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Need help finding new leaks?

Sim-On Water is your digital assistant

Lucia Costa
Engineer, HR Wallingford

About me

Lucia Costa

Engineer at HR Wallingford

- Degree in Environmental Engineering University of Bologna, Italy
- At HR Wallingford since 2005
- Focus on water supply systems
- Modelling, support, training, consultancy, technical software development
- International experience

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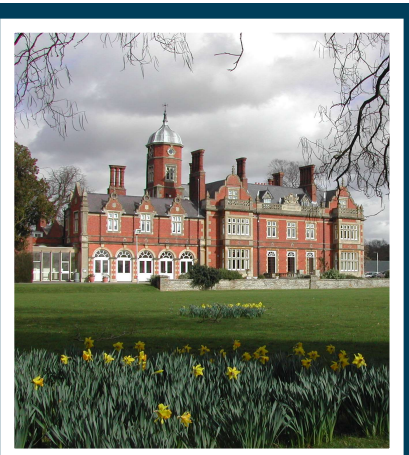
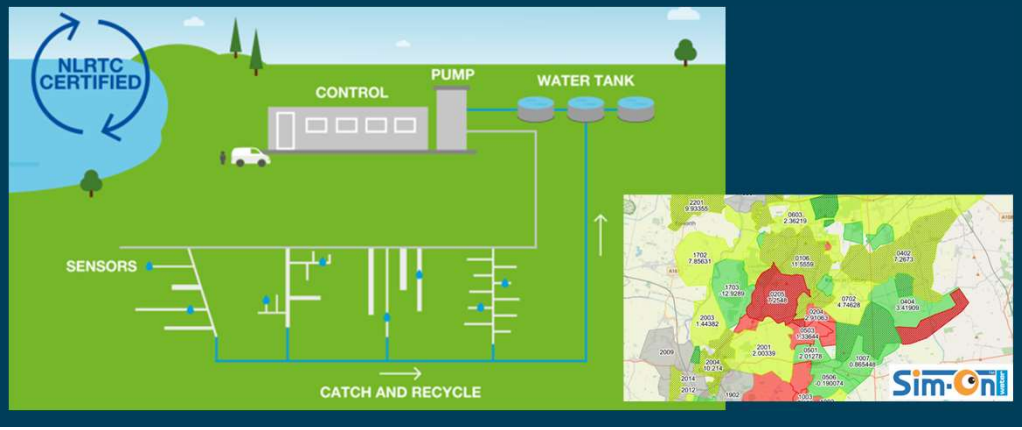
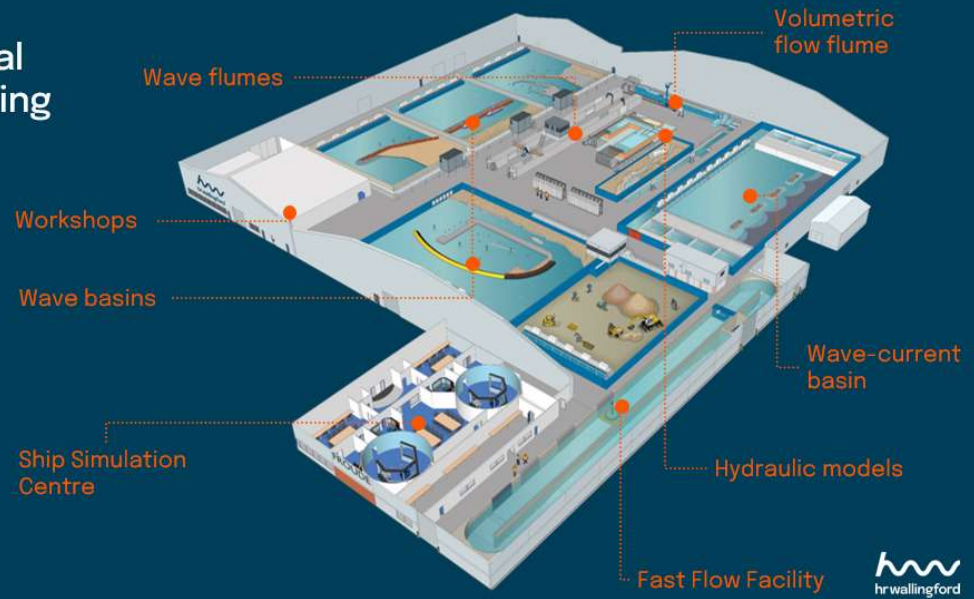
About HR Wallingford



