

# Water Treatment Plant Optimisation



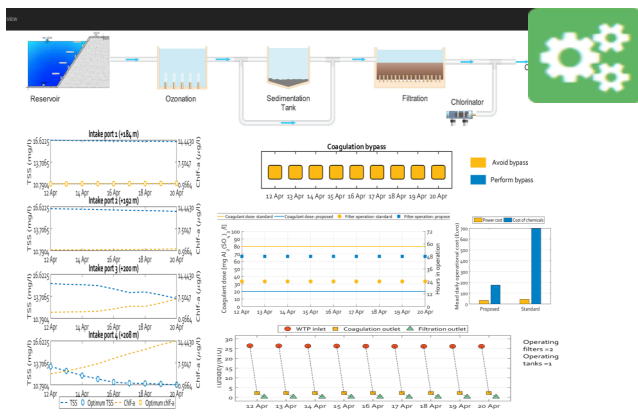
Water Utilities can directly benefit from SPACE-O Water Treatment Plant (WTP) emulator for achieving cost efficient operations, sustainable performance and at the same time ensure public health and safety issues.

## Applications

- Combined with on-line monitoring sensors SPACE-O emulator optimizes the energy - chemical nexus of critical treatment processes.
- Coupled with SPACE-O short to medium term forecasting service line for surface water quality, stimulates responsiveness and allows for micro-adjustments in chemical dosing.
- Using reservoir water flow and quality dynamics, identifies optimum abstraction depth for multiport intakes

## Benefits

- Improving efficiency:** Generates direct financial benefits by improving the energy- chemicals nexus of the plant. Ideal for handling sudden changes in raw water quality for prompt adjustment of chemical dosing.
- Enhancing productivity:** Boost operators' productivity providing remote access to web based advanced decision support tools.
- Generating reputational gains:** Establish consumers' confidence and improve customer's base.
- Exploiting the digital potential:** Based on data driven algorithms offers simplicity, robust performance and cost effectiveness for a wide range of processes compared to physical modelling approaches.
- Upgrading existing workflows:** Designed for smart integration with existing workflows and systems.



## Product Overview

SPACE-O Water Treatment Plant optimization tool relies upon a credible emulator of the system processes. This emulator is a series of machine-learning algorithms, which describe the performance of each treatment stage separately under varying raw water characteristics and operating scenarios. The optimization of the WTP operation is treated as a cost minimization problem subject to operational constraints and standards of effluent water quality.

Space Assisted Water Quality  
Forecasting Platform for  
Optimized Decision Making in  
Water Supply Services



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The SPACE-O Consortium



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