



Open
Geospatial
Consortium

Water quality IE update

The 125th OGC Member Meeting

With the support of

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Kyle Onda, Lincoln Institute
Tony Boston, ANU



20 February 2023

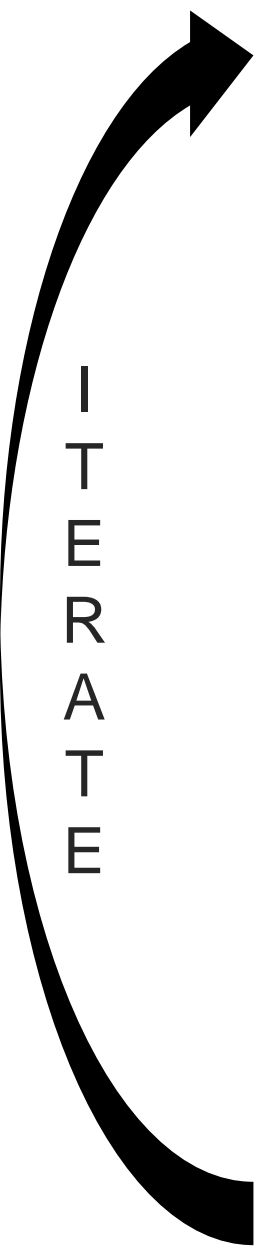


Context

- Water Quality workshop March 2022
- Kick-off : 13/09/2022
- Weekly webconf every Tuesday since then
- The reference point : <https://github.com/opengeospatial/WaterQualityIE/>
 - Link to living G.Doc for minutes then GoToMeeting webconf link etc....,
 - Issues,
 - Model : until we move it to OGC Sparx Cloud.

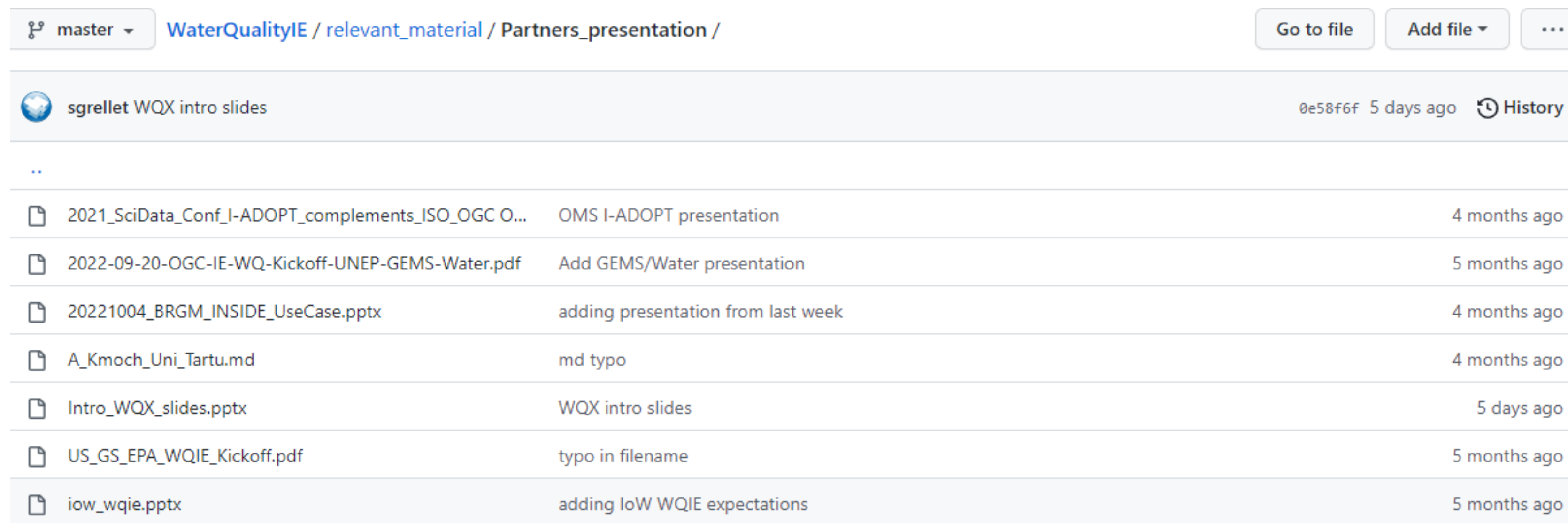
Progress overview

- Partners expectations regarding the IE
- OMS crash courses
- Use cases identifications and phasing
- Object diagrams
 - From doodles to real ones ← We are here
- Serializations examples
- Test implementations from the various partners: server, client
- Report



Building the team momentum

- Partners expectations regarding the IE -> various presentations
 - Other partners are expected -> La Plata basin (through WMO)



master WaterQualityIE / relevant_material / Partners_presentation /

Go to file Add file ...

sgrellet WQX intro slides 0e58f6f 5 days ago History

..

