

Meet OSCAR.™

THE FIRST NAME IN REAL TIME WASTEWATER PROCESS OPTIMIZATION.



SANITAIRE
a xylem brand

The background of the advertisement is a photograph of an industrial facility, possibly a water treatment plant, with a strong blue color cast. It shows complex piping, metal railings, and various mechanical components. In the lower half, two workers are visible, one in a blue uniform and another in a yellow high-visibility vest, both appearing to be in motion. A round analog clock is visible on the left side of the image.

OSCAR™

Xylem's leading
edge assistant
puts you in
control.



Monitoring and Controls Simplified

Through intuitive Graphic User Interface (GUI), combined with the transparency provided by real time monitoring, operators always know actual treatment process conditions. No more guessing – just ask OSCAR™ process performance optimizer. He equips operators with the tools they need to successfully and efficiently operate the WWTP, and he gives it to them now.

Hi, I'm
OSCAR.
I'm your
new
Process
Performance
Optimizer.

OSCAR™ process performance optimizer gives you real time wastewater process measurement and control to optimize your operations. Combining the monitoring capability of the most advanced probes and control systems for aeration and Solids Retention Time (SRT), OSCAR reduces energy consumption while stabilizing your treatment process and maintaining effluent quality. Developed with Xylem's extensive product, controls, and biological process expertise, OSCAR provides a comprehensive solution for your wastewater needs.

OSCAR can also assist you with your reporting needs. His reporting capabilities give you the tools you need to take your treatment analysis to the next level, spotting trends and allowing further optimization.



What can OSCAR do?

OSCAR's Real Time Information

Control and Optimization Start with Measurement. If you can't measure it, you can't control it, much less optimize it. That's why OSCAR™ process performance optimizer uses the most advanced Xylem brand sensors and probes, by WTW and YSI IQ SensorNet, for reliable monitoring. With OSCAR, all your monitoring and control requirements are integrated under the Xylem umbrella of quality.

Reliable REAL TIME monitoring of influent quality, basin conditions, and effluent quality give you the information you need, when you need it. For example:

- **Influent:** pH, Temperature, Conductivity, NH₄, TSS, COD, TOC, BOD
- **In Basin:** DO, Temperature, NH₄, NO₃, TSS, pH, ORP
- **Effluent:** NH₄, NO₃, pH, Conductivity, DO, Turbidity, COD, TOC, BOD.

Modular Design with Plug and Play Sensors. With up to 20 sensors per terminal, OSCAR's plug and play design allows you to change and expand your monitoring as your future requirements change. You are not stuck with yesterday's system. OSCAR provides you the flexibility to simplify the maintenance and control of your process today, and in the future.

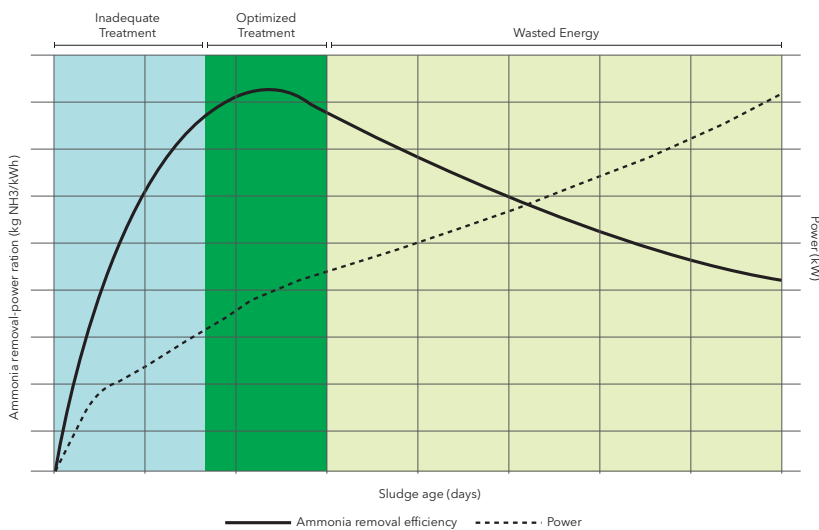


If you can't measure it, you can't control it. I can help with my advanced sensors and probes to provide reliable monitoring.





OSCAR Knows Healthy Biomass



Reduced Energy Consumption = Lower Life Cycle Costs

OSCAR Stabilizes Operations by Controlling Solids Retention Time (SRT)
Too long an SRT just wastes power. Too short, and you risk treatment quality.