NLRTC -
National Leakage Research
and Test Centre

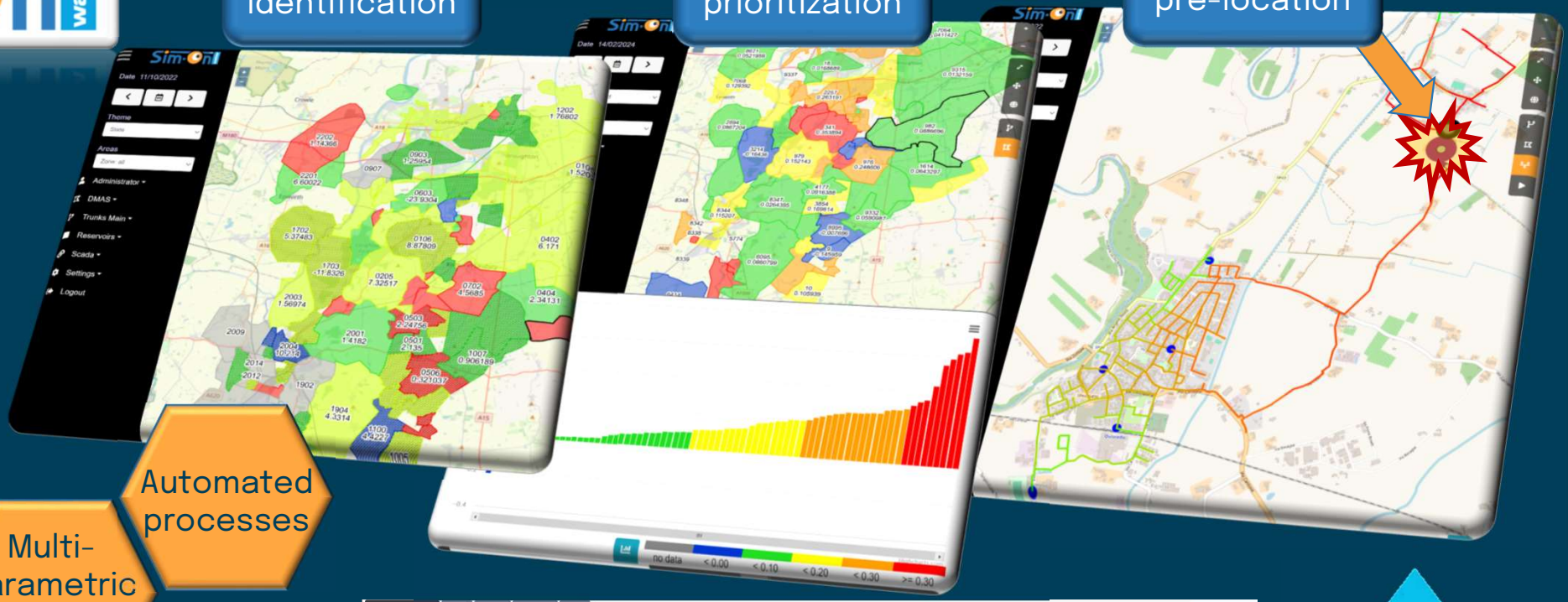


Physical modelling

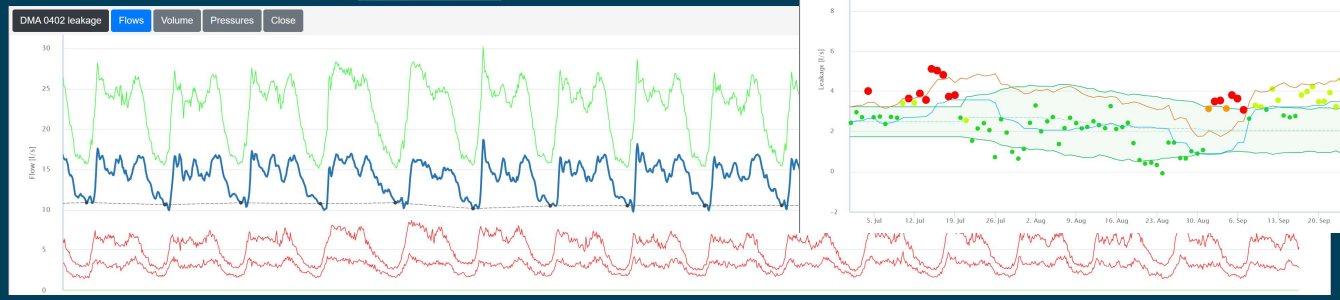


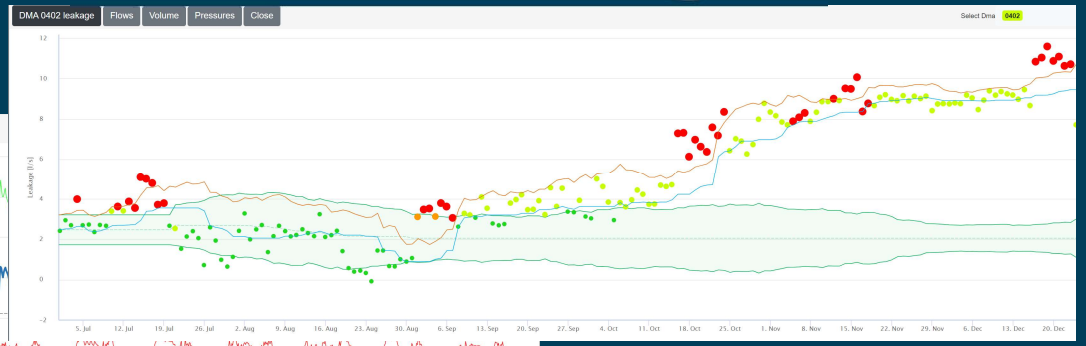
Sim-On water

Leakage identification → Leakage prioritization → Leakage pre-location



- Simple interface
- Tools for strategic analysis