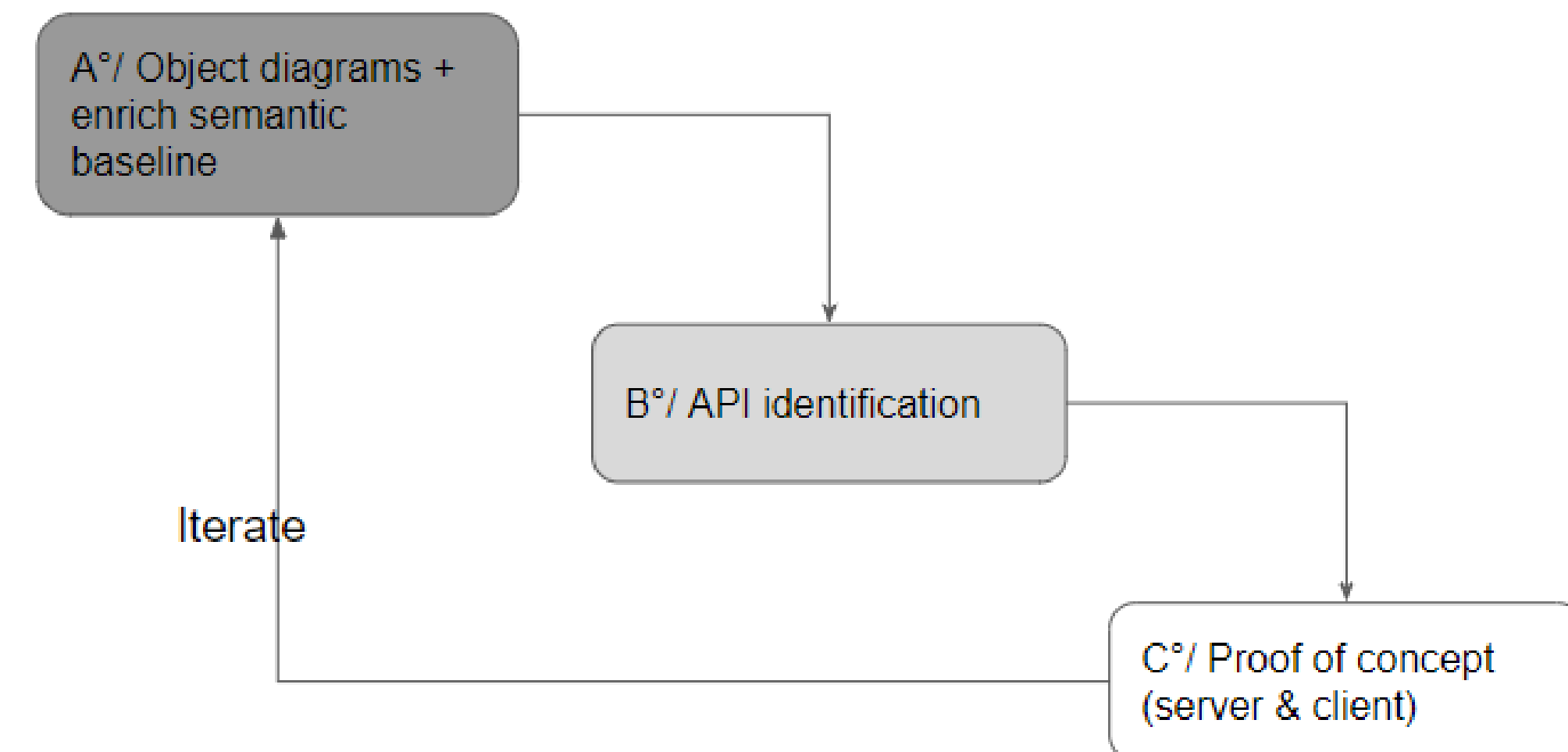
2021_SciData_Conf_I-ADOPT_complements_ISO_OGC O...	OMS I-ADOPT presentation	4 months ago
2022-09-20-OGC-IE-WQ-Kickoff-UNEP-GEMS-Water.pdf	Add GEMS/Water presentation	5 months ago
20221004_BRGM_INSIDE_UseCase.pptx	adding presentation from last week	4 months ago
A_Kmoch_Uni_Tartu.md	md typo	4 months ago
Intro_WQX_slides.pptx	WQX intro slides	5 days ago
US_GS_EPA_WQIE_Kickoff.pdf	typo in filename	5 months ago
iow_wqie.pptx	adding loW WQIE expectations	5 months ago

- OMS crash courses
 - Highly important to share a common language

Use cases identifications and phasing

	Org	Fol Type: Water (Surface and Ground together at this stage)			
Method	<i>Observed Property group</i>	Quantity	Physical properties	Chemistry	Biology
	Samples	Here as a support to WQ	1	2	3
	Sensors				
	Hydro Models				
	Remote Sensing				