Monitor

OSCAR monitors the MLSS in the aeration basin and TSS in the waste stream.

Control

Using Sludge Inventory Management System (SIMS) SRT controlling software, OSCAR adjusts the waste pumping rates to maintain the proper SRT for your effluent requirements.

Results

Consistent settling characteristics, energy optimization and reliable, high quality effluent.

OSCAR's Intelligent Control

Control Aeration, Mixing, and Biomass Wasting

Leveraging the aeration expertise plus the biological process control mastery of Sanitaire, OSCAR™ process performance optimizer continuously monitors process parameters in the influent, treatment zones and final effluent. He then stages and fine tunes blowers, pressure, air flow, and solids wasting to deliver the effluent quality required at substantial energy savings. At a WWTP in Sterno Sweden, a complete retrofit combined an energy efficient Sanitaire aeration system with OSCAR's controls and realized energy savings of 65%.

Biological Nitrogen Removal (BNR)

BNR is often controlled using DO levels alone, resulting in excessive energy consumption or inconsistent effluent quality or both. OSCAR uses a smart control algorithm, using both DO and NH4 levels to optimize aeration or anoxic conditions in the appropriate zones. With energy efficient equipment and intelligent control, energy savings for BNR processes of 10% is possible. By using new Ion Selective Electrode technology, which is lower cost and lower maintenance than old wet chemistry analyzers, BNR control is enhanced, putting control within the reach of even small WWTPs.

Precision Control of Aeration

Operating at a higher DO than is necessary to maintain a healthy biomass just wastes energy. OSCAR uses real time monitoring of DO in the basin to adjust aeration rates, minimizing energy consumption. He also ensures effluent quality meets discharge requirements by monitoring effluent parameters (BOD, NH4, DO).

OSCAR's Automated Reports

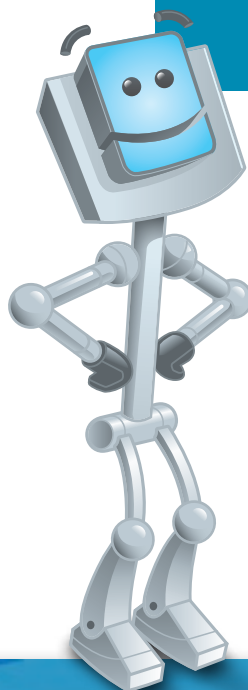
OSCAR assists in analysis. He converts operational data into accurate tables and graphs, freeing operators from data organization and equipping them for data analysis. You can quickly see how your process has been operating and spot trends, allowing for further optimization.

OSCAR quickly extracts data for customized reports to verify regulatory compliance.

