COPiLOtE (CertificatiOn PoLe OcEan) – Toward the Certification of the Data and Service Centres of the French Ocean Data Cluster – Odatis

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The French ocean data cluster ODATIS

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Cross-cutting structures

The ODATIS data and services centres (DSCs)

Missions

- Promote and facilitate access to French observation data made in the ocean or at its interface with other environments, based on in situ and remote sensing measurements .

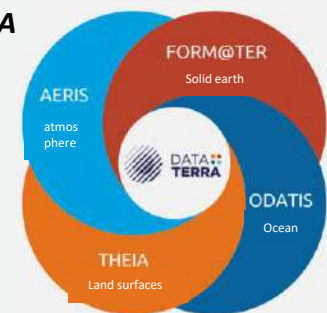- To federate data management and scientific expertise in oceanography at the national level
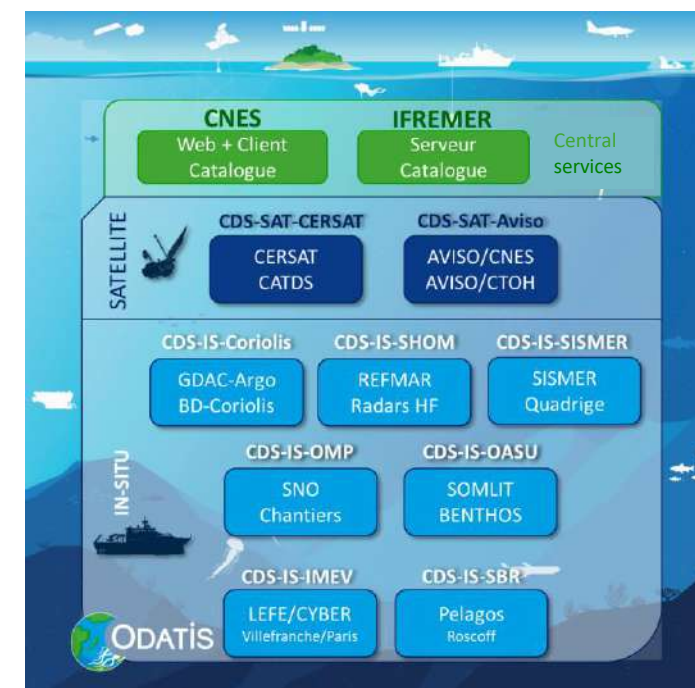
Partners

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Objectives of the ANR COPiLOtE project (2020-2022)

- COPiLOtE : stands for **C**ertificati**O**n **P**ô**L**e **O**c**E**an

- Supporting ODATIS Data and Service Centres (DSCs) in applying for Core Trust Seal (CTS) certification (4 certifications on-going)

- Carry out an assessment of the FAIR character of the data managed by the DSCs ODATIS

