

SWAN Digital Twin H2O Workshop

KWR Watercycle Research Institute

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KWR Watercycle Research Institute

- Generate knowledge that enables the water sector to operate water-wisely
- Our scientific findings and the resulting practical innovations contribute, worldwide, to a sustainable urban watercycle.

Joint Research Programme



European collaborations and projects



Our Research

ENABLING TECHNOLOGIES



Innovative Water treatment
Future-proof networks
Hydrogenomics

HEALTH



Emerging contaminants
Microbial safety and hygiene

SUSTAINABLE WATER CYCLE



Sustainable use of resources
Water technologies for sustainable energy
Resource recovery
Climate change and the water sector

THINKING AHEAD



Hydroinformatics
Response strategies
Horizon scanning

Hydroinformatics and Digital Twins

Long history in simulation and modelling of water cycle components

- UWOT – source to tap scenario modelling of the complete urban water cycle for resilience stress testing
- Gondwana – optimization platform for drinking water distribution systems



Serious gaming – scenario studies and training

KWR Perspectives

Scenario studies

- In use and becoming ever more powerful

Anomaly detection

- Currently in limited use
- Integration of real-time data

Cyber-physical systems (and the new challenges in their design and protection)