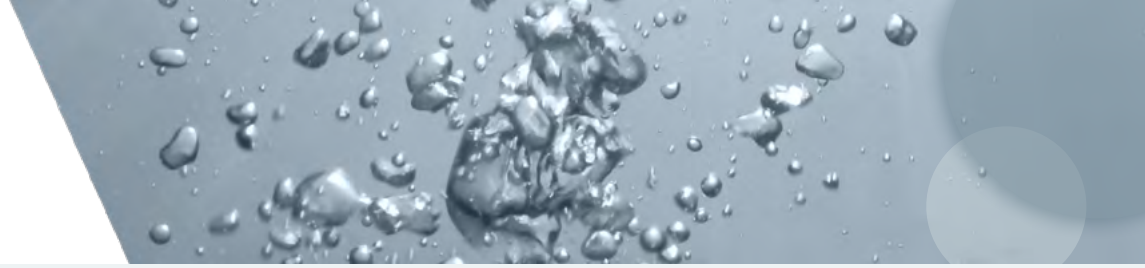

Proactively Protect Your System to Optimize Performance and Reduce Costs

Capitalize on cost-saving opportunities

Technical processes and equipment often benefit from periodic tune-ups or optimizations, even as early as one year after startup. Through the Aria CARE™ process optimization service, Aria Filtra® process engineers evaluate your processes, analyze your operating data, and test water quality to identify areas for improvement and optimization.

The insights we uncover could help you correct underlying issues, avoid premature asset aging, or discover opportunities to reduce costs. For example, some customers can safely delay cleanings or reduce chemical use to save money.

Improve process efficiency

As the manufacturer, we want to ensure your system and its modules meet the performance and reliability standards you expect from Aria Filtra. With more than 25 years of filtration experience, we know the strategies that can extend module life while ensuring your treatment requirements are met. If it's time to replace your modules, we will let you know that, too.

To help you run your plant more reliably and efficiently, we will evaluate key aspects of your filtration system and provide optimization recommendations across:

- **Controls:** Fine-tune system programming, leveraging adaptive controls that respond to changing process conditions.
- **Throughput:** Adjust the timing and flow rates of interdependent processes to maximize output.
- **Module life:** Recover fouled membranes, identify underlying causes, and design processes to reduce future damage.
- **Cleaning:** Evaluate your current cleaning recipe and test adjustments to composition, timing, and/or frequency.

What does the service entail?

Our process engineers and module experts review your processes, test your water quality, and provide a comprehensive report that outlines findings and recommendations.

Step 1

Review your data, including historical operating data logs and enhanced flux maintenance/clean-in-place recipe and recovery trends.

Step 2

Establish current versus ideal water quality state by analyzing a sample of your feed water using our in-house water quality lab.

Step 3

Based on water quality test results, **suggest updates** to cleaning recipe, frequency, setpoint change, or other recommendations.

Step 4

Deliver a plant performance report that summarizes recommended changes.

Step 5

Evaluate implemented changes during a six-month review.

The benefits of optimizing

- Mitigate energy or chemical cost increases
- Quickly address water quality changes
- Add capacity to meet water demand
- Prevent or treat module fouling
- Meet efficiency goals (e.g., recovery percent)
- Address aging infrastructure

Aria CARE services

Process optimization is just one of the many services offered by Aria Filtra, designed to provide convenient, reliable ways to ensure efficient system operation and minimize downtime.

SERVICE OFFERING	Years 0-3	Years 4-7	Years 8-10	Years 10+
Health check	✔	✔	✔	✔
Process optimizations				
Flux maintenance	✔	✔	✔	✔
Clean-in-place	✔	✔	✔	✔
Pretreatment process inspection	✔	✔	✔	✔
Module life analysis			✔	✔
Operator training	✔	✔	✔	✔
Module autopsy	✔	✔	✔	✔
Spare parts supply	✔	✔	✔	✔
Instruments and valves	✔	✔	✔	✔
Mechanical equipment			✔	
Controls upgrades				
Software	✔	✔	✔	✔
PC/SCADA upgrades		✔		✔
Solenoid manifold		✔		
PLC upgrades				✔
Network platform				✔
Plant renovation/ rehabilitation	As required. Reach out to your Aria Filtra experts for an evaluation. On average, rehabilitation is recommended every 10 to 15 years.			

Process optimization in action

For a water treatment facility in Maine, Aria CARE process engineers conducted a historical review of an Aria Filtra system and its water quality. The team assessed system performance using recycled water from the lagoon, which was returned to the wet well.

A second, shorter trial was performed a few months later, using water recycled from the lagoon, consisting solely of microfiltration (MF) backwash waste. The MF system performance was negatively impacted during both periods, using lagoon recycled water blended with raw water in the MF system wet well. The water quality analysis from the second trial indicated contaminants (iron, manganese, and total organic carbon) appeared to concentrate over time due to low removal efficiency in the lagoon's sand filtration system, with decant drawn from the underdrainage system.

Our experts recommended modifying the recycling process to improve the efficiency of contaminant removal. Better recycled water quality would improve the MF system's performance and reduce disinfection byproduct precursors in the finished water. Cleaning processes were also recommended to maximize system performance.

After implementing the cleaning process recommendations, the facility realized permeability gains of more than 60% with caustic and more than 25% with acid cleans. Over the last 15 years, the system has demonstrated resilience, maintaining membrane performance and operating successfully in a zero-liquid discharge facility.

Schedule your Aria Filtra process evaluation today

Email the Aria CARE team at
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Aria Filtra, a division of Trojan Technologies, is the filtration partner of choice for municipal and industrial customers that need reliable access to consistent, high-quality water. With more than two billion gallons of installed capacity spanning six continents, Aria Filtra has the process expertise, proven technology, and intelligent systems that customers trust to reliably tackle their most complex water treatment challenges. Featuring industry-leading durability, reliability, and ease of operations, our broad portfolio of solutions ensures mission-critical functions continue to work as needed, day in, day out, for years to come.

Because of technological developments related to the products, systems, and/or services described herein, the data and procedures are subject to change without notice. Please consult your local representative to verify that this information remains valid.

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