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Engaging the WATERVERSE:

A case study in stakeholder co-creation and engagement for the sustainable development of a Water Data Management Ecosystem

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WATERVERSE



**MAKING DATA MORE INTEROPERABLE
TO CONNECT WATER STAKEHOLDERS
FOR IMPROVED DECISION-MAKING**



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KEY FACTS

- **Start Date:** 01 October 2022
- **Duration:** 36 months
- *Project Co-funded by the European Union Grant Agreement 101070262*



**Co-funded by
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Project Partners



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What WATERVERSE will do



The WATERVERSE mission is to develop a Water Data Management Ecosystem (WDME) for:

- making data management practices and resources in the water sector secure, easy to use, and **FAIR** (findable, accessible, interoperable, and reusable).
- improving the usability of data and the interoperability of data-intensive processes.
- lowering the entry barrier to data spaces.
- boosting the perceived value of data and therefore the market opportunities behind it.

WATERVERSE: Stakeholder management

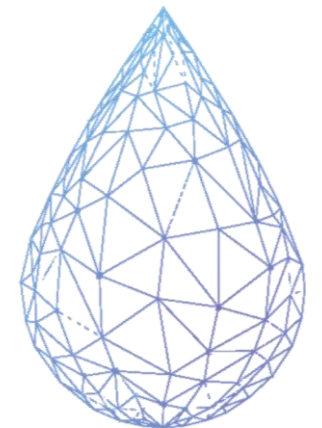
- 6 Diverse Case Studies
- 7 Target groups of Stakeholders
 1. Water utilities and local water authorities dealing with the water cycle
 2. Enterprises working in AI and Data Science
 3. Research Centers and Universities
 4. Innovation Hubs, Networks, Clusters
 5. Emergency Response Services
 6. Citizen Initiatives
 7. Policy Makers and Government



Aim of Stakeholder Engagement

The involvement of stakeholders for digital water spaces is important for three reasons:

1. the complexity of water-related data spaces leads to inadequate use of data hindering decision making;
2. involving stakeholders can lead to multiple value creation as new types of knowledge can lead to new and broader perspectives on digital solutions;
3. stakeholder involvement can secure the (long-term) implementation of water solutions by water utilities.



Multi-Stakeholder Forums (MSFs)

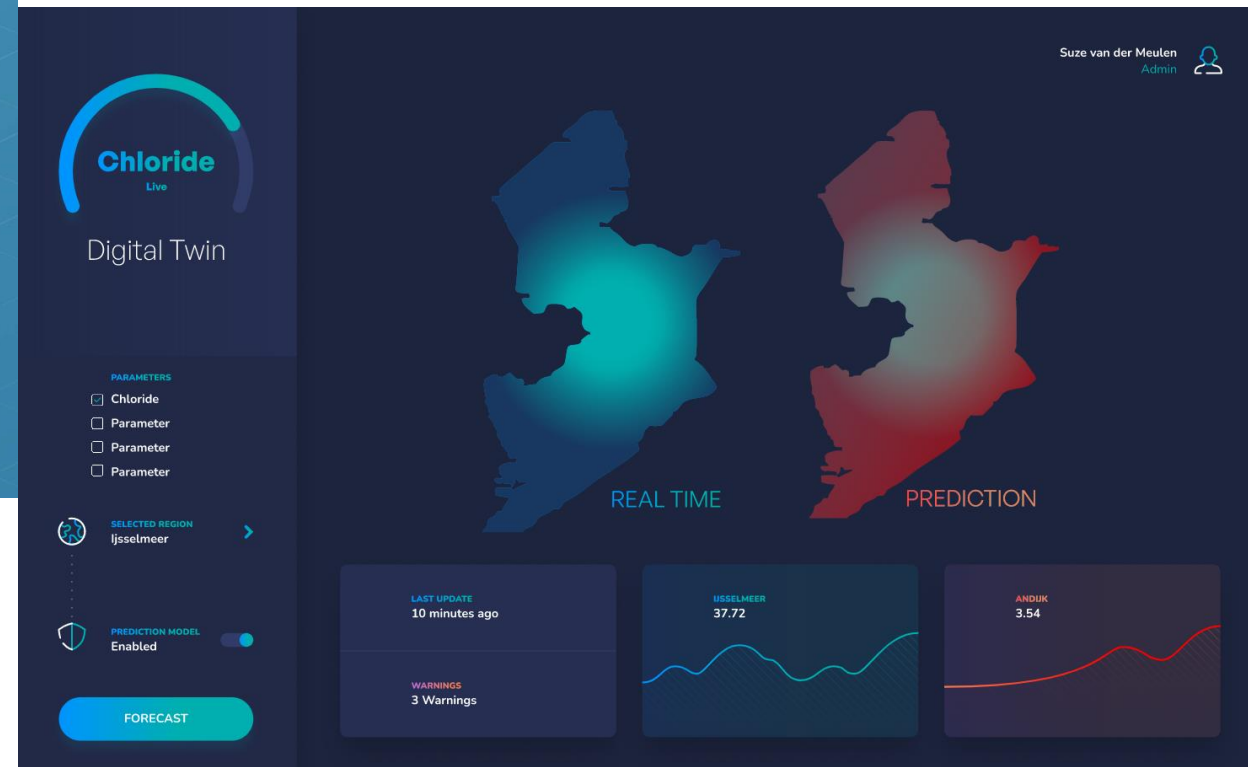
- MSFs – target groups who identify themselves as a community due to their shared interest and are engaged in a particular topic.
- The Wataverse MSF frameworks builds off and extends from past EU Horizon projects.