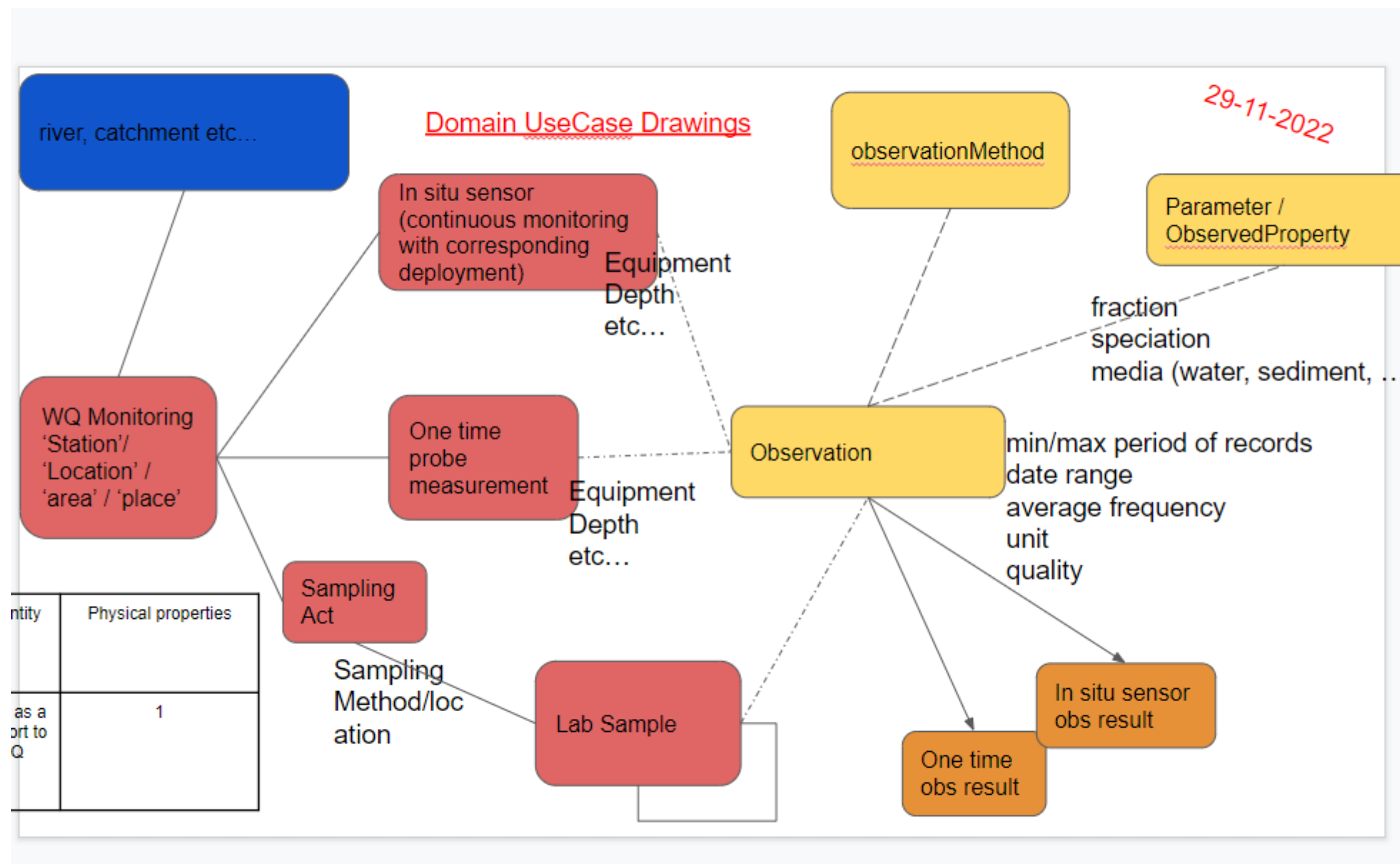
Rationale (per Use Case)



