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Developing synthetic data for FIWARE-enabled Digital Twins in the water sector

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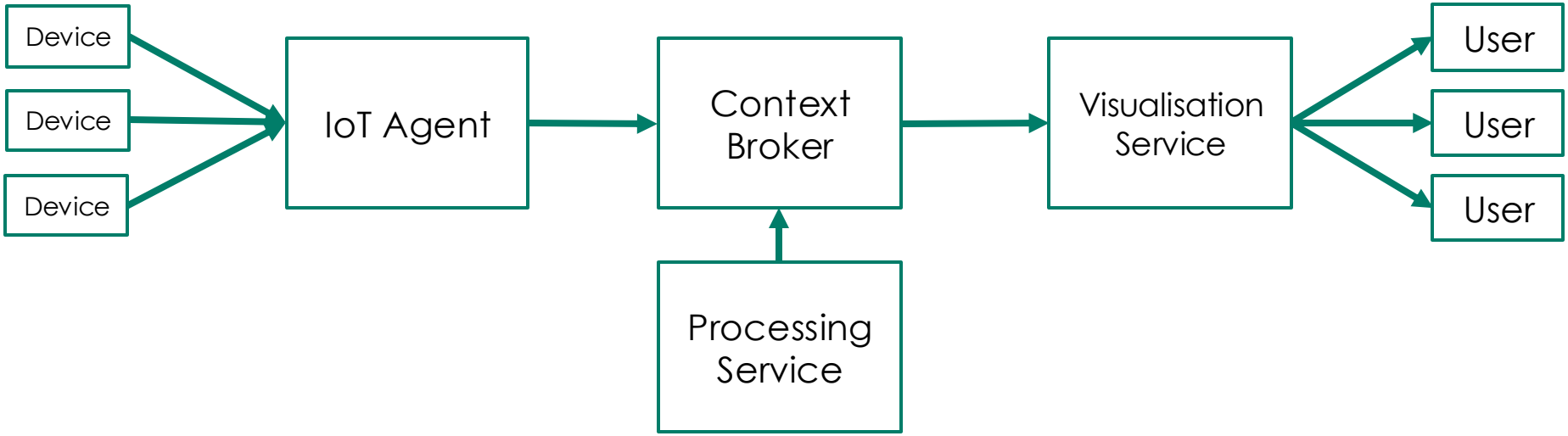
WATERVERSE

WATERVERSE is an EU-funded project aimed at developing a Water Data Management Ecosystem (WDME) for making data management practices and resources in the water sector accessible, affordable, secure, fair, and easy to use.

The Water Data Management Ecosystem will improve usability of data and the interoperability of data-intensive processes, thus lower the entry barrier to data spaces, enhance the resilience of water utilities and boosting the perceived value of data and therefore the market opportunities behind it.

https://waterverse.eu/

FIWARE architecture



3 previous ‘hurting’ Projects

- Aqua3S
  - Safety, security and standardisation of drinking water for water companies
- Fiware4Water
  - Link the water sector to FIWARE
- LOTUS
  - Low-cost innovative technology for water quality monitoring and resources management or urban and rural systems in India