COPiLOtE – FAIR self-assessment of ODATIS DSCs

- The FAIR Principles = a set of guidelines for managing research data aiming to make them **F**indable, **A**ccessible, **I**nteroperable and **R**e-usable by both humans and machines
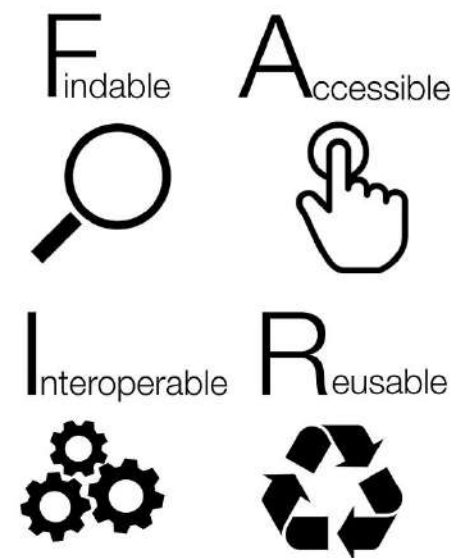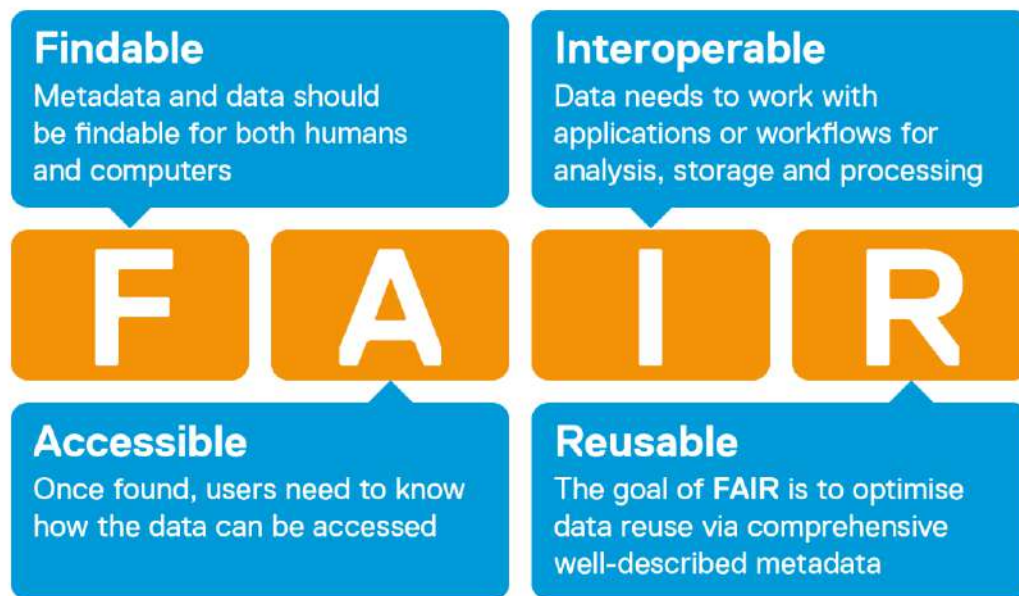
COPiLOtE : RDA - FAIR Data Maturity Model

- RDA - FAIR Data Maturity Model WG
  - RDA FAIR Data Maturity Model Specification and Guidelines
    Recommendation : https://doi.org/10.15497/rda00050

- Approach proposed by the **RDA/FDMM** most adapted to the ODATIS context compared to other initiatives 'FAIRsFAIR, F AIR implementation Profile (FIP) ➔ used in COPiLOtE

Indicators of the FAIR DATA MATURITY MODEL (FDMM)

- **41 indicators**
  - **F** : 7 indicators
  - **A** : 12 indicators
  - **I** : 12 indicators
  - **R** : 10 indicators

Indicators are classified as
- Essential: utmost importance
- Important: substantially increase FAIRness
- Useful: nice to have

	Principle				
Priority	Findable	Accessible	Interoperable	Reusable	Grand Total
Essential	7	8	0	5	20
Important	0	3	7	4	14
Useful	0	1	5	1	7
Grand Total	7	12	12	10	41

FAIR Data Maturity Model indicators(FDMM)

- **F**indable: 7 indicators, all essential
  - *Identifiers and rich metadata*

- **A**ccessible: 12 indicators (8 essential, 3 important, 1 useful)
  - *Access protocol, Authentication, Authorisation*

- **I**nteroperable: (7 important, 5 usefull)
  - *Standards, FAIR vocabularies FAIR, machine readable, linked data*

- **R**eusable: 10 indicators (5 essential, 4 important, 1 useful)
  - *License, provenance, Community standards*

FDMM evaluation methods

- 2 methods
  - **Measuring progress**
    - Delivering a measure of the extent to which a resource under evaluation meets the requirements of an expressed indicator following the scale
      - 0 : not applicable
      - 1 : not being considered yet
      - 2 : under consideration or in planning phase
      - 3 : in implementation phase
      - 4 : fully implemented
  - Measuring pass-or-fail
    - Determining whether a resource under evaluation meets the requirements of an expressed indicator on a binary pass-or-fail scale