- Multi-parametric algorithms
- Automated processes





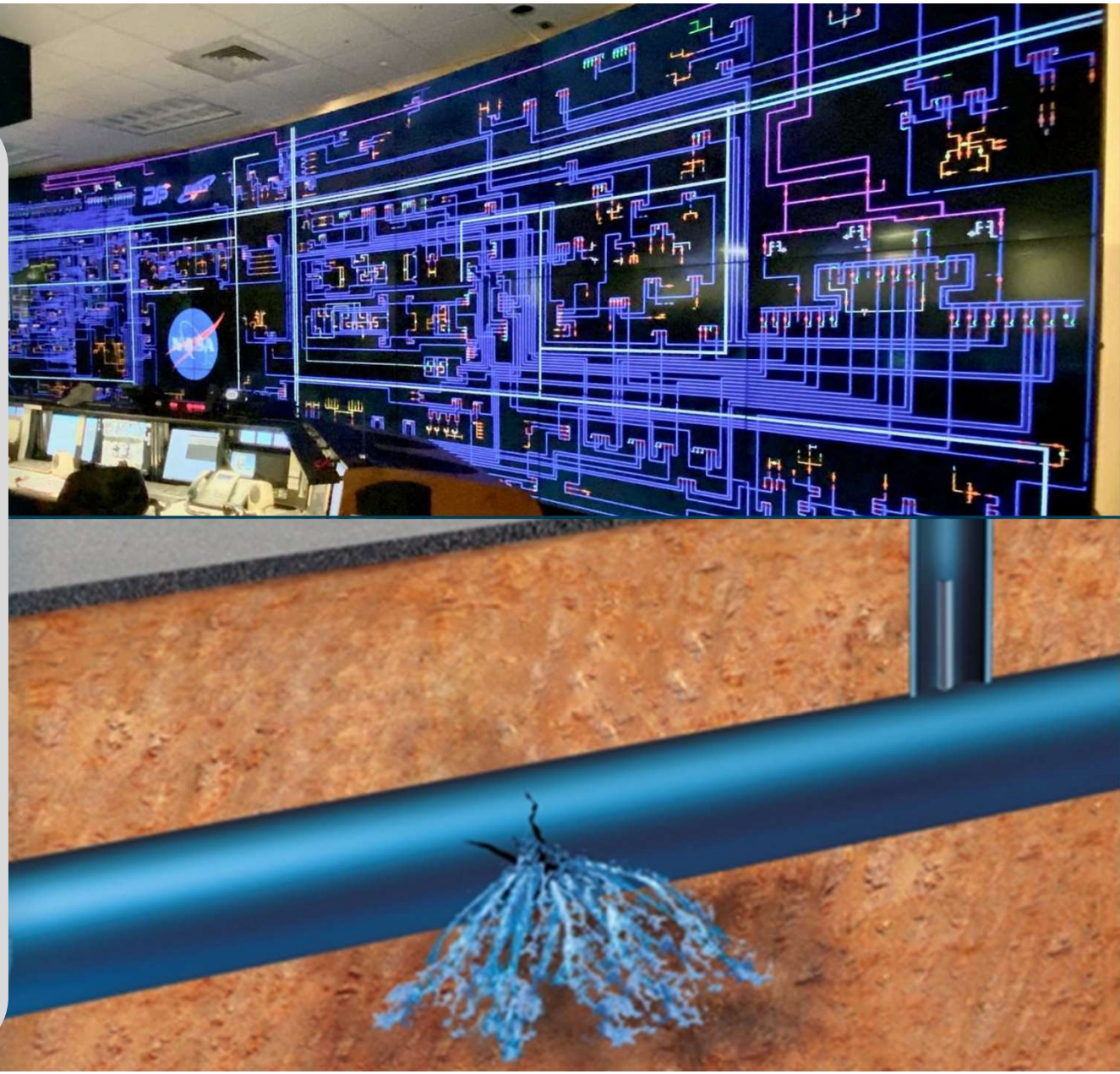
Less time
Less leakage
Less energy

Platform objectives

- Provide a permanent monitoring of piped systems
- Promptly identify potential new leaks
- Optimise intervention strategies
- Quantify maintenance effects
- Have an integrated overview of all flow data series

