



OneWater FAIR Data Platform: setting up a national FAIR water data platform and community

Sylvain Grellet, Isabelle Braud, Fanny Arnaud, Kenneth Maussang, Anne Laurent, Frédéric Huynh, Hervé Piégay, Lise Vaudor, Christelle Pierkot, Sandrine Charles, et al.

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OneWater FAIR Data Platform: setting up a national FAIR water data platform and community

28/09/2023- TERENO-OZCAR conference

Sylvain Grellet (BRGM) & the OneWater Data Platform Team

 OneWater
Eau Bien Commun

PEPR Exploratoire co-dirigé par
Agathe Euzen (CNRS), Dominique Darmendrail (BRGM), Thibault Datry (INRAE)

Référence ANR-22-PEXO-0009

Context



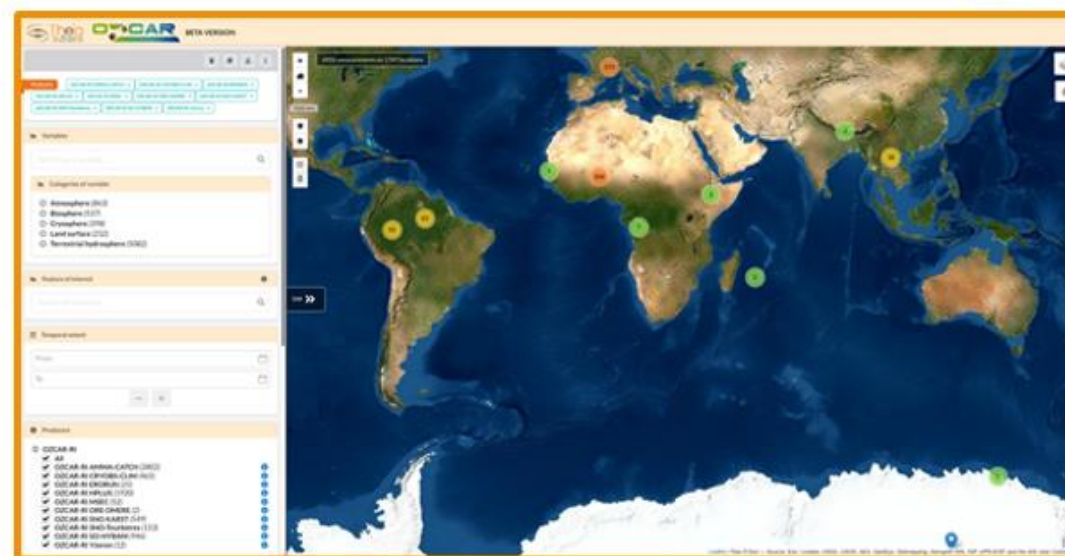
⇒ OZCAR is not new here



Data available online

<https://in-situ.theia-land.fr>

- Data discovery through variables, climate, geology, funders
- 16/22 visible observatories

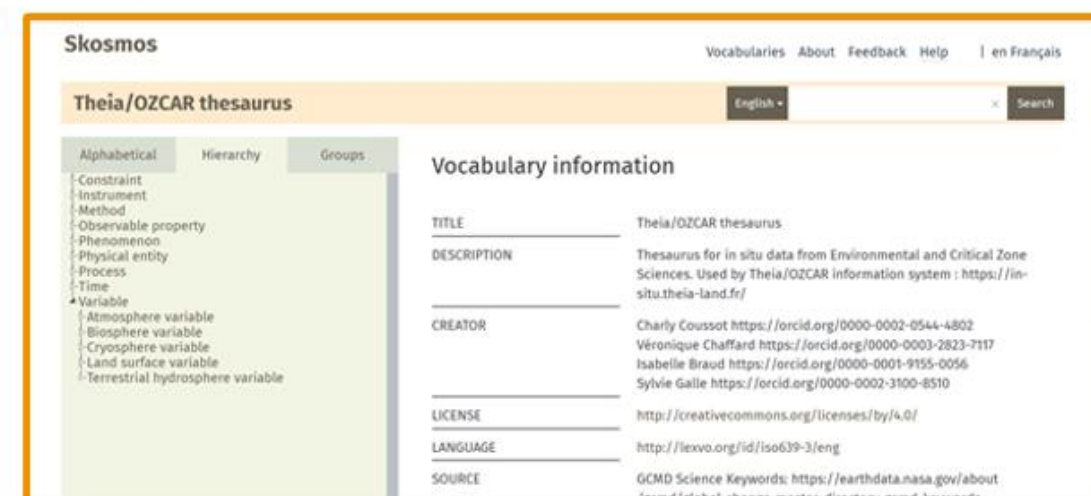


FAIR thesaurus

Variable / object of interest names

<https://w3id.org/ozcar-theia>

DOI : 10.17178/67b5a1d5-8c8c-4a94-a646-1cca1d0adf79



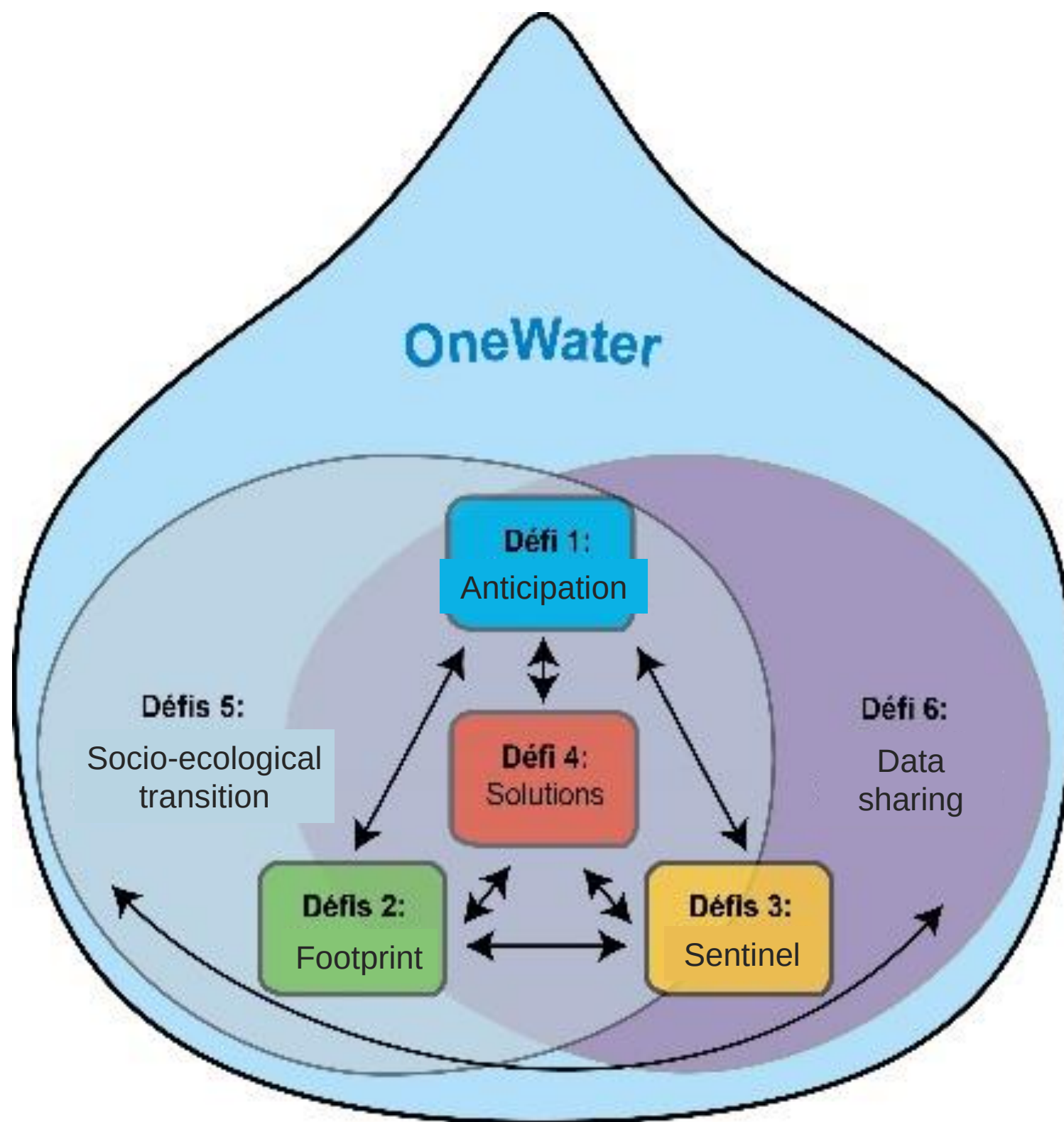
Context

What's new ?

