

## CLOSE THE PERFORMANCE GAP

# TRANSFORM YOUR WATER SYSTEM INTO A STRATEGIC ASSET

Check out the new benchmark for industrial water treatment and how Gradiant outperforms the status quo. Does your system stack up?

For leading manufacturers, water isn't just a utility — it's a strategic asset. Gradiant is enabling this shift by delivering bespoke water treatment solutions that continuously set new benchmarks in performance.

Our approach combines cutting-edge technology, advanced engineering, and customized chemistry to tackle your most complex water challenges. From ensuring ultrapure water for semiconductor fabrication to achieving zero liquid discharge in mining operations, Gradiant transforms water management into a source of competitive advantage.

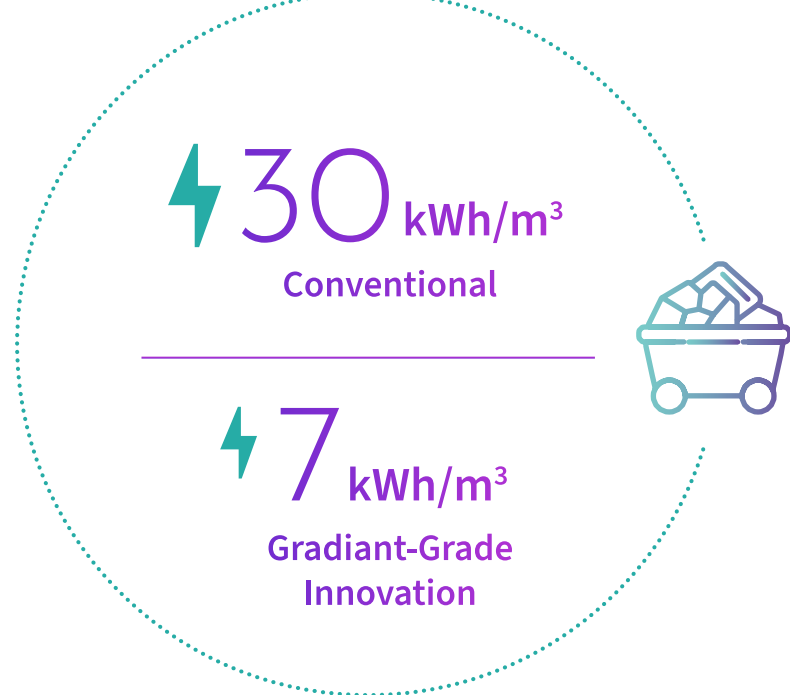
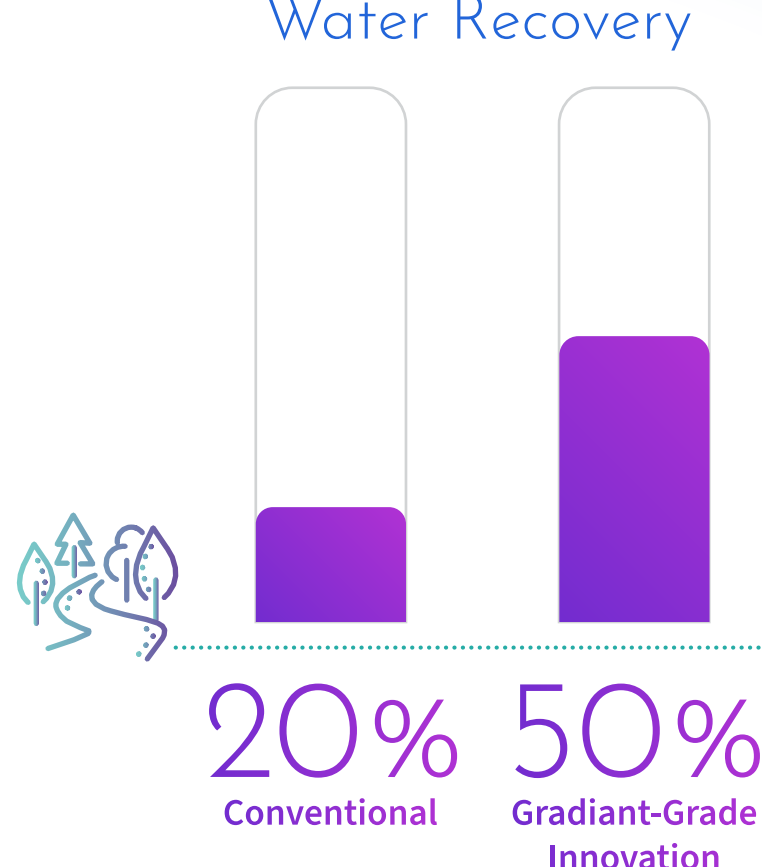
Not sure what this means for your unique setup? Here are six examples across various industries that illustrate how Gradiant-grade solutions compare to conventional options.