Netherlands Pilot

Digital Twin IJsselmeer 2025 – Source Prediction Model of Cl⁻ Concentrations





Conceptualized Pilot

- Prediction of water quality and its impact in the treatment steps.
 - Location: the IJsselmeer water body, North Holland, Netherlands
 - External organisations involved: Royal Netherlands Meteorological Institute (KNMI), Rijkswaterstaat (RWS), the waterboard Hollands Noorderkwartier (HHNK).

Challenges with data management

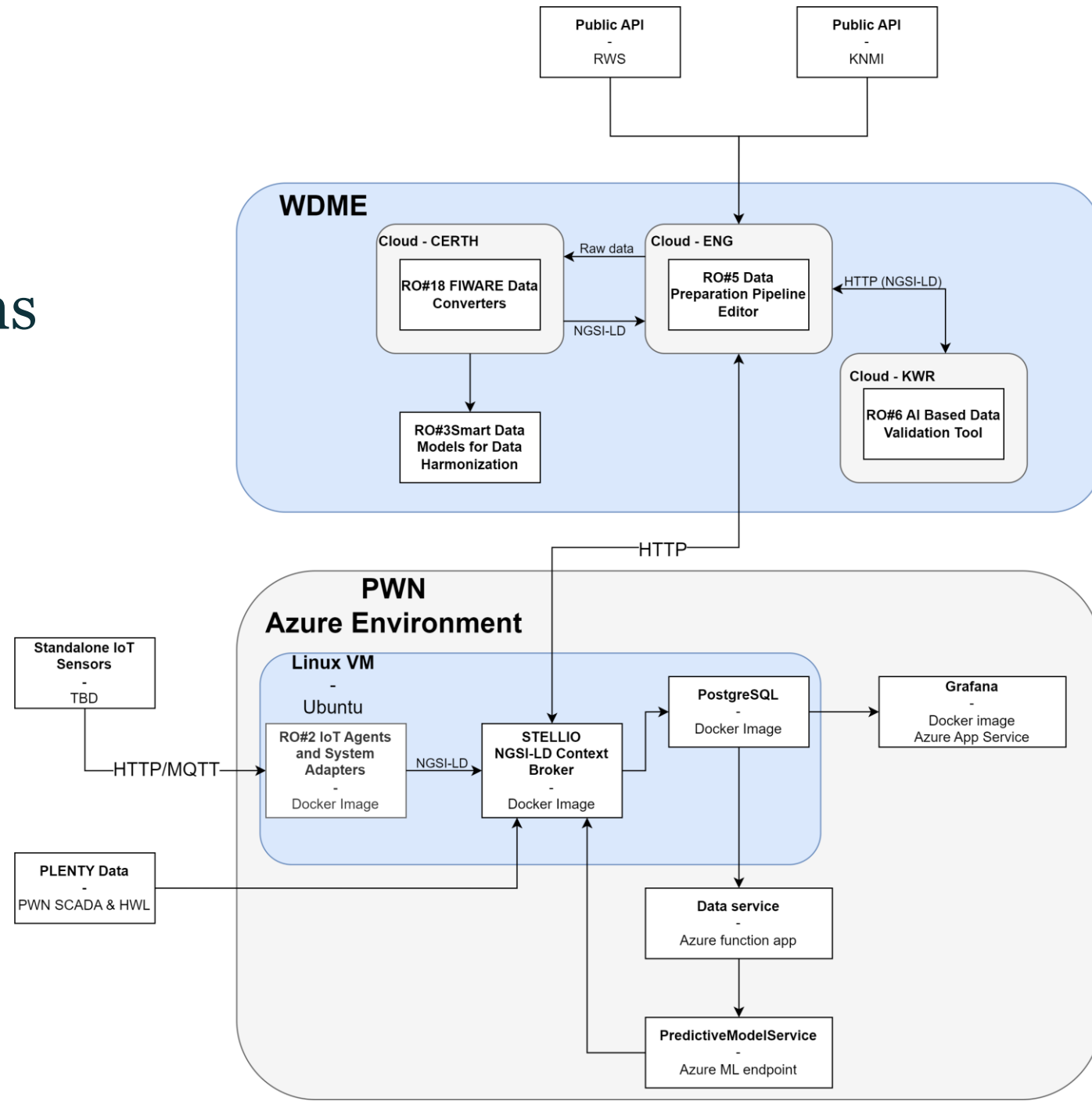
Data

- Data standardization
- Inclusive data exchange
- Real-time data validation
- Data anonymization
- Metadata

Functional

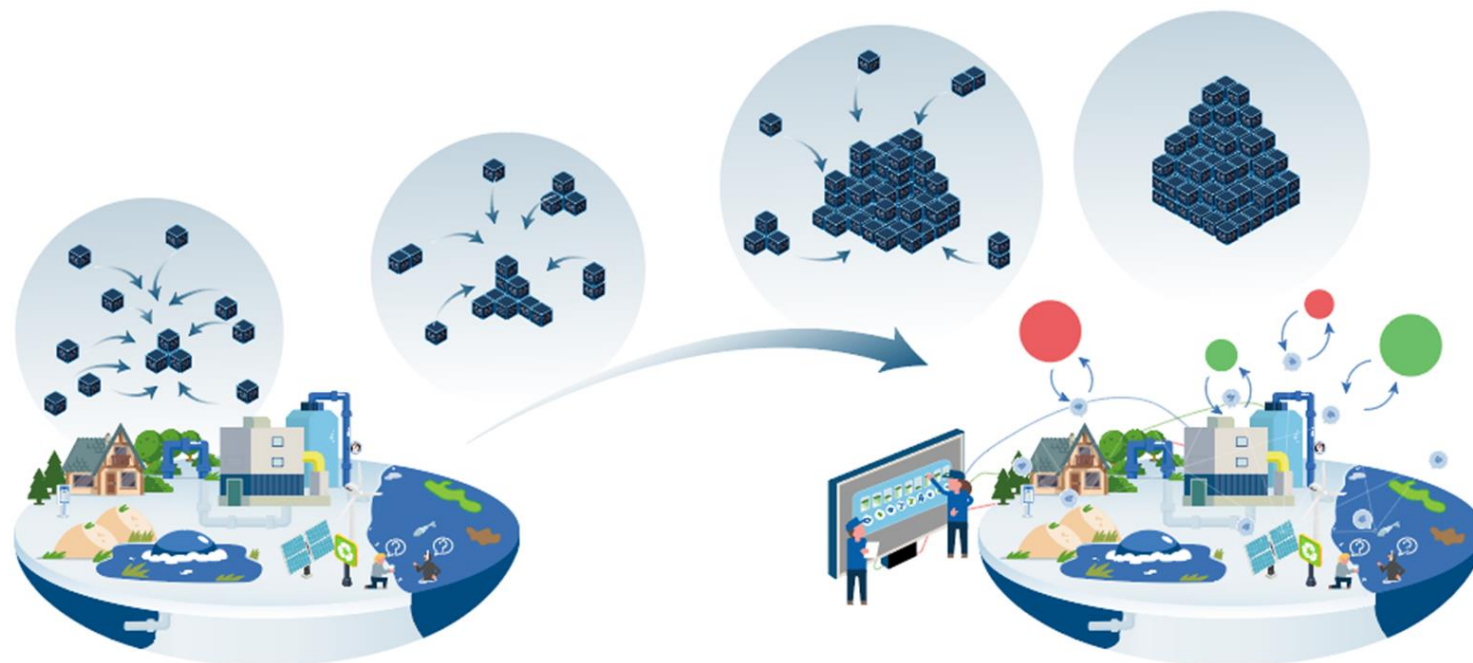
- Security by design
- Easy user-interface
- Predictions + Uncertainty
- Data processing
- Explainable & Traceable
- Handle high-frequency data volumes
- Service/APIs