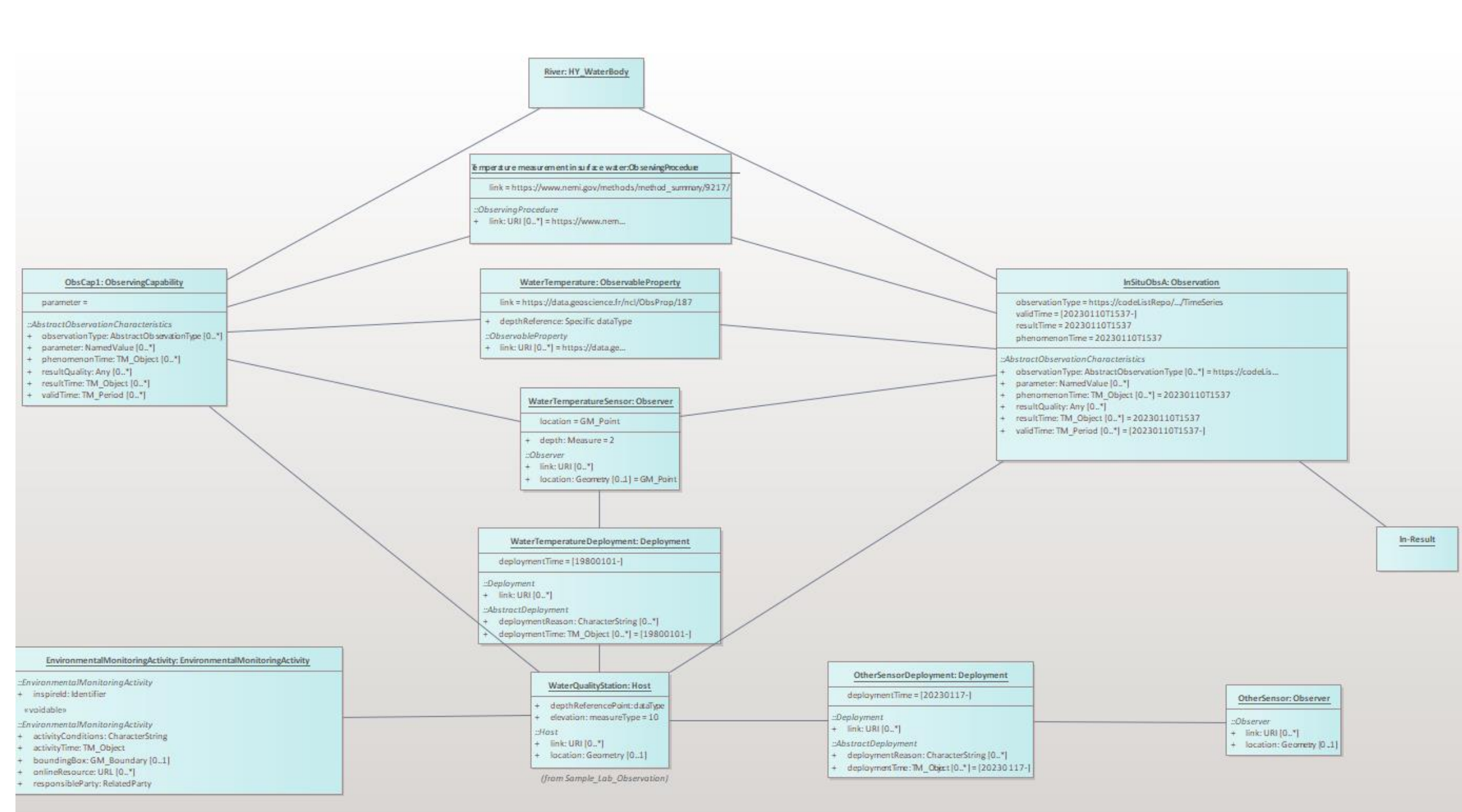
Object diagrams

- Almost everything is in the standard baseline just need to agree on how to use it

