To optimise operational efficiencies and energy costs
What will help you to reduce energy and chemical costs whilst ensuring security of supply?

Do you need an energy management system that delivers 10% cost savings?

Do you need a way to safely, reliably and proactively manage your water network?

Do you want an automated real-time SAAS solution that continuously updates and optimises?

Do you need to plan ahead and mitigate risks?

Then let OptiMISER take control.
The benefits of OptiMISER

OptiMISER is proven to reduce operating costs and improve security by continuously reviewing your network data, controlling pumps in the most efficient way and forecasting ahead with predictive modelling. OptiMISER helps you improve the service to your customers by:

- Reducing energy costs and achieving OPEX savings – typically 10% per annum
- Whole system optimisation with better reporting providing business insight
- Improving operational consistency, leading to a reduction in alarms
- Reducing manual control activity
- Giving prior warning of problems, better use of storage and outage handling
- Improvement in water quality
- Improving asset maintenance and data management

What does OptiMISER do?

OptiMISER helps you by automatically controlling pumps and valves in the network at the lowest cost, while maintaining the security of supply and ensuring that water quality targets and network constraints are met.

OptiMISER delivers these benefits by generating a holistic optimisation of the network based on a model which includes:

- Cost data
- Source yields
- Abstraction licences
- Nitrate blending
- Outages
- Pumping limits
- Pressure limitations
- Reservoir operating limits
- Turnover constraints
- Forecast demands

As water supply networks become more complex due to increased integration, degrading water quality and reduced abstraction licences you need a real-time system that you can trust to provide the optimal planning and control system for your network.

OptiMISER uses telemetry data to forecast demands throughout your network and determines the least-cost schedules, which satisfy operational constraints and targets then relays the pump and valve instructions back to a SCADA system for action.

How?

OptiMISER’s sophisticated decision-making algorithms use all available data to enable a safe, efficient and cost-effective operation in a similar way to how a sat-nav device calculates the most efficient route for a journey based on the data it is given. The application helps you to plan ahead to avoid future problems, manages low reservoirs and outages and continually updates to provide you with a real-time dashboard displaying the status of your network.

Within this complex set of constraints OptiMISER controls the timing and selection of pumps, the selection of sources and the selection of flow routes to minimise operating costs.

OptiMISER plans ahead to meet optimisation objectives providing a calmer and more consistent network operation with fewer reservoir alarms and water quality issues. It continuously forecasts network behaviour, warning of potential issues and reducing out-of-hours call-outs as a result of increased operator confidence. OptiMISER responds to potential problems by automatically shifting water around the network to maximise the use of storage and balance out deficits.

What makes OptiMISER different?

OptiMISER is a proven energy management solution that reduces costs. The customisable solution is embedded into a control room environment and operates in a closed-loop; re-optimising in real time and exporting pump and valve control instructions to your network’s telemetry system. This approach allows operators in the control room to simply monitor the current and predicted behaviour of the network in the knowledge that the system is being operated optimally. Open-loop mode is also supported, where pump and valve schedules can be implemented manually by operators (such as at major water treatment works). OptiMISER can also be adapted for use on wastewater systems and is compatible with Miser, our suite of decision support and planning assistance tools.
Servelec leads the water industry in the development of software to assist with business optimisation and asset planning. Our focus is on achieving business efficiency for our clients, through the practical application of Applied Systems Analysis techniques to big data challenges. We have provided consultancy support for over 30 years in the areas of operational optimisation, asset management, leakage strategy and demand analysis.

In particular, we provide:
- Data review and improvement
- Modelling Services
- Strategy advice
- Development of deterioration and consequence models
- Long term water resource and expenditure planning
- Leakage management strategy support and advice
- Demand analysis
- Other associated consultancy to support network management and event response
- Full support services

For further information on how we can help you please contact us on +44 (0) 1306 742772 or optimiser@servelec-technologies.com

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