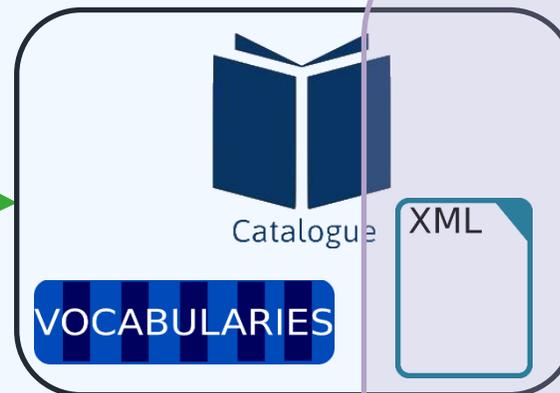
Data



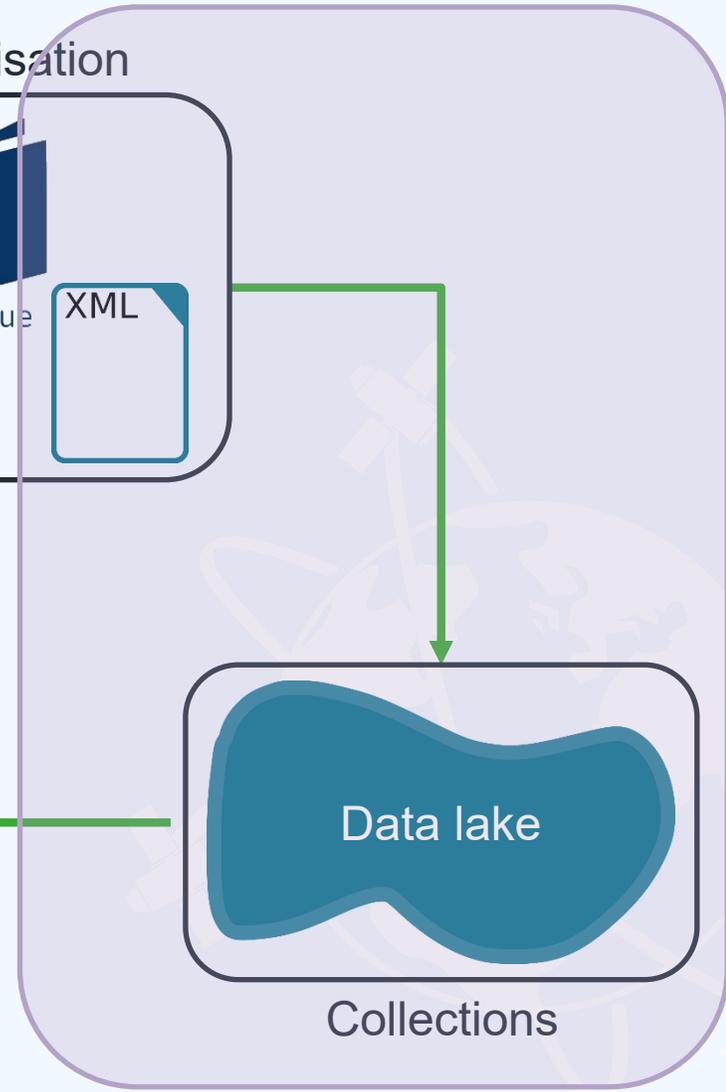
Infrastructure



Harmonisation



Processing

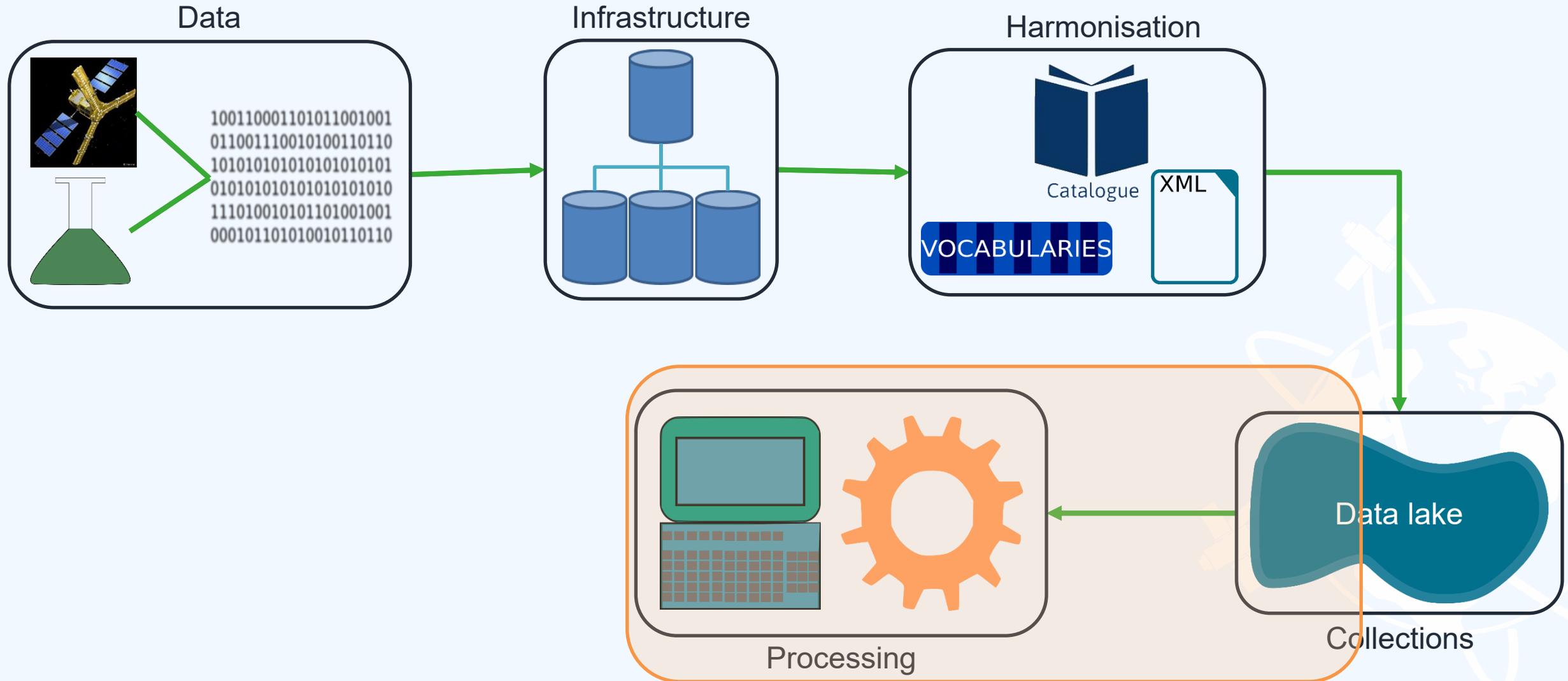


Data lake

Collections

Alexander BARTH

Analyzing ocean observations in an HPC infrastructure with DIVAnd



Thank-you

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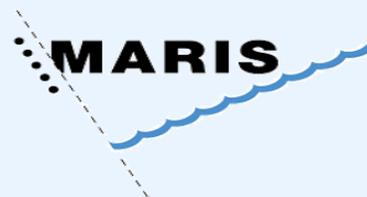
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