From



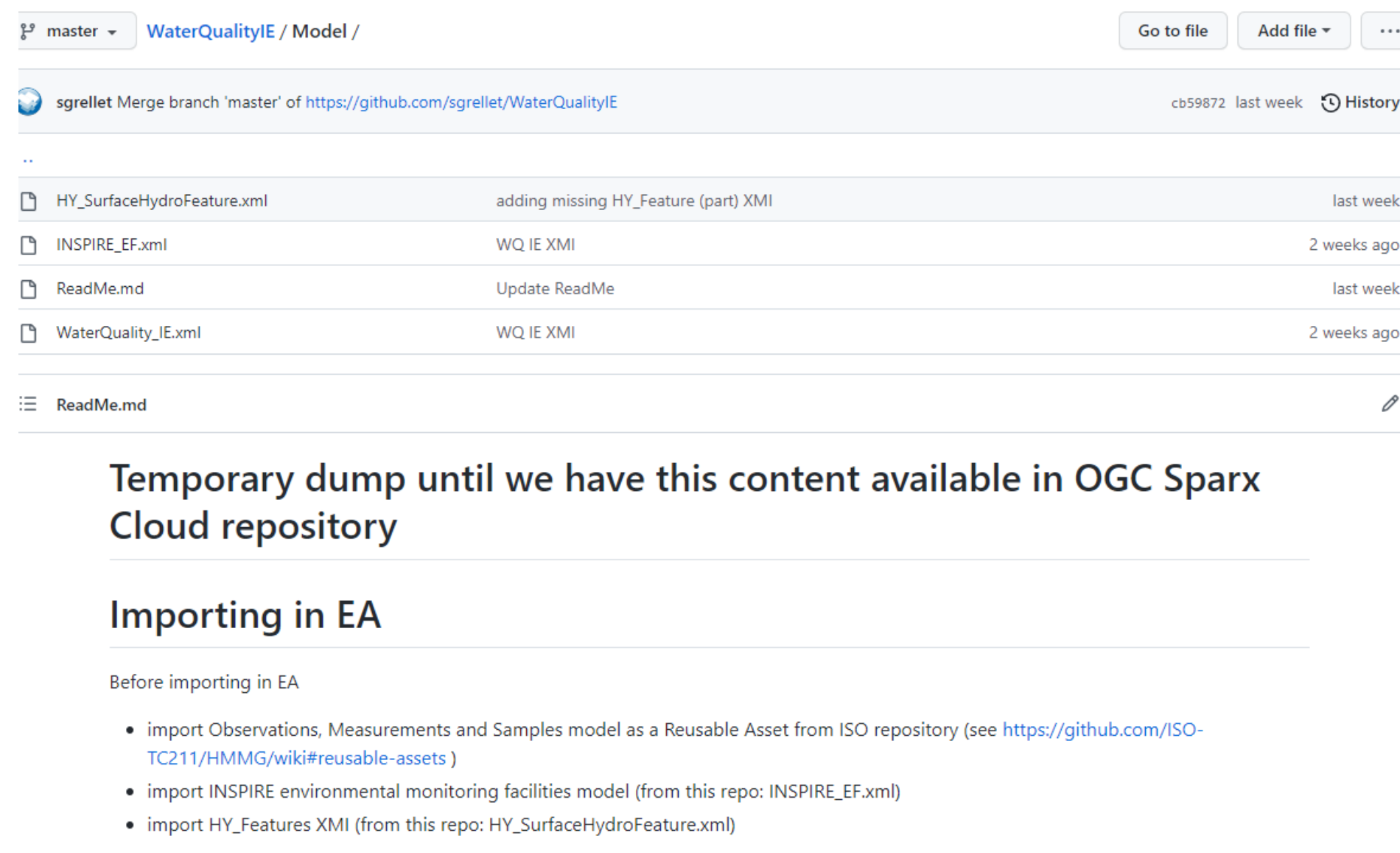
To



Object diagrams

- So far under the WQ IE Github:

<https://github.com/opengeospatial/WaterQualityIE/tree/master/Model>



WaterQualityIE / Model /

sgrellet Merge branch 'master' of https://github.com/sgrellet/WaterQualityIE cb59872 last week History

File	Commit Message	Time
HY_SurfaceHydroFeature.xml	adding missing HY_Feature (part) XMI	last week
INSPIRE_EF.xml	WQ IE XMI	2 weeks ago
ReadMe.md	Update ReadMe	last week
WaterQuality_IE.xml	WQ IE XMI	2 weeks ago

ReadMe.md

Temporary dump until we have this content available in OGC Sparx Cloud repository