## Minimizing Brine and Maximizing Reuse in Advanced Desalination

Desalination plants require major capital investment, especially in the intake structure and permitting. Expanding capacity often means costly and disruptive upgrades before the plant can produce more water for distribution.

Gradiant offers a smarter alternative with counter-flow reverse osmosis (CFRO). By recovering more from the SWRO brine stream, plants can boost output without this costly scope. This opens up additional capacity, lowers capital and operating expenses, and maximizes the capacity of existing assets.

Gradiant made it possible for SAWACO to recover 150% more water from their desalination process — enough to supply half of Boston's drinking water needs. Thanks to a better desalination process, they reclaim more than 1,176,000 liters per day.



## Redefining Process Efficiency and Resource Recovery in Mining Operations

Mining operations require water treatment systems built for extreme conditions — from highly saline brines to heavy metals to variable flow rates — all while meeting strict sustainability targets. Traditional systems often force a trade-off between performance and environmental responsibility. Gradiant delivers both.

Our advanced technologies are engineered to eliminate harmful discharge, reduce energy consumption, and perform reliably in remote, off-grid, and/or high-volume conditions.

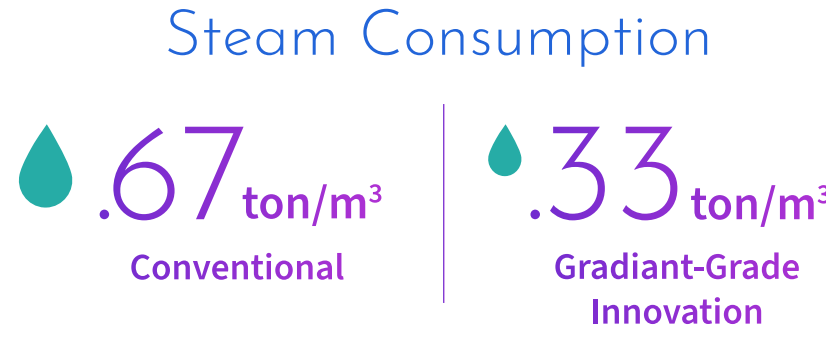
In one case, a mining client needed a more efficient way to remove nickel and cobalt from their waste stream. Our solution provided 4x better energy consumption over conventional approaches, while slashing CAPEX in half and reclaiming valuable metals.