- We are building a more integrated water environment for research & public organization monitoring data to be FAIR



- <https://www.onewater.fr/fr> , 10 years, 10 partners,
- 53 Milion €
- “Programmes et Equipements Prioritaires de Recherche (PEPR) ” -> National Acceleration Strategy
- To contribute to accelerate transitions a measure impacts of global changes on socio-ecological systems through 6 scientific challenges



Anticipation

of water resource availability (surface & ground) -> new sensors, models, forecast

Footprint

holistic approach human pressures and their consequences on hydrosystems and aquatic ecosystem

Sentinel

water as a environment health and human societies sentinel
-> new approaches/methods/data/indicators

Solutions

enhance water resource resilience in the context of global change, circular use, ...

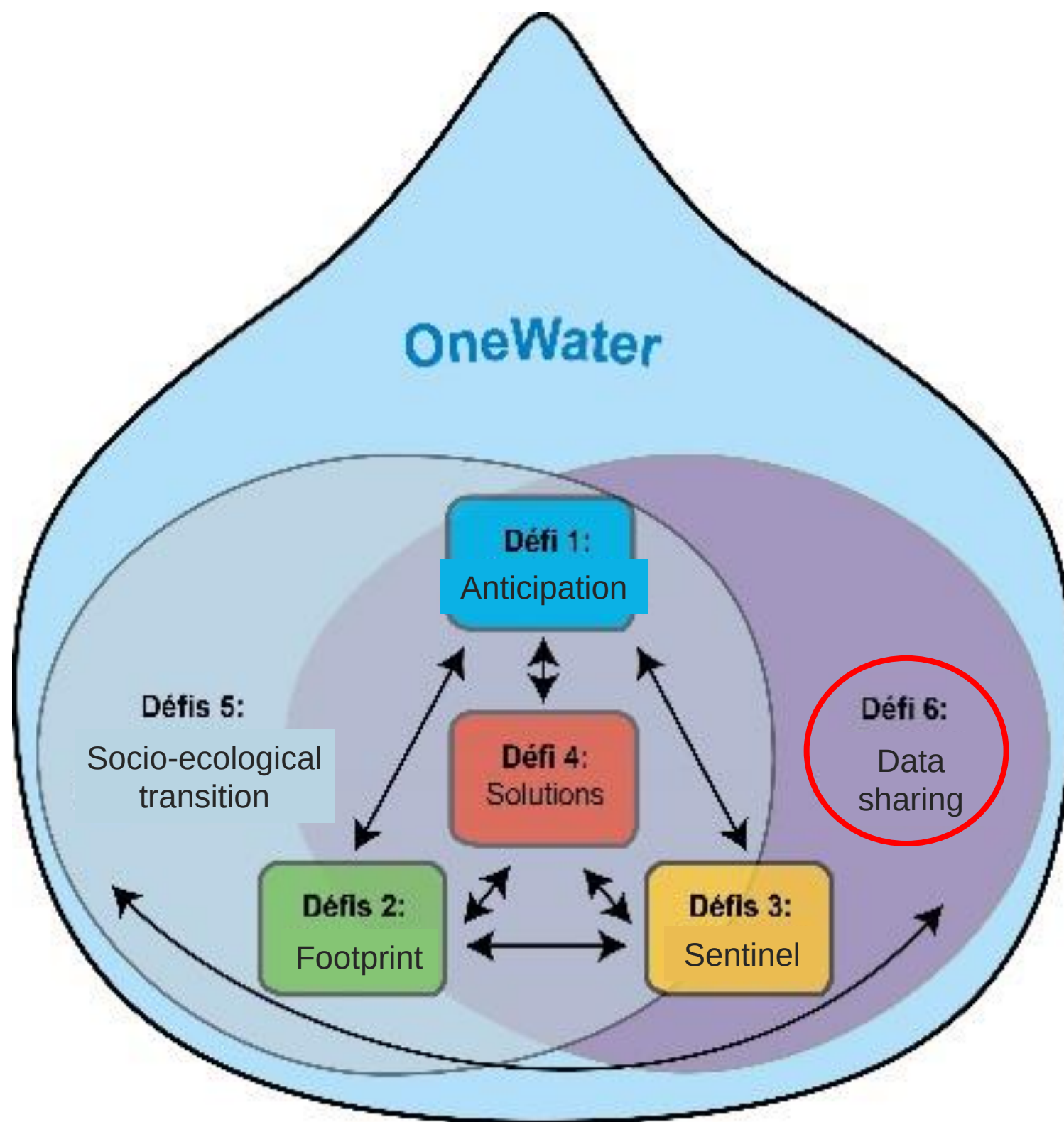
Socio-ecological transition

new governance modes/tools to protect water and elaborate public water policies with water as common

Data sharing

FAIR Data / interoperability





Anticipation

of water resource availability (surface & ground) -> new sensors, models, forecast

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Socio-ecological
transition

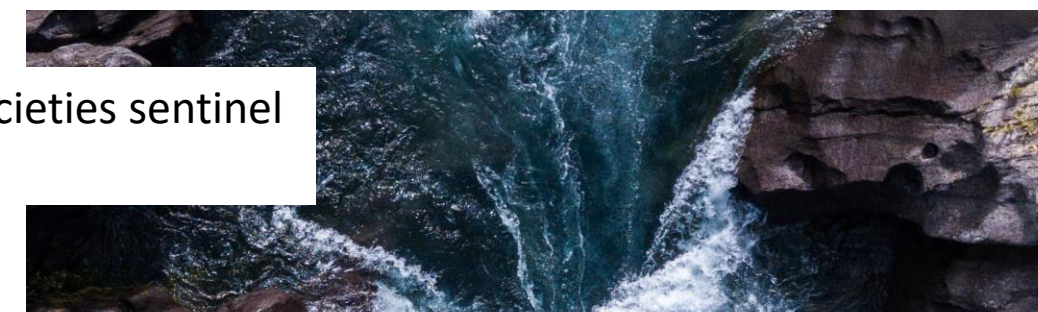
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Data
sharing