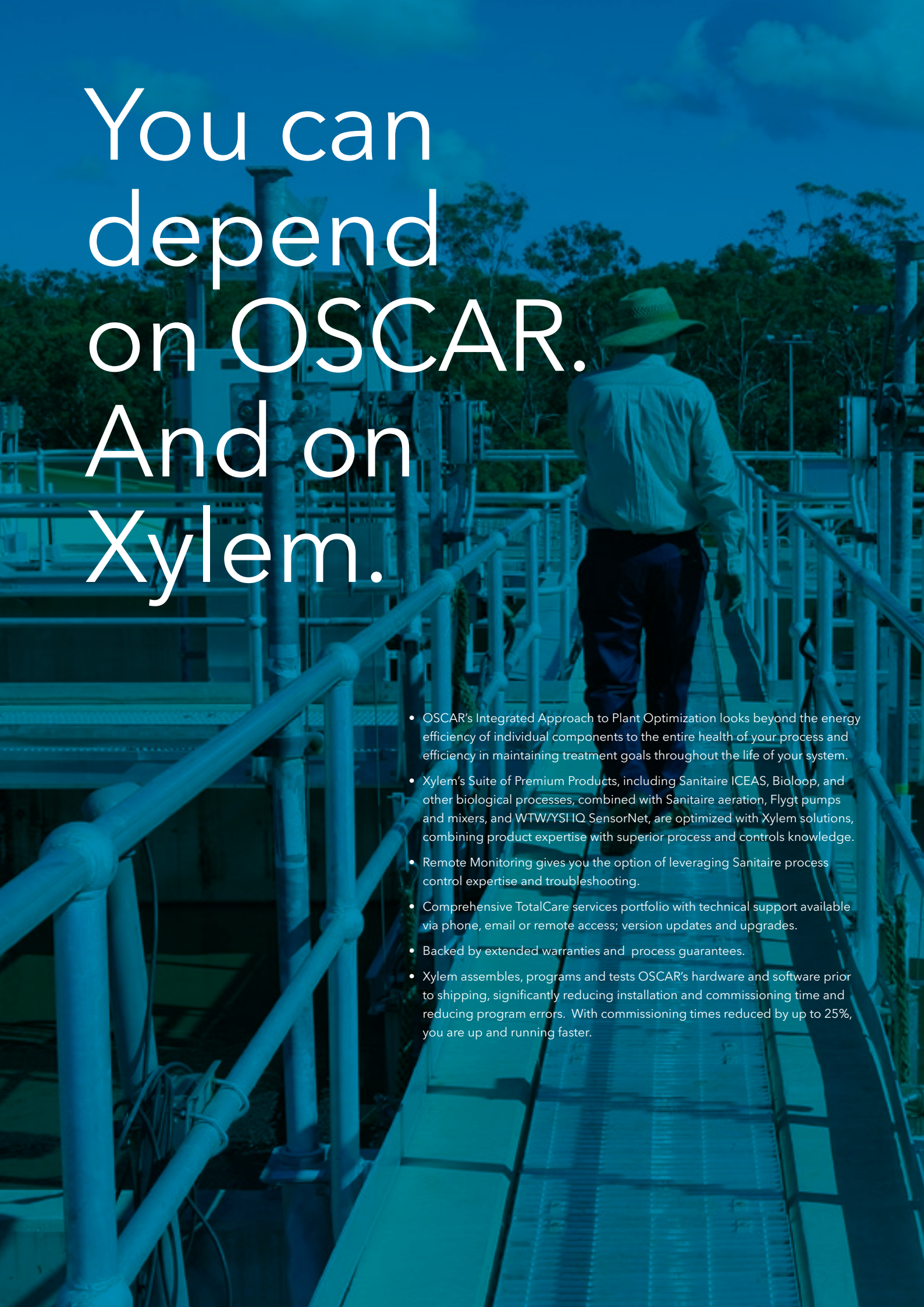
OSCAR loves reports but hates errors! OSCAR performs calculations from online process data, automatically generating tables, graphs and reports and minimizing errors.

OSCAR frees Operator Time from administrative duties, so they have more time for other tasks, including process evaluation. Some clients have reported time savings of 3 to 5 hours each week.

Not only do I optimize your operation, I help you analyze your process and streamline reporting.



Variable	Unit	Value	Unit	Value	Unit	Value	Unit	Value	Unit	Value	Unit
DO	mg/L	2.1	DO	mg/L	2.1	DO	mg/L	2.1	DO	mg/L	2.1
NH4	mg/L	0.5	NH4	mg/L	0.5	NH4	mg/L	0.5	NH4	mg/L	0.5
BOD	mg/L	1.2	BOD	mg/L	1.2	BOD	mg/L	1.2	BOD	mg/L	1.2
Flow	m³/h	100	Flow	m³/h	100	Flow	m³/h	100	Flow	m³/h	100



You can depend on OSCAR. And on Xylem.

- OSCAR's Integrated Approach to Plant Optimization looks beyond the energy efficiency of individual components to the entire health of your process and efficiency in maintaining treatment goals throughout the life of your system.
- Xylem's Suite of Premium Products, including Sanitaire ICEAS, Bioloop, and other biological processes, combined with Sanitaire aeration, Flygt pumps and mixers, and WTW/YSI IQ SensorNet, are optimized with Xylem solutions, combining product expertise with superior process and controls knowledge.
- Remote Monitoring gives you the option of leveraging Sanitaire process control expertise and troubleshooting.
- Comprehensive TotalCare services portfolio with technical support available via phone, email or remote access; version updates and upgrades.
- Backed by extended warranties and process guarantees.
- Xylem assembles, programs and tests OSCAR's hardware and software prior to shipping, significantly reducing installation and commissioning time and reducing program errors. With commissioning times reduced by up to 25%, you are up and running faster.

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're 12,000 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

For more information on how Xylem can help you, go to www.xylem.com