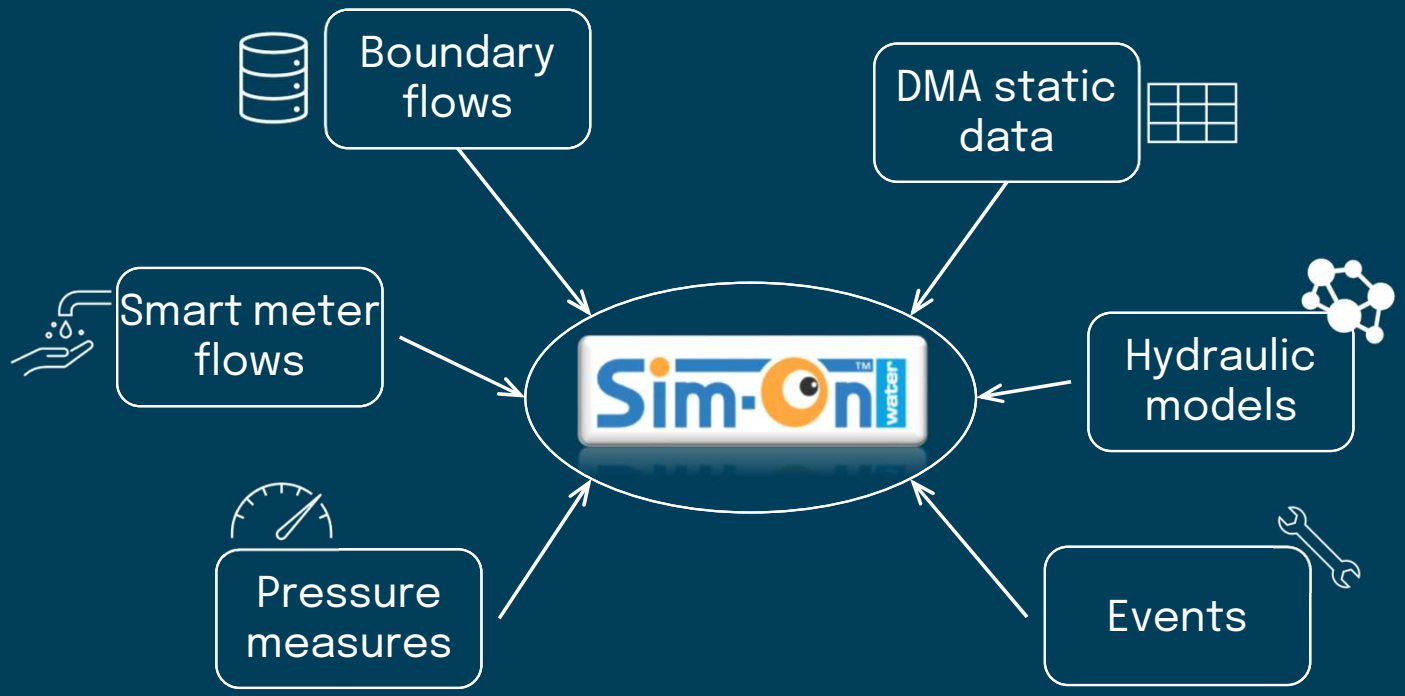
Main features

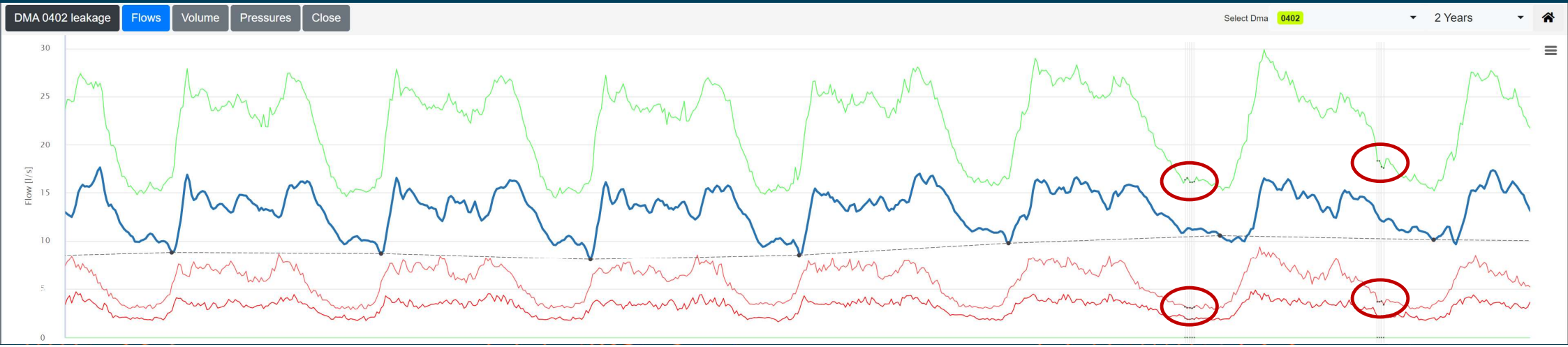
- Simple and intuitive interface
- Easy access web application
- Sophisticated multi-parametric algorithms
- Automated processes
- Real-time alerting system



