digital-water.city
Leading urban water management to its digital future

H2020 innovation action | 5 M€ funding
Project start: June 2019 | Duration: 3.5 years

Dr. Hella Schwarzmüller
Kompetenzzentrum Wasser Berlin
DWC in few words

→ Leverage the potential of data and digital technologies

→ Boost the water management in 5 EU cities

→ Promote the value of the digital solutions for the tech providers

→ Achieve a new step in the integration of digital solutions in EU, in particular regarding cybersecurity, interoperability and governance

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digitalwater.eu
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5 cities

→ Large scale assessment of the **benefits provided** by the digital solutions

→ Lighthouse to raise awareness of other cities and accelerate market uptake

- #Paris
  - Bathing water

- #Berlin
  - Infrastructure performance and public involvement

- #Copenhagen
  - Flooding and environmental impacts

- #Milan
  - Safe water-reuse

- #Sofia
  - Infrastructure performance
Bathing water
01 e-coli sensors
02 EWS bathing water

Drinking water
07 App predictive maintenance

Sewer
08 8+9 Illicit connections
09 11 Flow modelling
10 14 CSO sensors
15 Sewer cleaning

WWTP
03 EWS for reuse
12 Integrated RTC
13 Visualization platform

Reuse
5.2 Drone water stress
5.3 Match-making

Public involvement
04 WebGIS
06 Serious game for nexus
10 AR for groundwater

15 solutions
Innovative monitoring of sewer illicit connections

Low costs CSO monitoring technology with T sensor

Advanced 48h sewer flow forecast
#Sewer monitoring

![Diagram showing sewer monitoring in dry and wet weather conditions.]

**Temperature sensor**

**OFFLINE CONFIGURATION**

- **Sensor A**
- **Sensor B**

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*Images and logos from various organizations and projects.*
# Real-time control of WWTPs

**DWC digital solution 11 - Sewer flow forecast toolbox**

Flow forecast with up to 48 hours forecast horizon based on the smart integration of:
- (1) real-time sewer flow data
- (2) open climate data
- (3) numerical weather model
- (4) hydrodynamic sewer model

**Input data:**
- Rain gauge data
- Ensemble forecast data:
  - Weather radar
  - NWP
- Discharge and water level data

**Output forecast data:**
- Probabilistic forecast (5%, 50%, 95%)
- Historical data
- Map of forecast results

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**Logos:**
- BIOFOS
- DHI

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Water reuse

- Remote monitoring of water stress
- Match making platform to support water allocation
Safe water reuse and matchmaking for agricultural irrigation

Real-time monitoring of *E. coli* and Enterocci
The water-energy-food-climate (WEFC) nexus is a systematic approach that focuses on synergies and trade-offs emerging in the interactions between water, energy, food and climate at bio-cyber-physical, socio-economic and governance level.
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