Importing in EA

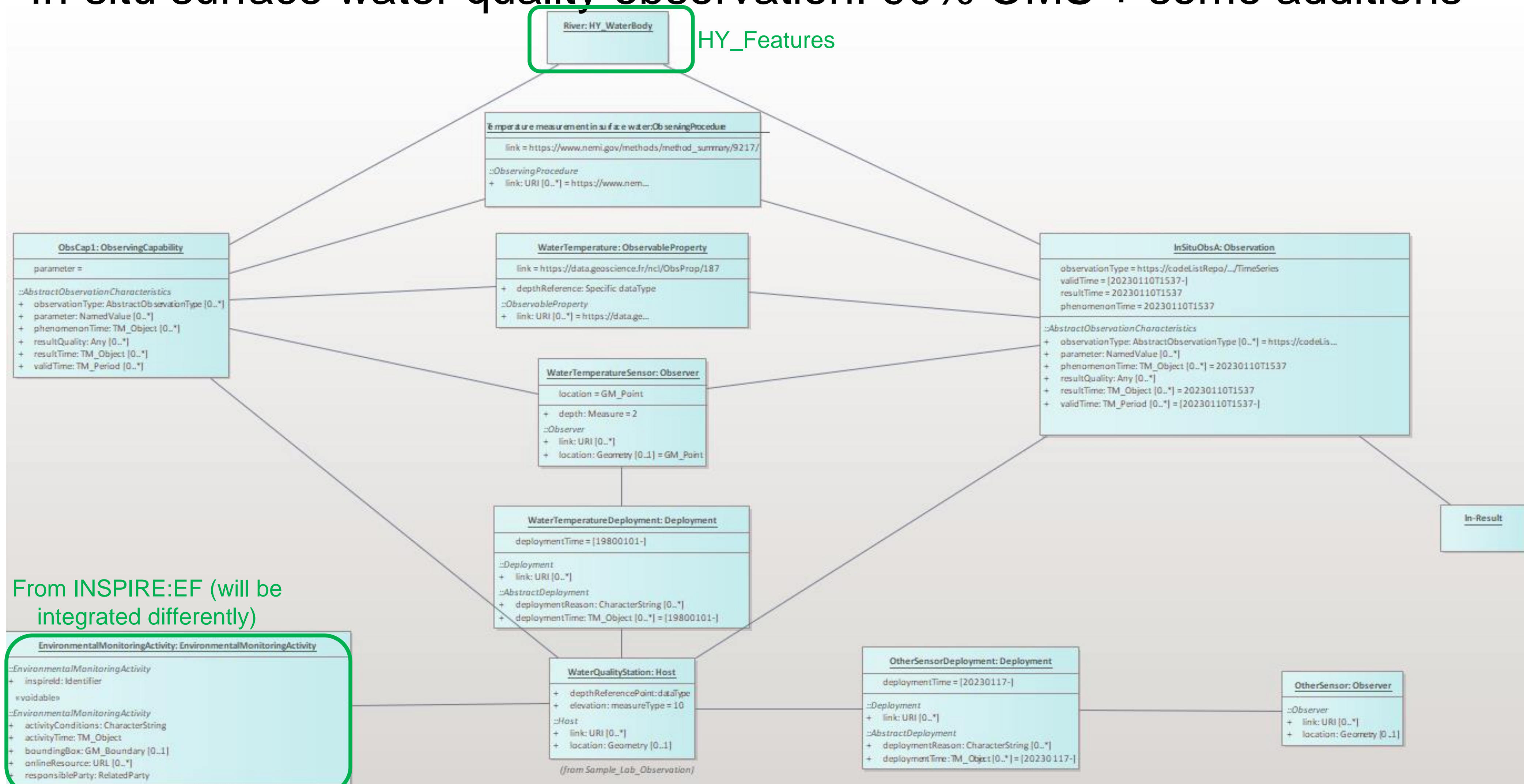
Before importing in EA

- import Observations, Measurements and Samples model as a Reusable Asset from ISO repository (see <https://github.com/ISO-TC211/HMMG/wiki#reusable-assets>)
- import INSPIRE environmental monitoring facilities model (from this repo: INSPIRE_EF.xml)
- import HY_Features XMI (from this repo: HY_SurfaceHydroFeature.xml)

- Activity to have it under OGC Sparx Cloud in coordination with OGC Conceptual Modelling SubGroup

Object diagrams

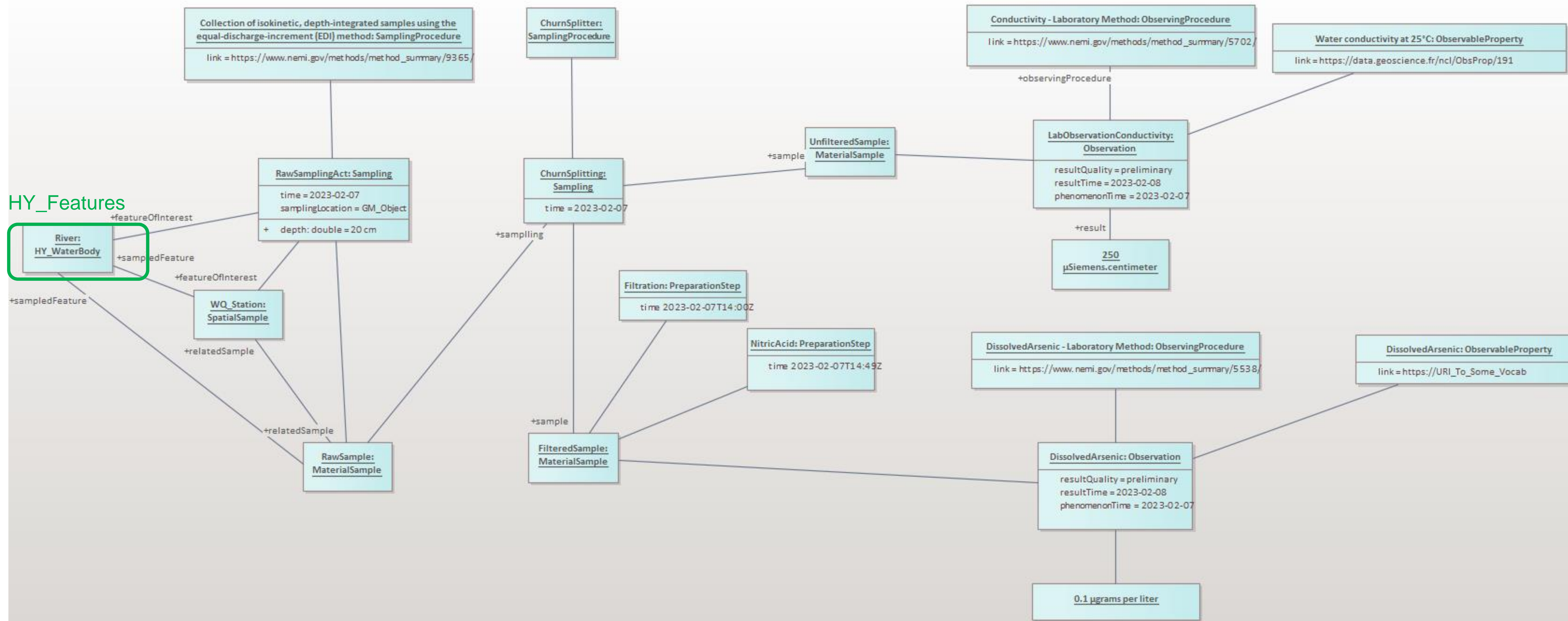
- In-situ surface water quality observation: 90% OMS + some additions