COPiLOtE : ODATIS DSCs FAIR self-assessment

- Self-assessment questionnaire for each data work flows- Meetings to answer the questionnaires (2 meetings per DSC)
    - **DSC-IS-SBR**: for PHYTOBS and BENTHOBS,
    - **DSC-IS-CORIOLIS**: for ARGO, DBCP, OceanSITES-PIRATA, GOSUD-Ferry Box, Gliders
    - **DSC-IS-IMEV**: for Lefe-CyberDSC-IS-OASU: for SOMLIT (monitoring) and KIDA (astrophysics)
    - **DSC-IS-SISMER**: for the SISMER data flows: Geographic data (Sextant), Research vruise data: Physical Chemistry and Geosciences, Cruise Summary Report Catalogue, Quadrige/SURVAL (coastal monitoring), Biological and geological samples
    - **DSC-IS-Shom**: for RONIM/REFMAR (maregraph datasets)
    - **DSC-SAT-CERSAT**: for all products + CATDS
    - **DSC-SAT-AVISO**: for AVISO+ (Altymetry products)

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Self Assessment – Exemple of the F PRINCIPLE
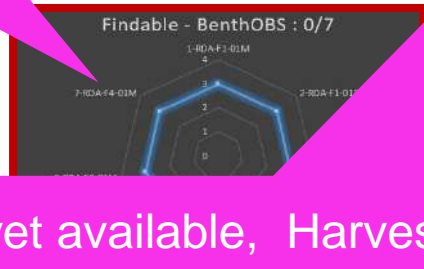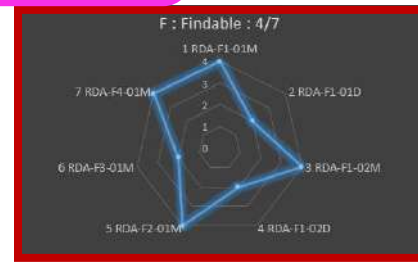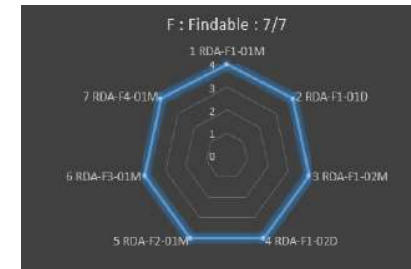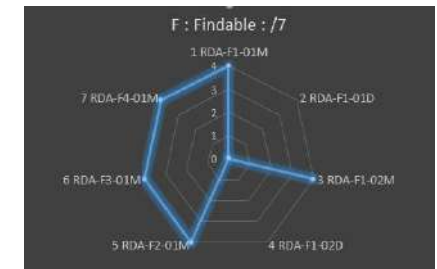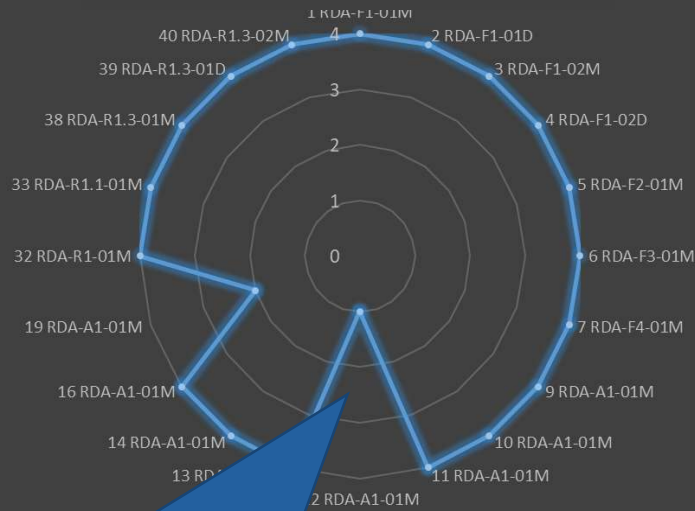
COPiLOtE: exemple of FAIR auto-evaluation of the French Cruise physical and chemical data distributed via SeaDataNet
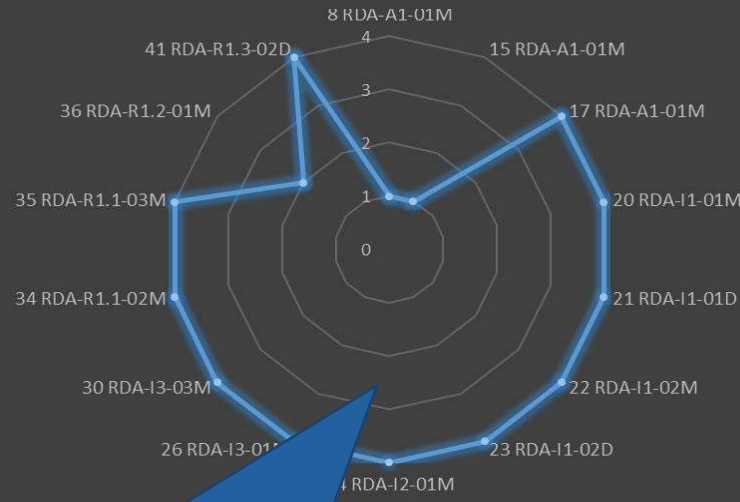