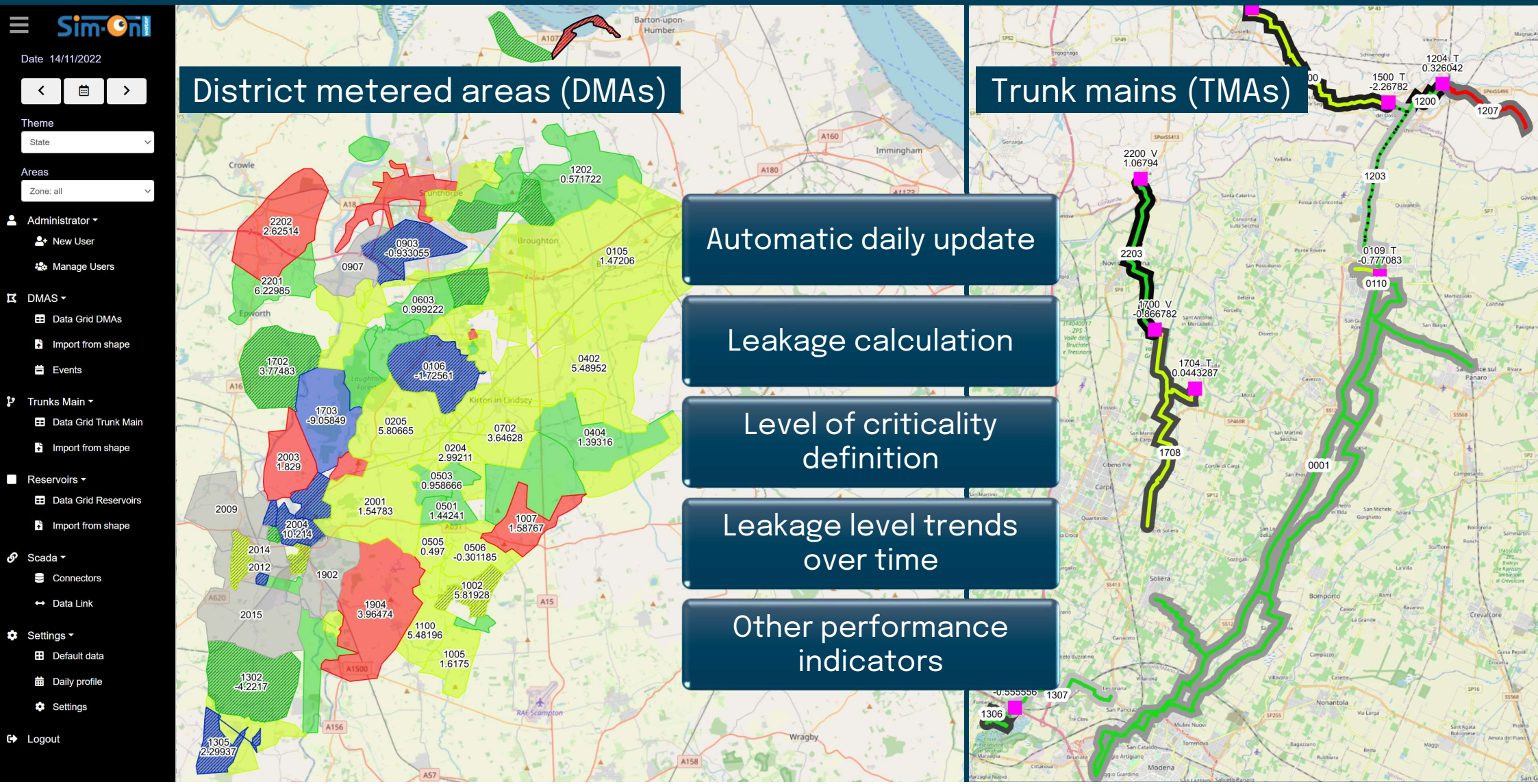
Data integration

- Databases in different formats
- Permanent connection with source databases
- Data continuity with infilling