## Pharma Solutions Built for Compliance, Optimized for Sustainability

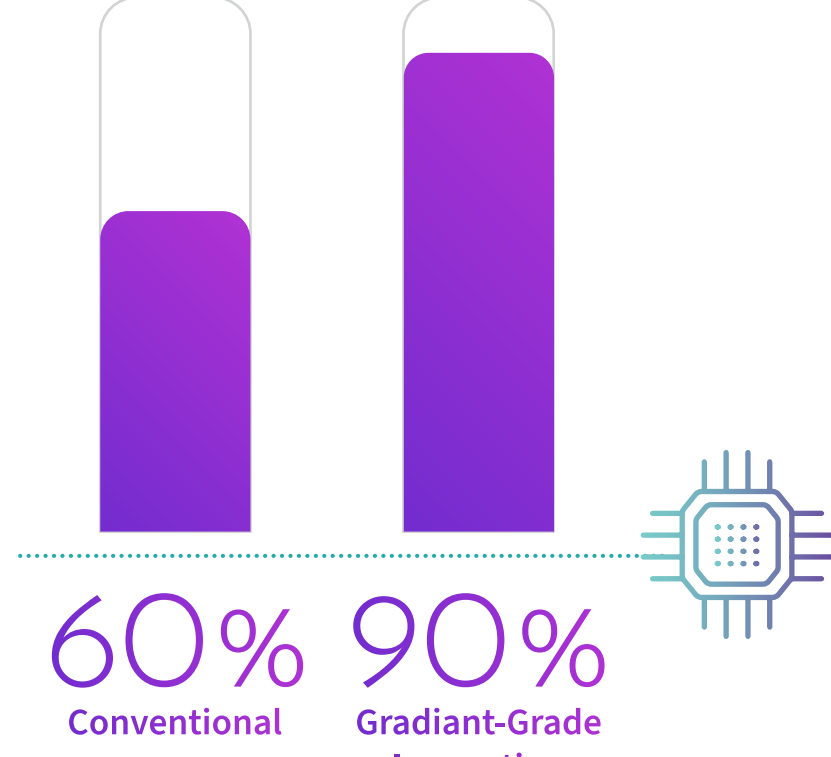
Precision matters in pharmaceutical manufacturing — from ultrapure water to core processes to wastewater treatment. Stringent requirements demand reliable, validated solutions that not only deliver consistent results, but also meet challenging sustainability goals surrounding energy use in the process. Gradiant delivers innovative solutions that are engineered to handle APIs, organic contaminants, and other toxic compounds at the lowest energy and operational costs.

With custom-engineered solutions and technologies like Carrier Gas Extraction, we help pharmaceutical leaders cut lifetime costs, meet compliance requirements, and move towards a net-zero environmental impact - all without sacrificing performance or reliability.

Gradiant helped GSK improve zero liquid discharge (ZLD) performance to save 53% in energy each year — enough to power the Yankee Stadium for more than a year!



## Water Recovery



## Multi-Component Solution for Complex Water Challenges in Semiconductor Manufacturing

Water plays a central role in semiconductor production, where precision and purity directly impact performance. Yet most conventional treatment systems aren't built to recover water at the scale or quality this industry demands.

Gradiant's advanced treatment technologies are engineered to meet the purity, volume, and reliability demands of fabs. Our solutions are built to handle high TDS, fluoride, metals, and other contaminants — maintaining quality and reliability in your critical water systems.