20 essential criteria

14 important criteria

7 useful criteria

MISSING
12 (A): direct access to data via an API for example
19 (A): Obsolete metadata are kept but the info is not accessible online at the moment

MISSING
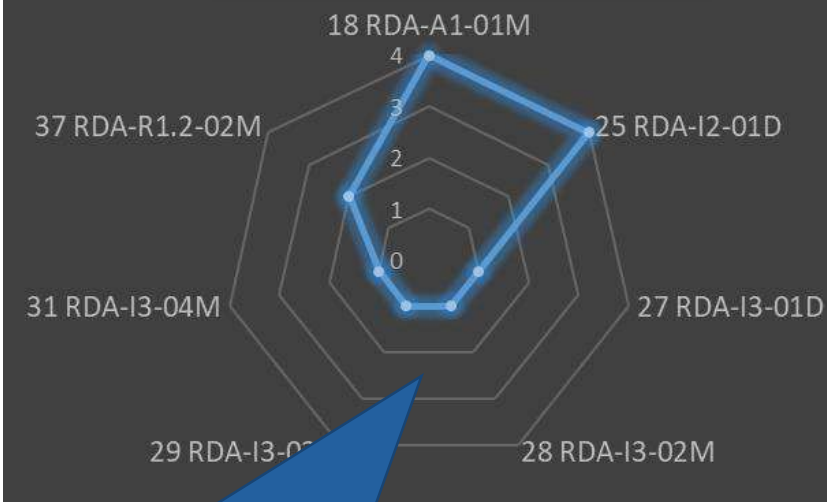**8 (A):** Direct access to data via metadata
15 (A): No API on data
36 (R): Provenance according to community standard

MISSING
27 (I): Data with references to other data
28 (I): Metadata with references to other data
29 (I): Data with qualified references to other data
31 (I): Metadata with qualified references to other data

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COPiLOtE : Conclusion

- For the DSCs:
  - Interesting exercise to see what improvements can be made to the datasets in particular with regard to the essential criteria which are "mandatory" to have FAIR data

- For ODATIS :
  - Global vision on the FAIR character of the data of all the ODATIS DSCs.
  - Identification of tools to be implemented to improve the FAIR character

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Thank you for your attention
Feel free to contact us in case of any question
or complementary information needed

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