



CONSULTING FOR WASTEWATER SYSTEMS OPTIMISATION

BlueWatt offers extensive model-based engineering services for optimisation of wastewater treatment plants. Our team of domain and modelling experts provides a range of advanced solutions to improve equipment utilisation, reduce energy consumption by up to 40% and establish efficient and effective plant operation. We also provide economic assessment and optimisation of process and investment options.

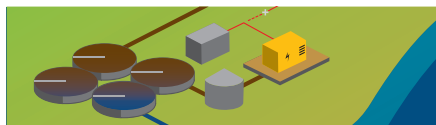
Consulting services

BlueWatt offers a range of consulting options and applications to help wastewater treatment plants to modernise and improve their current operation:

- Plant energy audit
- Plant investment optimisation
- Micropollutant process design
- Plant operation, upgrades and retro-fits
- Economic comparison of process options
- Expert support

All of our services are based on the application of Advanced Process Modelling technology to accelerate innovation, manage risk and support engineering and operating decisions.

WHAT WE DO



Plant audit

Initial scoping assessment and modelling of plant operations, water quality and power usage to determine potential for improvements.



Model construction and engineering

Development of plant-specific, validated models of wastewater treatment systems to simulate and optimise cost and release of contaminants. Identification of viable engineering solutions to reduce power consumption and improve design and operations.



Offline monitoring systems

Implementation of easy-to-use plant models with customised web-based interfaces and secure connections to aid on-plant decision making, monitor key process parameters and maintain a low energy consumption year-on-year.



Online monitoring systems

Implementation of online plant models, connected to real, live measurements for continuous monitoring and decision support. This option includes online auto-calibration and continuous optimisation of water quality and energy consumption.

- Reduce operating costs
- Reduce capital costs
- Reduce energy consumption
- Improve water quality
- Reduce environmental impact (CO₂ emissions...)
- Reduce initial investment
- Improve long-term planning



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CONSULTING SERVICES

Plant energy optimisation

Most wastewater treatment plants operate under sub-optimal conditions. There is often scope to significantly reduce power consumption and further optimise plant design and operation without compromising water purity standards.

Our model-based engineering services help you identify and evaluate what power saving and process optimisation options are available, and scope how you can realise them.

Micropollutant process design

Wastewater treatment plants are under increasing pressure to remove micropollutants from wastewater, using expensive and energy intensive membrane or ozone processes. We provide state-of-the-art technology based on EPFL research to simulate and optimise design and operation for micropollutant removal in existing and new plants, including energy usage optimisation.

Economic comparison of process options

Our wastewater systems optimisation services also include economic analyses of all the process options considered. The analyses consider optimal sizing of equipment and the related capital investment as well as the operating cost for each option considered.

Plant investment optimisation

Making the right plant investment decisions for the future is difficult without the right decision-making tools. Our advanced modelling services help wastewater plants plan their investments for the future by building long term scenarios (30-40 years), taking into account predicted changes in the surrounding population and the related development of sewer systems.

Plant operation, upgrades and retro-fits

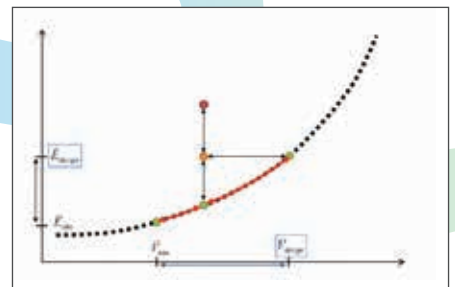
Wastewater treatment plants must be able to adapt quickly to changing weather conditions, population growth and new standards and regulations. Our services enable decision makers to evaluate their operation, construction and upgrade scenarios for a particular site and also to identify new superior options that may not have been considered.

Expert support

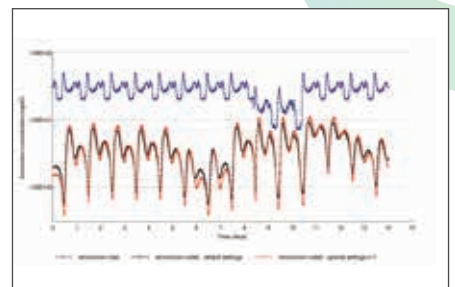
We offer extensive domain expert and modelling support services to all our clients to enable them to maintain, update and obtain the best possible results from their wastewater systems solutions.



Advanced Process Modelling for optimising wastewater systems



Optimise energy consumption



Make informed decisions



Improve water purity



Find out how BlueWatt can make your wastewater processes better at

bluewatt-eng.com

A member of the PSE group