3 Key use cases

- Proof of concept
- Scale of process
- Edge case creation

Synthetic Data Generation

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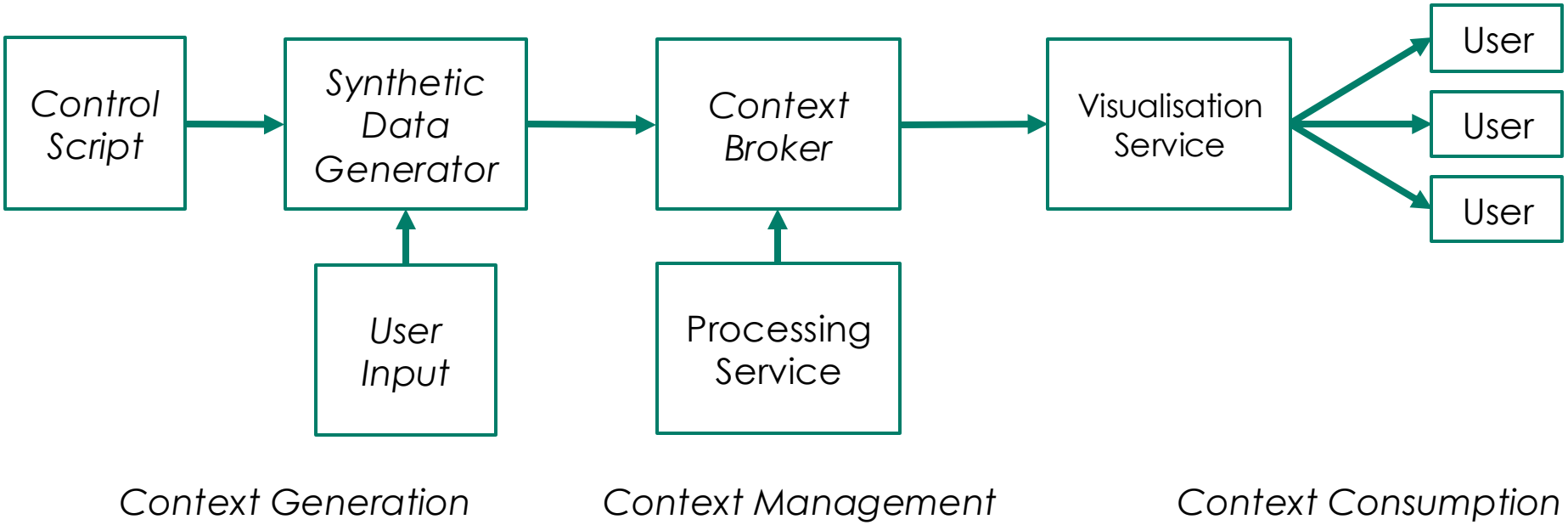
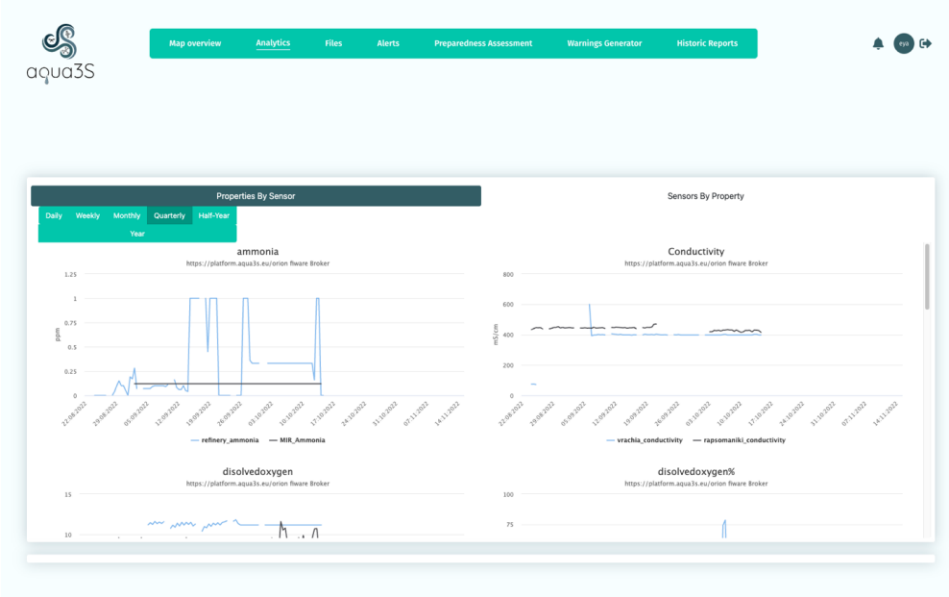


3 Key use cases

- Proof of concept
  - Is the right data going to the right place at the right time.

3 Key use cases

- Scale of process
  - will algorithms work with realistic amounts of data within time / memory / processing constraints