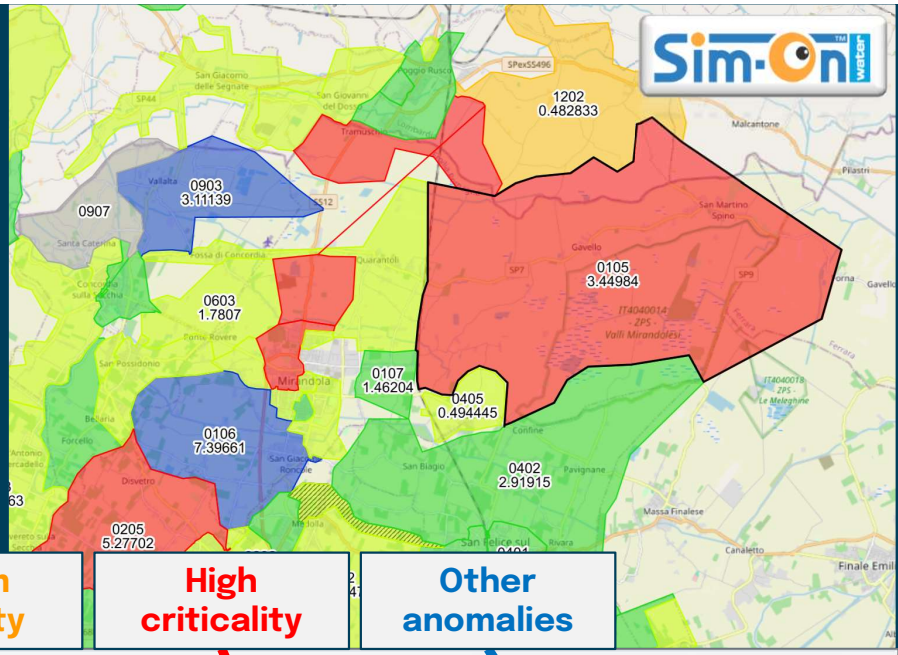


Status dashboard for DMAs and TMAs



Criticality alerts

- Daily calculation of flows and volumes
- Leakage calculation and statistical analyses
- Evaluation of potential criticalities