FAIR Data / interoperability



We are here

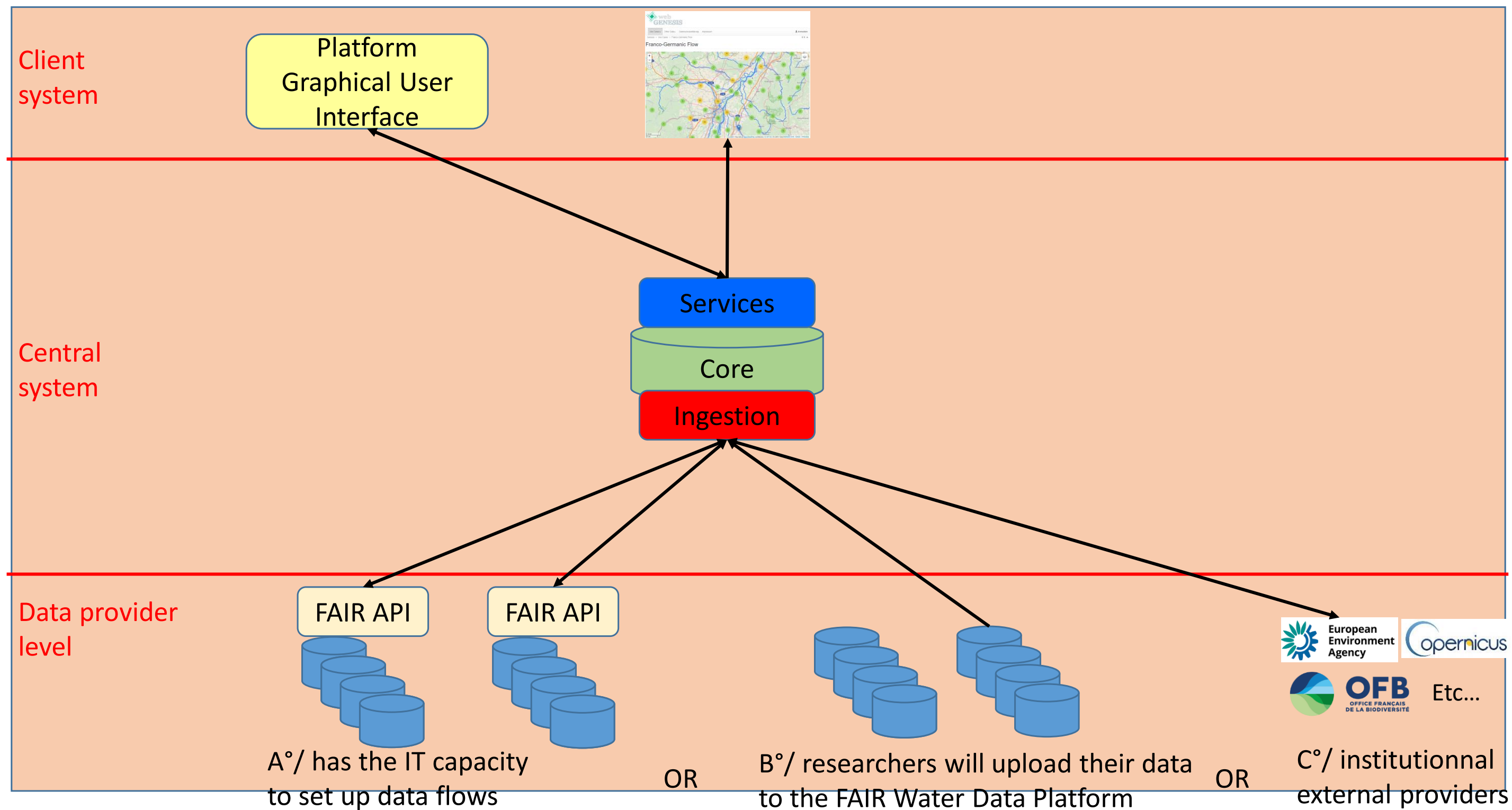


= a set of common practices

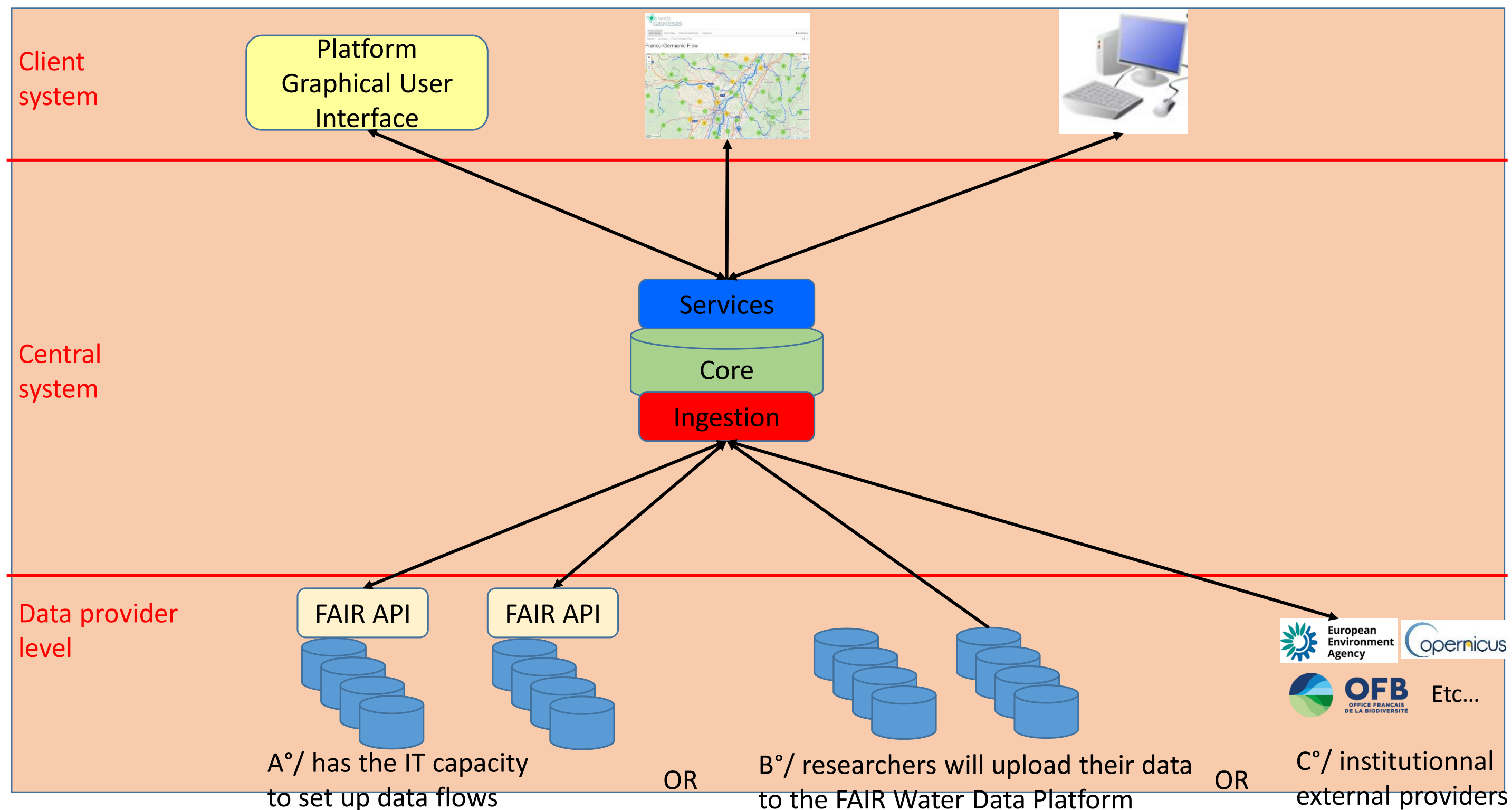
Common practices: specifications and FAIR Implementation Profiles