~ Pilot architecture for first iteration including WDME deployment and interactions with the deployed Azure environment.



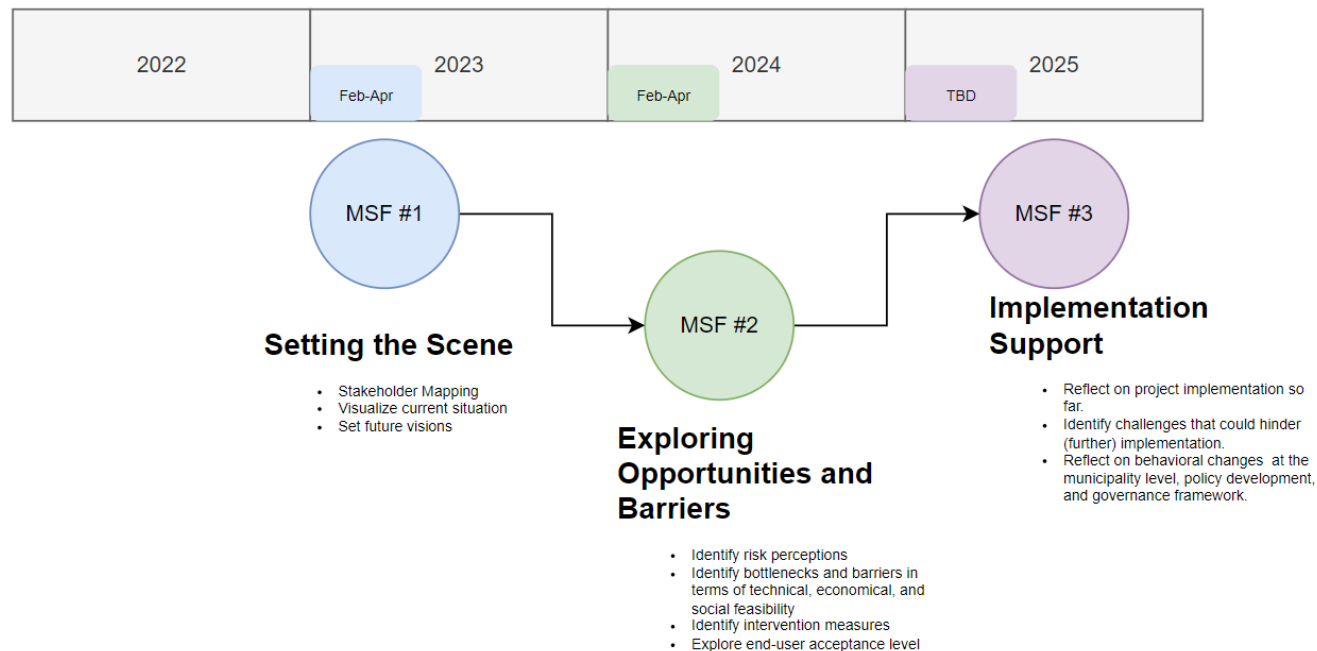
Realizing the results of the first iteration

- Faster, cheaper and higher quality data will be available to implement more data-driven solutions.
- The correct (uniform) data and models will be openly available and accessible to make predictions of chloride concentrations.
- Increased stakeholder engagement ex. Waterboard for Amsterdam



Next Steps

- Continual improvement on the developed critical infrastructure for the development of data spaces.
- Exploring the risks, opportunities, and barriers identified through the first pilot iteration.
- This will ultimately lead to better decision making and more resilient water sector decision.





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