Short term analysis

Best performance analysis

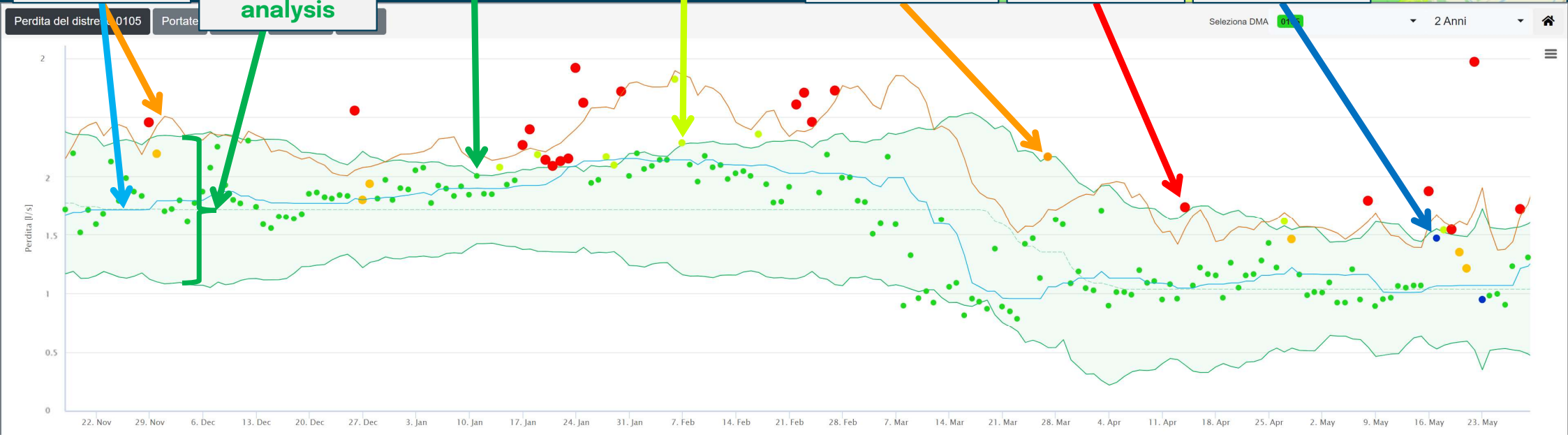
No warnings

Low criticality

Medium criticality

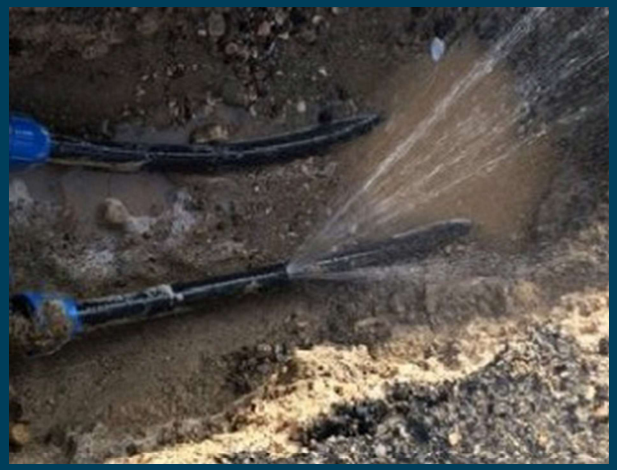
High criticality

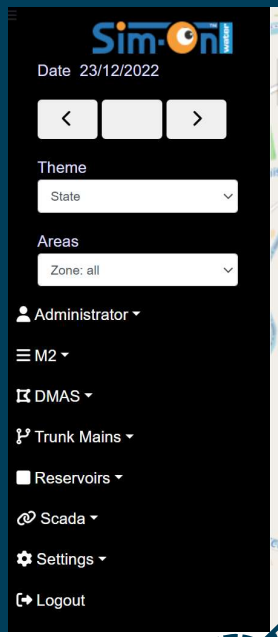
Other anomalies

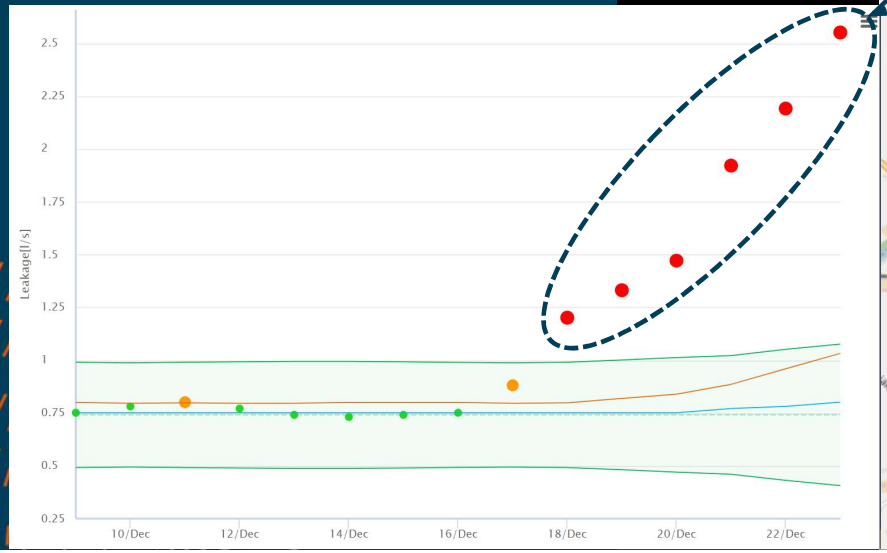


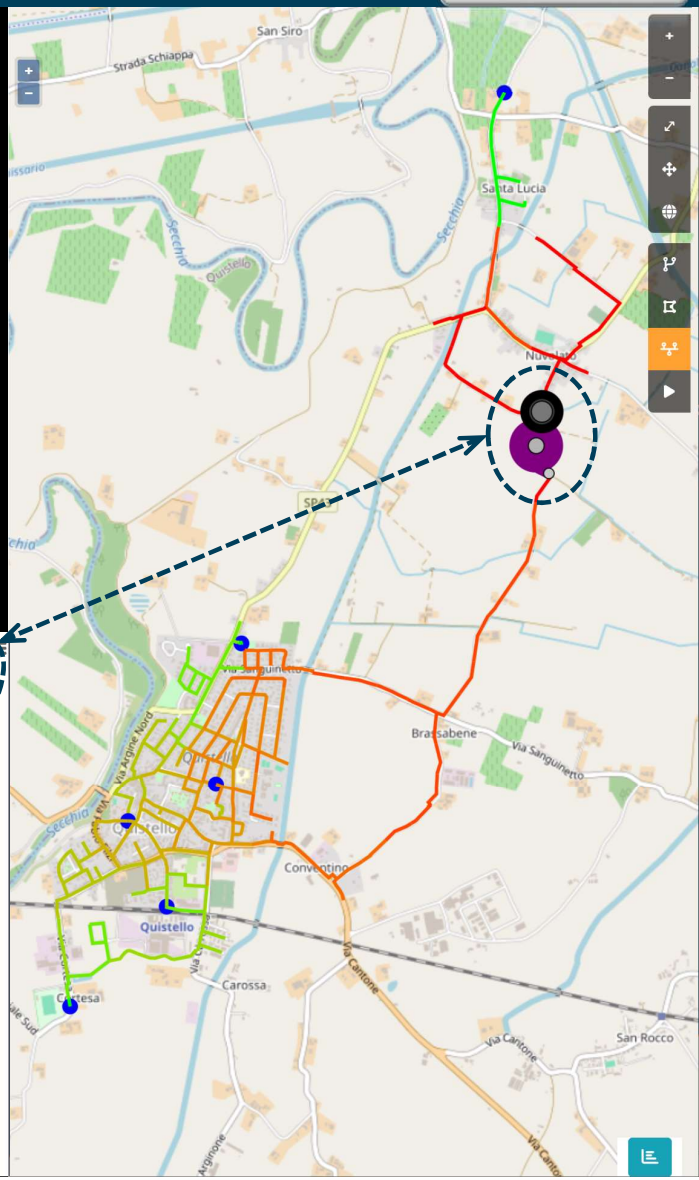
Leakage pre-location

- Automatically triggered processes
- Hydraulic modelling and iterative statistical calculations
- Reduced number of pressure sensors needed in the field
- Possibility to identify small leaks