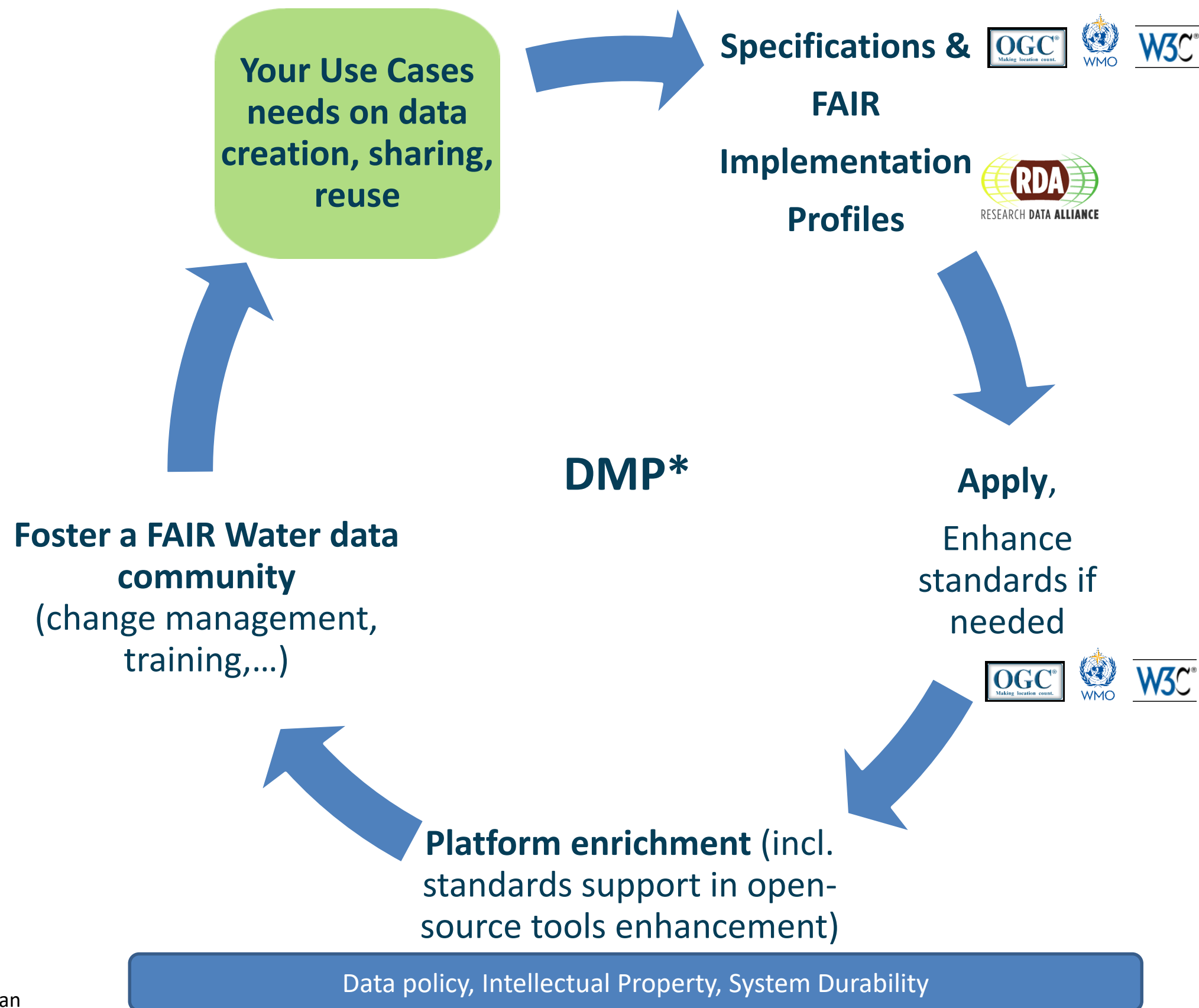


= a set of common practices + platform



= a set of common practices + platform + tools





- Initial Use Cases to bootstrap the process

Surface Water Quantity



Ground Water Quantity



Surface Water Quality
(physico-chemical properties)



Ground Water Quality
(physico-chemical properties)