From INSPIRE:EF (will be integrated differently)

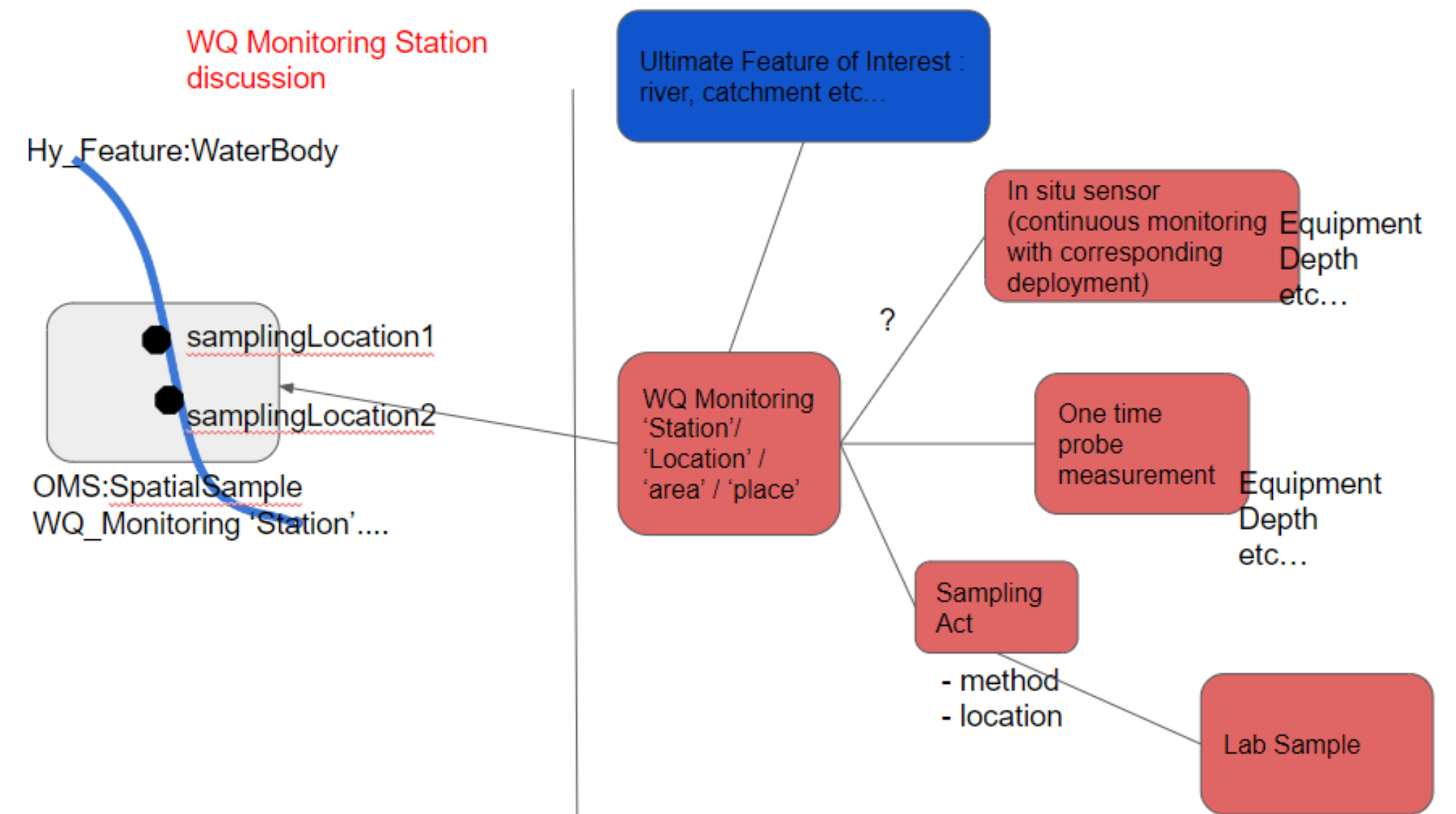
Object diagrams

- Lab surface water quality observation: 90% OMS + some additions



Next steps

- Refining our joint understanding on the needs
 - Enriching object diagrams
 - Need for « WQ specific information / modeling » ?
 - Depth attributes on Observer and/or Host ? -> subtyping Observer | Host ?
 - Concept of Water Quality station (an OMS SpatialSample)
 - Environmental Monitoring Activity ?