Real case example

Metrics:

- Number of DMAs: 206
- Number of flow feeds: 388
- Smart meter integration with
  7181 households
  577 non-households

Modular costing scheme:

- Leakage calculation:
  number of flow feeds
- Leakage pre-location
- Smart meter integration

International application

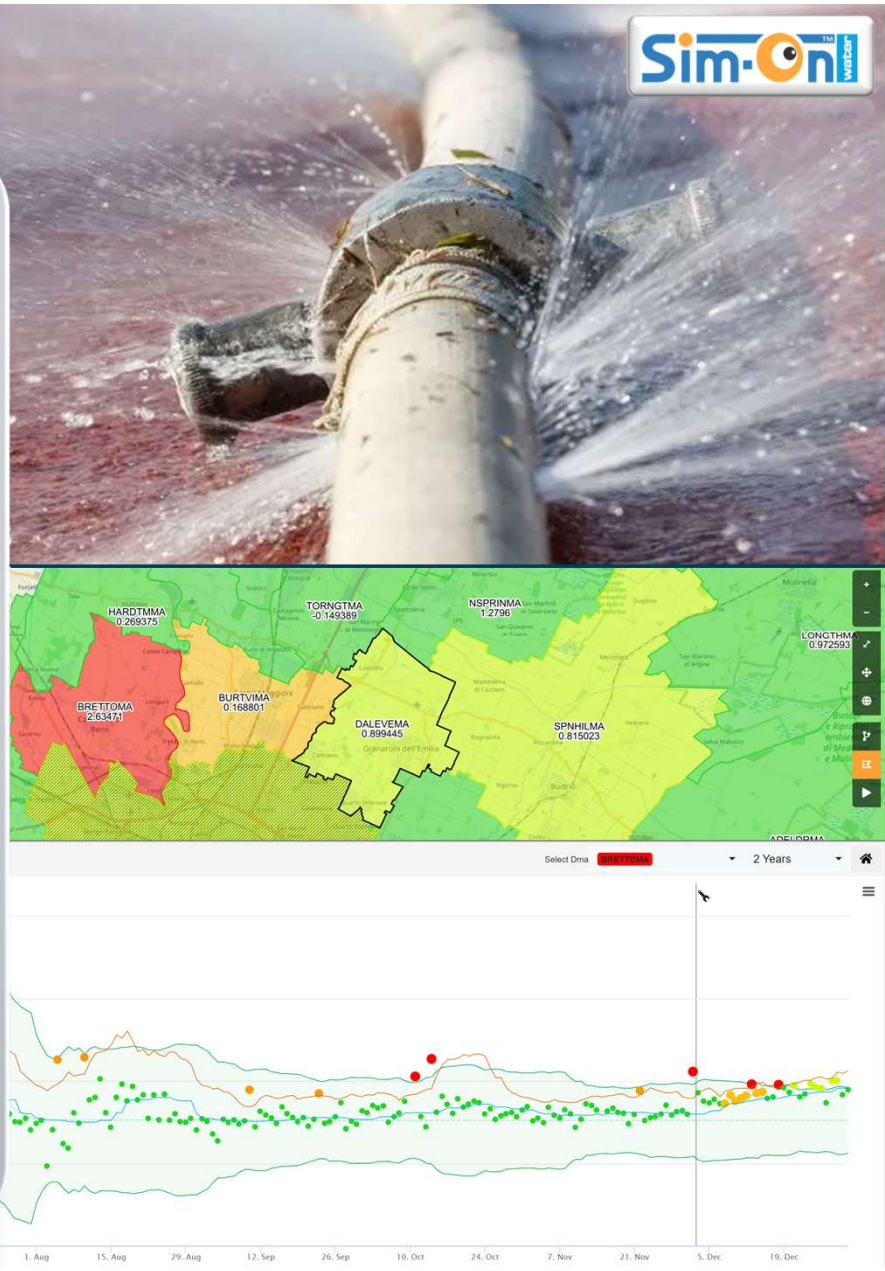
Sim-On Water in a nutshell

WHY

- Support decision tool for piped systems managers
- Optimise resources allocated to leakage repair
- Identify the impacts of maintenance

HOW

- Immediately applicable software tool
- Simple to install, configure, use and maintain



https://simondigitaltwin.com/sim-on-water

Thank you

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