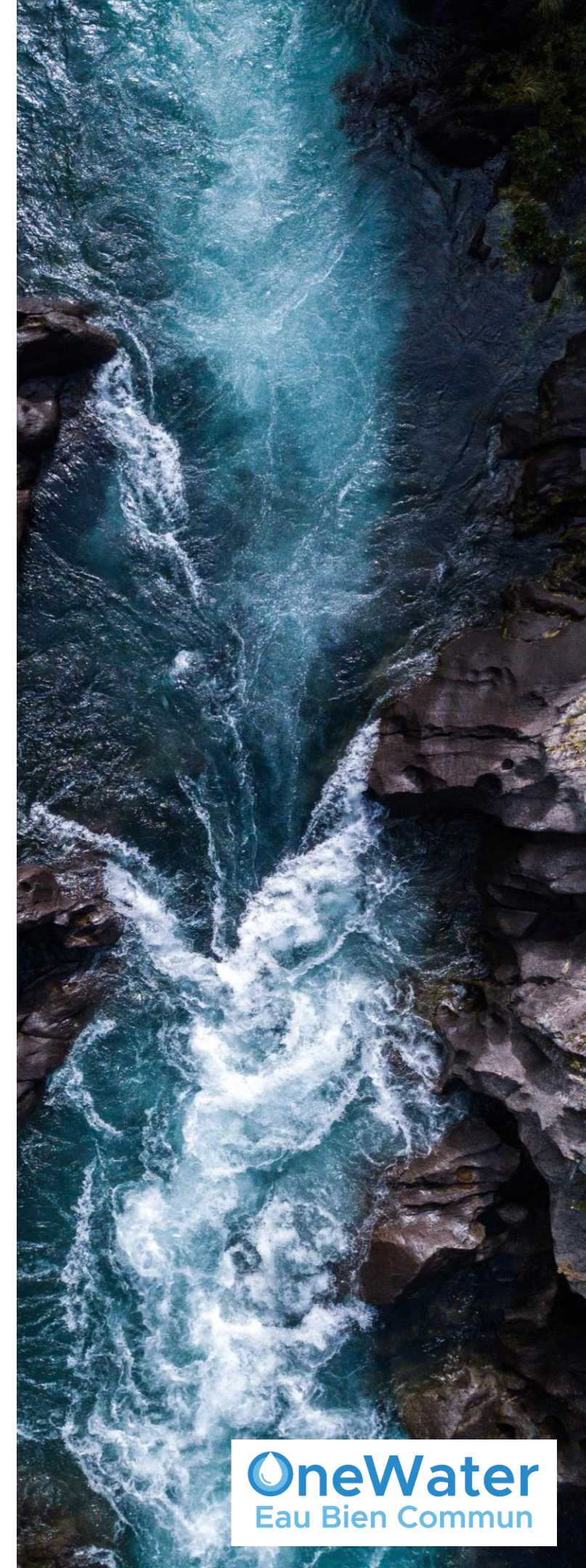
Reference hydro network



Reference hydrogeology

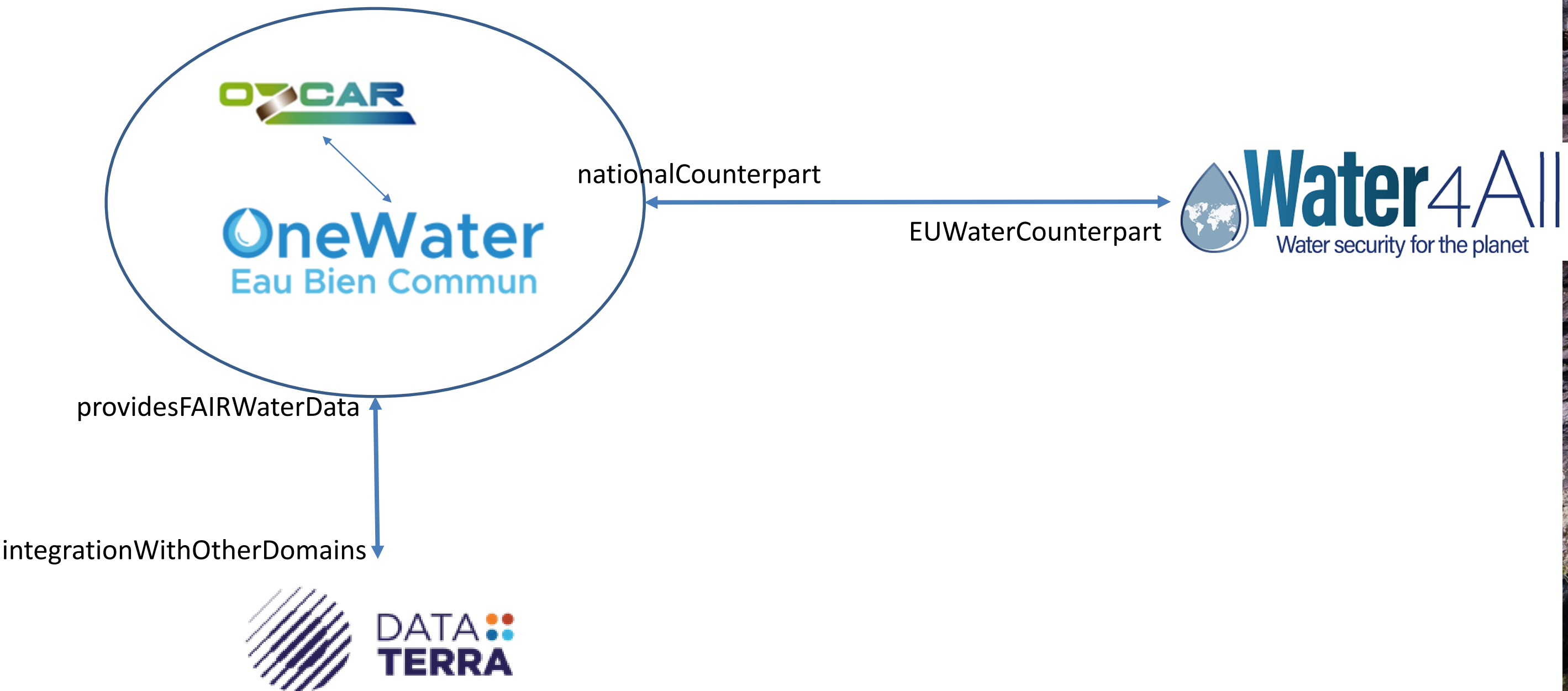


Vocabularies

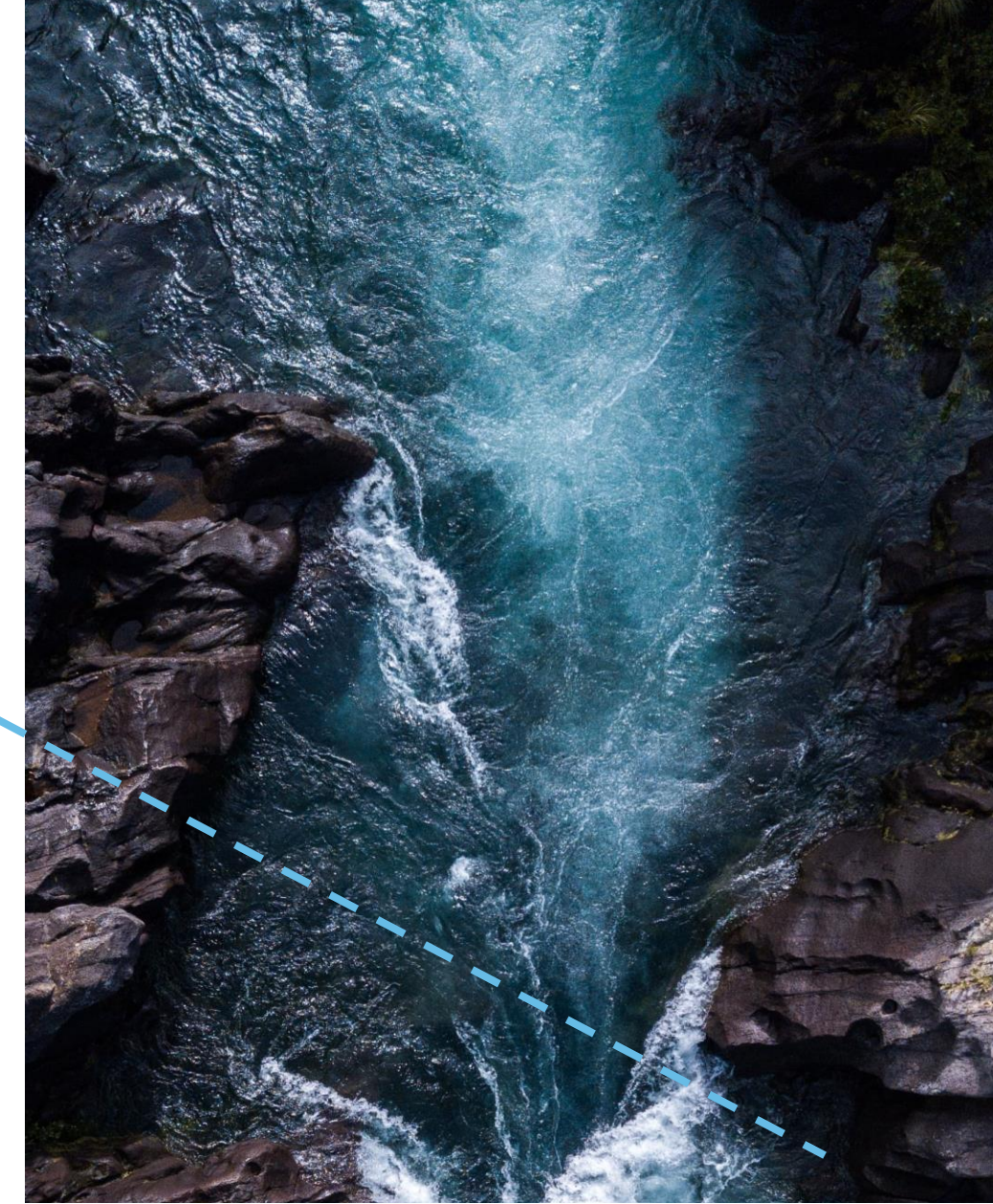
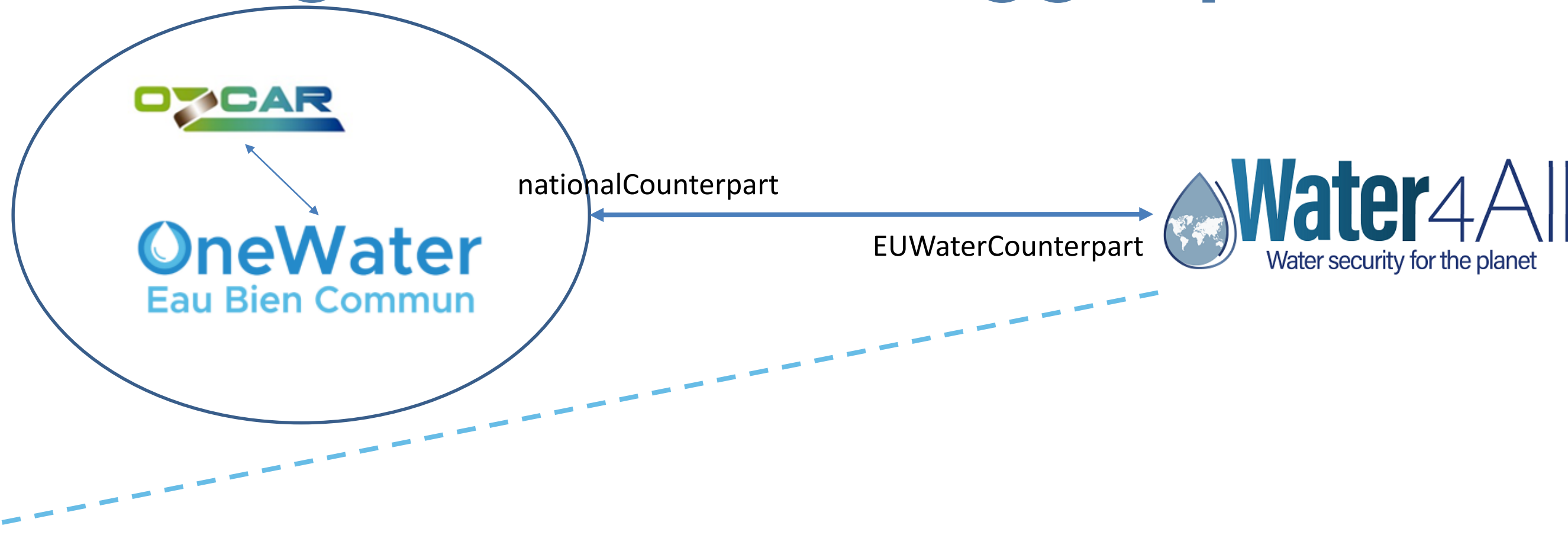