Next steps

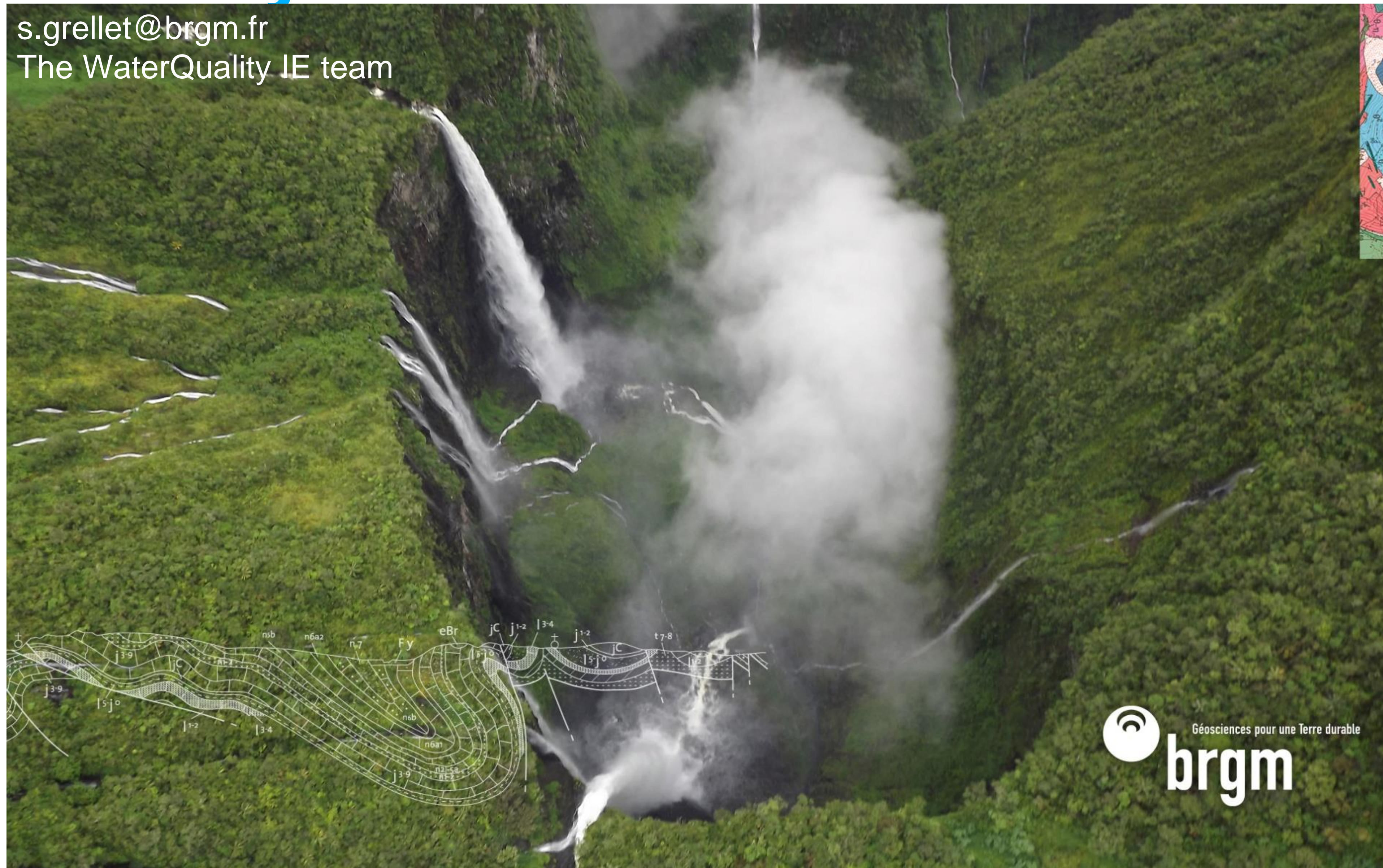
- OMS serializations example
 - ? JSON only ?

+ « which API to serve what ? » discussion

⇒ Partners implementation

Thank you and thanks to

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The WaterQuality IE team





Thank You

Community

- 500+ International Members
- 110+ Member Meetings
- 60+ Alliance and Liaison partners
- 50+ Standards Working Groups
- 45+ Domain Working Groups
- 25+ Years of Not for Profit Work
- 10+ Regional and Country Forums

Innovation

- 120+ Innovation Initiatives
- 380+ Technical reports
- Quarterly Tech Trends monitoring

Standards

- 65+ Adopted Standards
- 300+ products with 1000+ certified implementations
- 1,700,000+ Operational Data Sets
- Using OGC Standards