Synthetic Data Generation

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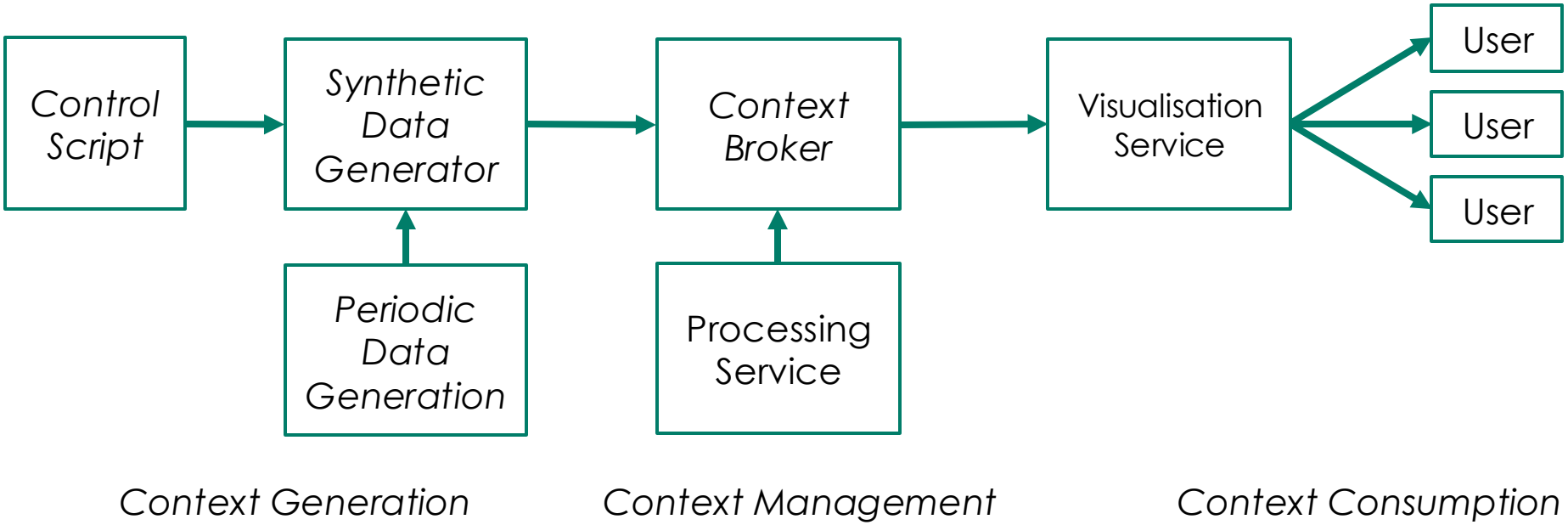
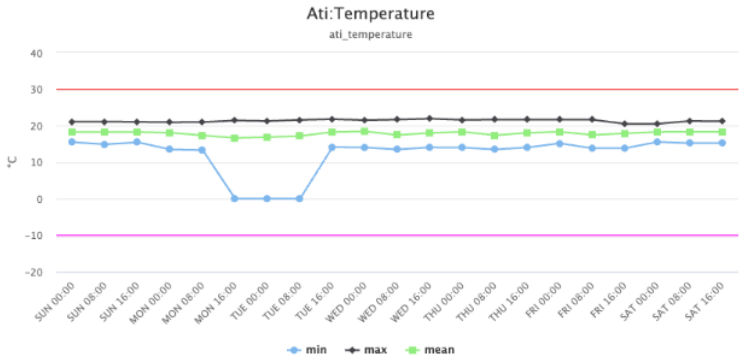
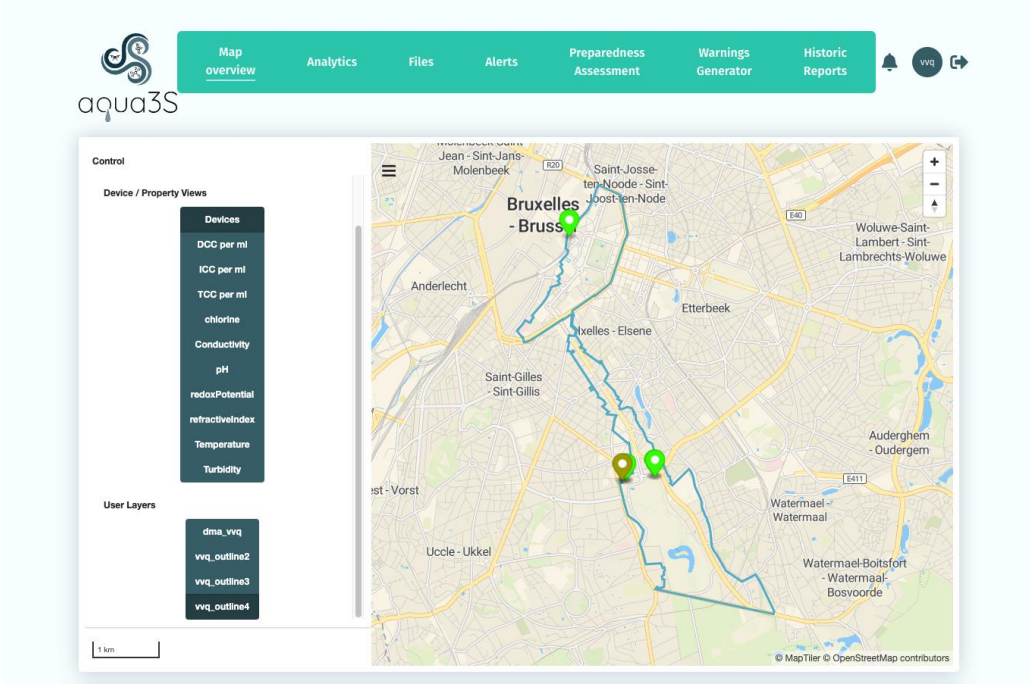


3 Key use cases

- Edge case creation
  - Chaos on-demand





Conclusions

- Synthetic data generation is incredibly useful
- Meaningful software reuse
- Configuration complexity / creeping scope

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Thank you

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