Integration in the bigger puzzle

Synergies with other dynamics



Integration in the bigger puzzle



<https://www.water4all-partnership.eu/>

31 countries, 7 years

86 m€ for the 1st phase

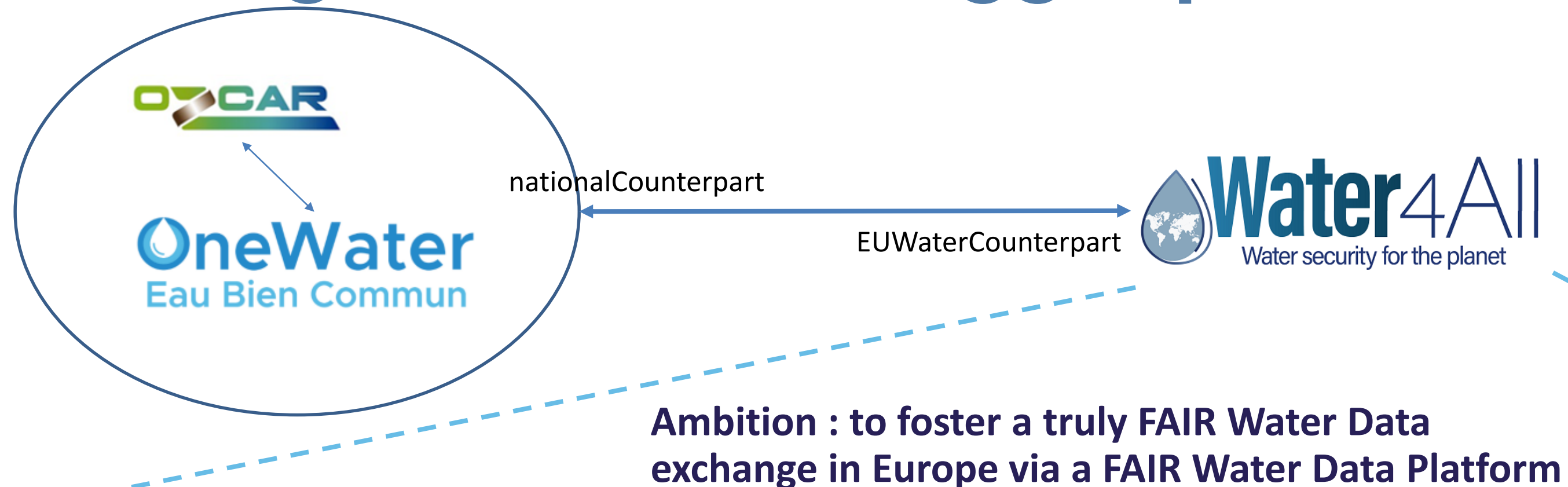
To tackle water challenges as means to face climate change, help to achieve the United Nations' Sustainable Development Goals and boost the EU's competitiveness and growth (EU Green Deal).

81 partners

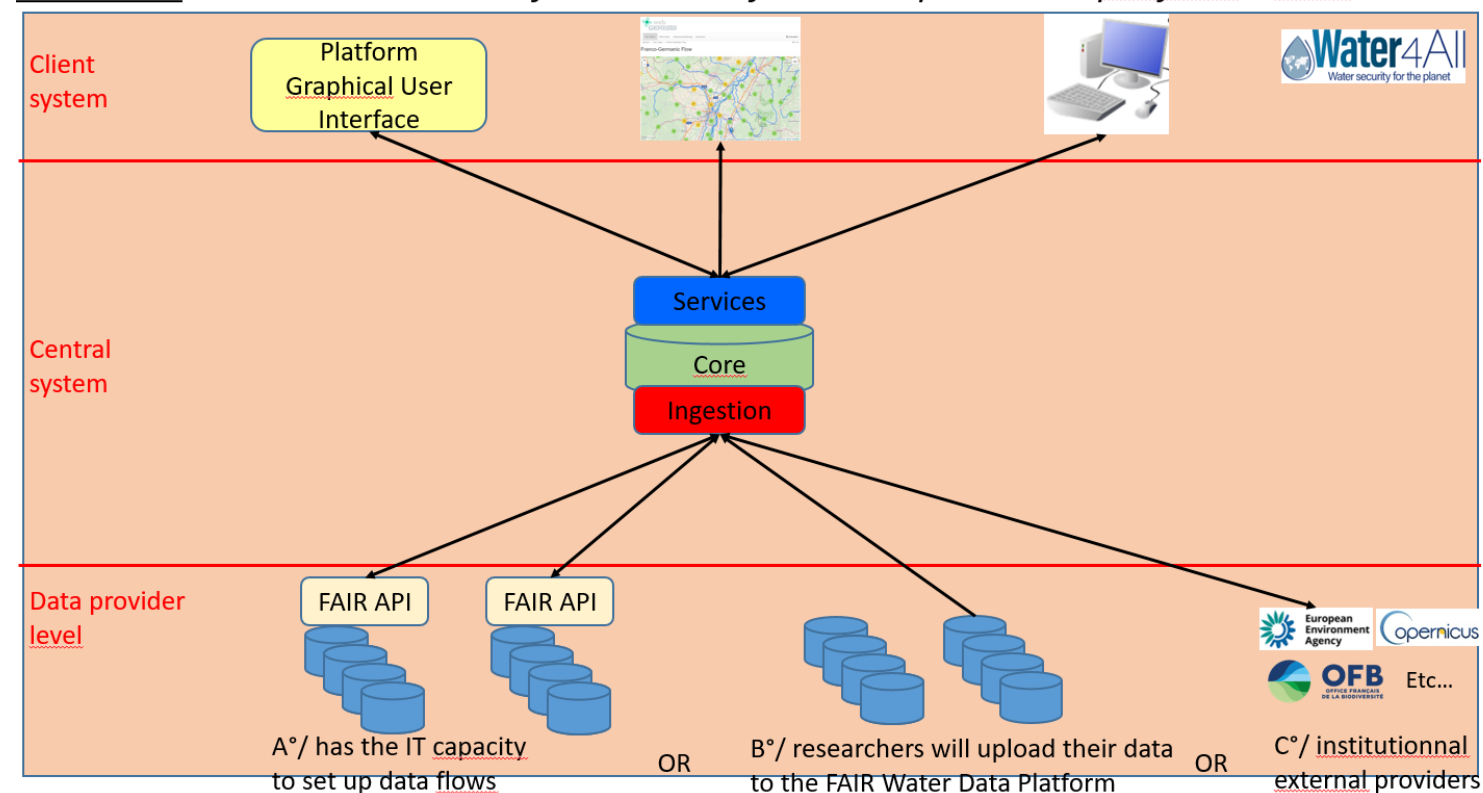
- research and innovation funders,
- thematic authorities in charge of water issues and policy-makers,
- local authorities,
- associations and networks representing the economic sector in the field of water at the European, national or regional level,
- research organisations.



Integration in the bigger puzzle

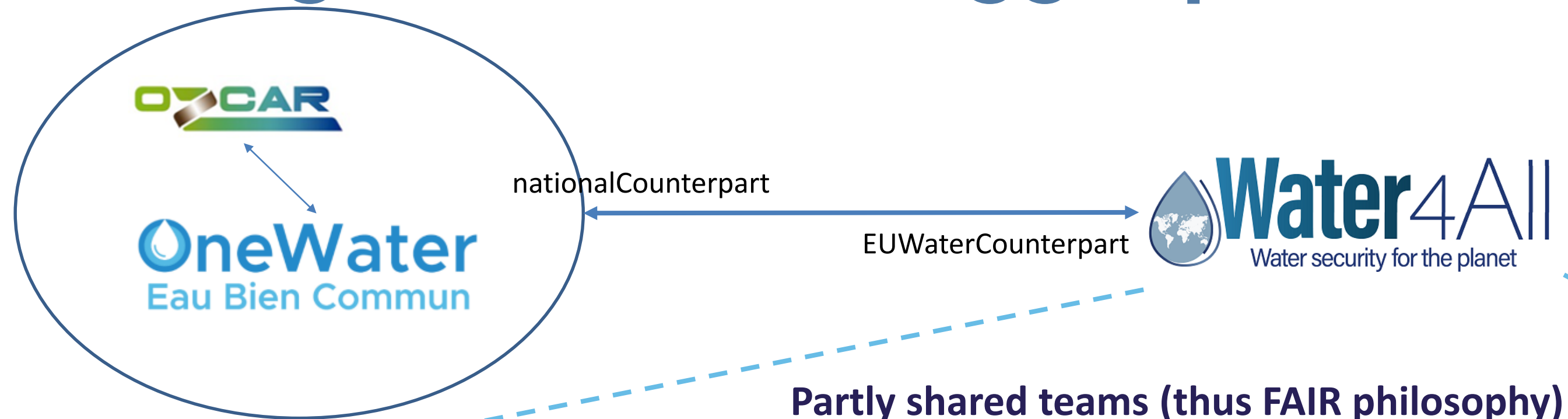


Conclusion: FAIR Water Data Platform = a set of common practices + platform + tools



? Looks similar ?

Integration in the bigger puzzle



Partly shared teams (thus FAIR philosophy)
and initial Use Cases

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Ground Water Quantity



Surface Water Quality
(physico-chemical properties)



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Reference hydro network



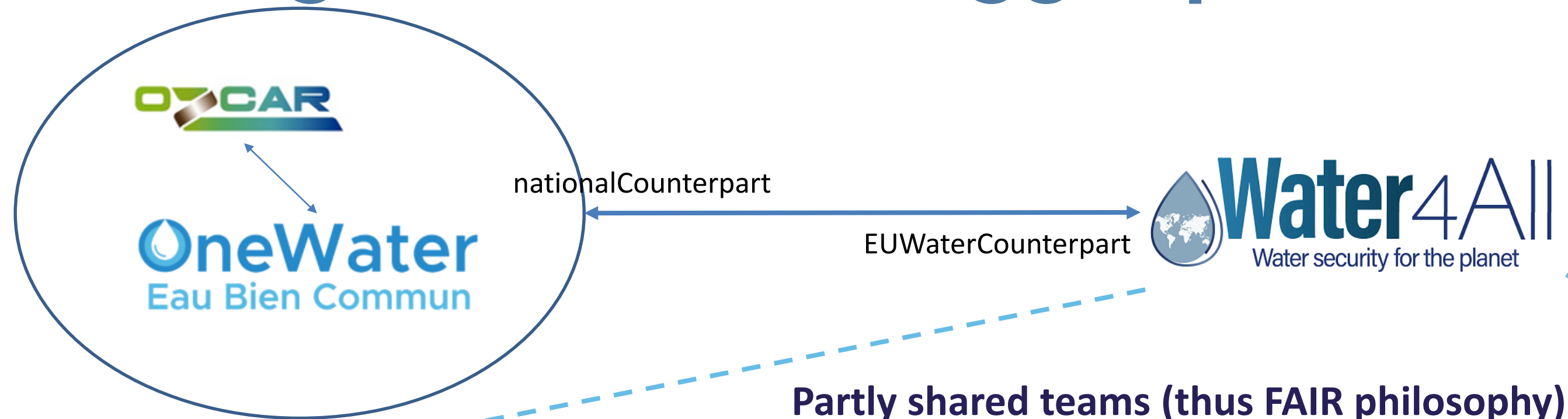
Reference hydrogeology



Vocabularies



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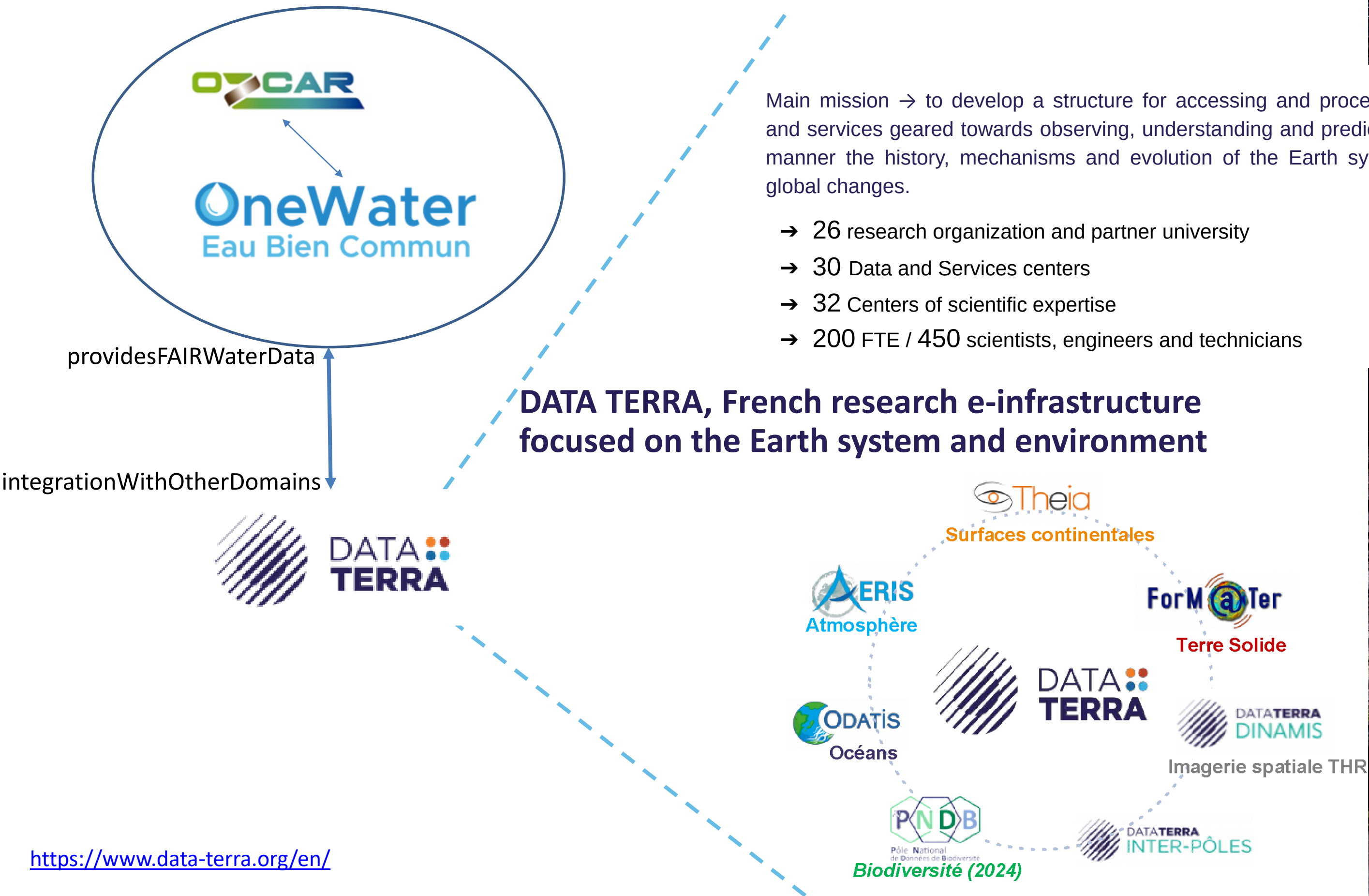


Vocabularies



= Those Use Cases are also already currently being handled in the OGC
Water Quality Interoperability Experiment
<https://github.com/opengeospatial/WaterQualityIE>

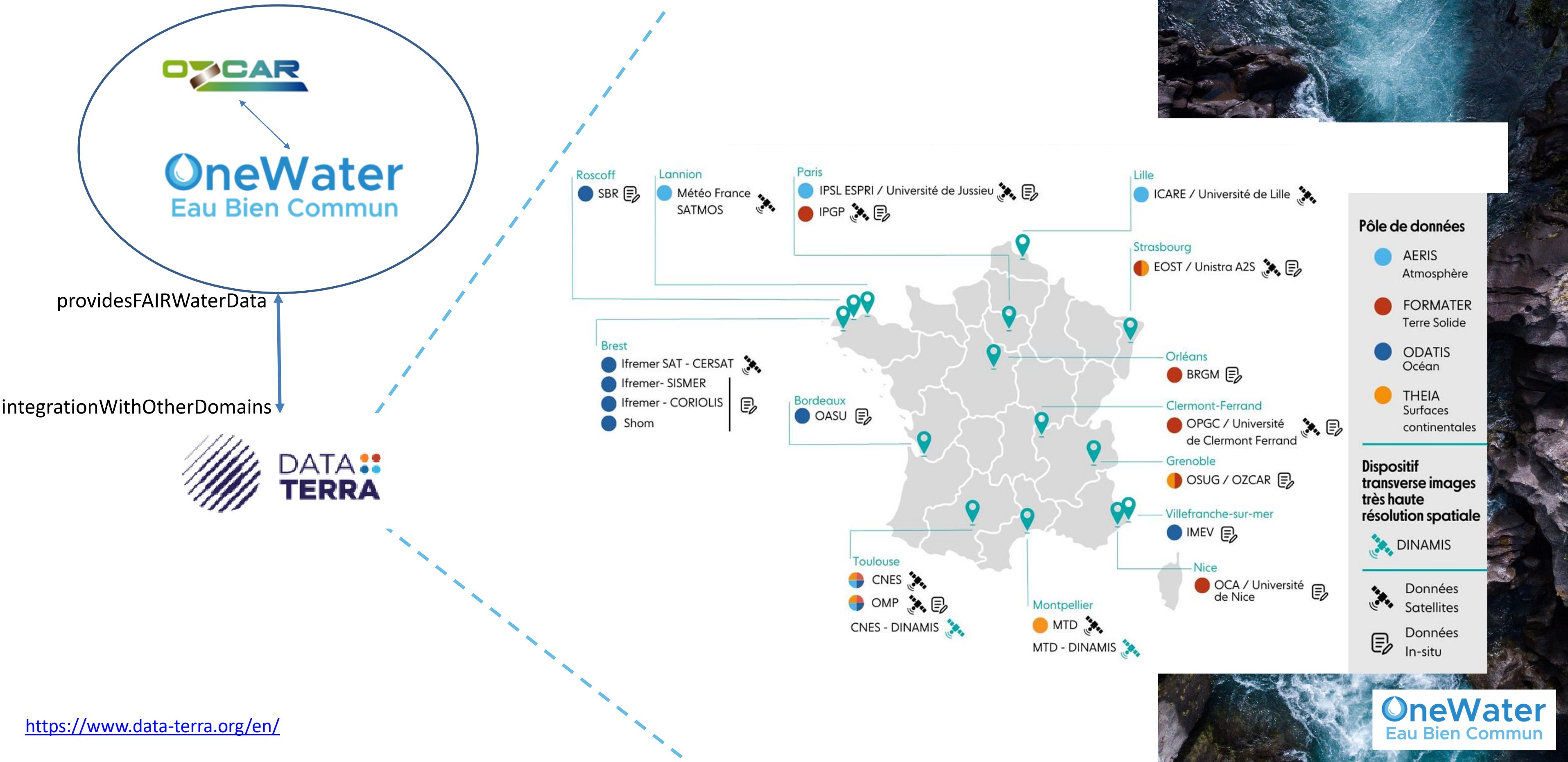
Integration in the bigger puzzle



Integration in the bigger puzzle

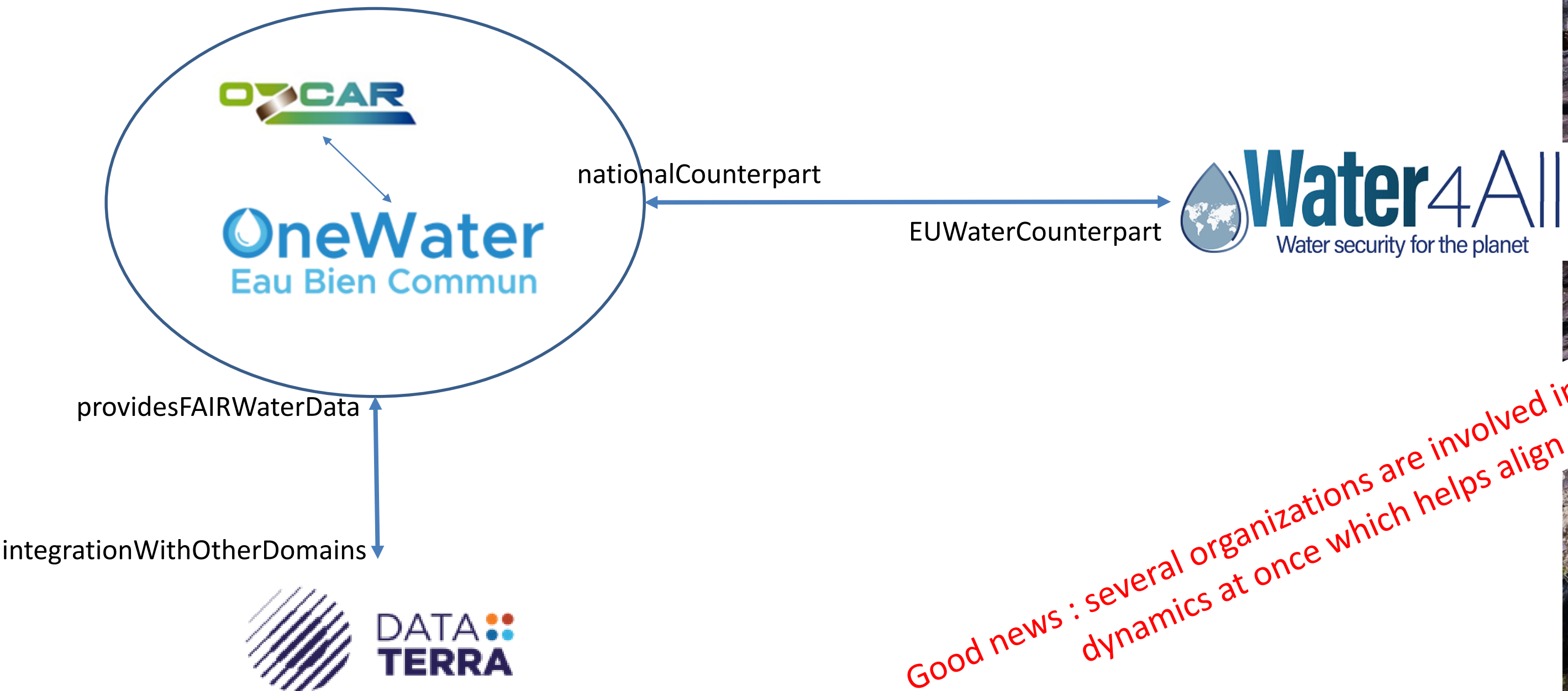


Integration in the bigger puzzle



Integration in the bigger puzzle

Synergies with other dynamics



Good news : several organizations are involved in all those various dynamics at once which helps align planets

Conclusion

Quite an endeavor !

- However, all those dynamics
 - have decent time to work
 - build on
 - international FAIR practices
 - & open-source implementations

⇒ Better chance to contribute to the overall community



Thank you – OneWater Data Platform Team



Sylvain Grellet (BRGM); Isabelle Braud (INRAE); Fanny Arnaud (CNRS EVS - Université de Lyon); Kenneth Maussang (Université de Montpellier); Anne Laurent (Université de Montpellier); Frédéric Huynh (CNRS); Hervé Piegay (CNRS); Lise Vaudor (CNRS); Christelle Pierkot (DataTerra); Sandrine Charles (Université de Lyon); Yvan Le Bras (mnhn); Laurent Longuevergne (CNRS); Hervé Squidant (UMR SAS - Institut Agro); Mario Adam (INRAE); Charly Coussot (IRD / OSUG); Véronique Chaffard (IRD/IGE) and many others onboarding

MERCI DE VOTRE ATTENTION

 **OneWater**
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