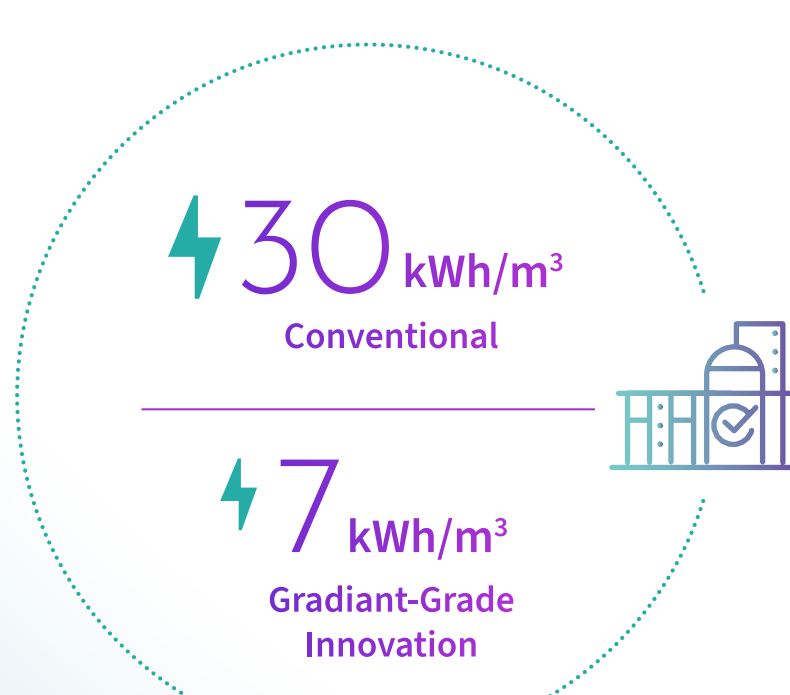
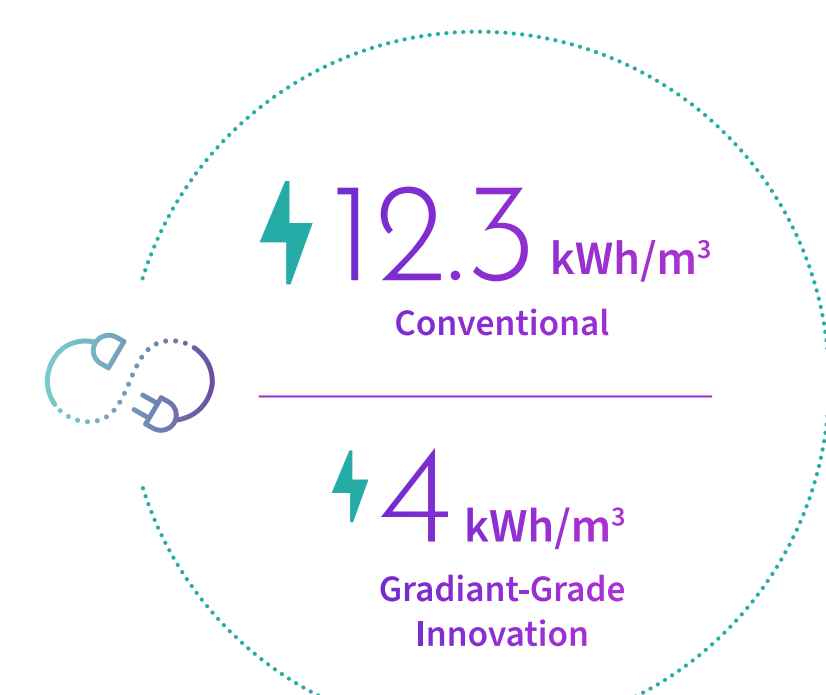
When a global leader in semiconductor memory and storage needed a better scrubber reclaim process, we outperformed the competition to help them recover 50% more water. Our solution combined multiple treatment technologies, powered by SmartOps AI, to deliver reliable performance in a high-risk process prone to fouling and failure. The 2,880,000 liters this client now saves per day is equivalent to the amount of drinking water Seattle consumes.

## Breakthrough Solution for Catalyst Production

Catalyst production demands precise, energy-intensive water treatment to manage complex chemistries and meet strict environmental standards. Conventional systems often waste energy and space — a costly burden for plants constantly balancing production flexibility and capacity limits.

For one catalyst manufacturer, Gradiant delivered a compact, high-efficiency CFRO solution that slashed energy use while boosting performance.

This solution helped them cut their footprint in half, using 1/3 the energy, and producing 2x the output.



## Reduced Energy Consumption for Zero Liquid Discharge

Chemical manufacturers face a perfect storm of challenges: high water demand, complex wastewater from dyes and chemicals, as well as mounting sustainability pressures. Gradiant's advanced treatment solutions are built for this reality — engineered to recover and reuse water at a scale conventional systems can't match.

With award-winning technologies and whole-system expertise, we help chemical manufacturers reduce freshwater dependency, meet discharge regulations, and transform water from a cost to a source of long-term value.

For example, Gradiant-grade innovation helped Archroma save nearly 8 million kWh of energy per year — 4x better than conventional ZLD solutions.



## What Is Your Water Treatment System Costing You in Performance?

Use this helpful checklist to benchmark your system against high-performing operations.

- ☐ Are your current systems achieving promised performance levels — or are you looking for improvements?
- ☐ Have your recovery rates, energy use, reliability, and operational costs improved in measurable ways year over year?
- ☐ Have you recently evaluated the economics for improved freshwater consumption, water reuse, resource recovery, MLD, or ZLD?
- ☐ Are you leveraging the latest technologies in water management?
- ☐ Do your systems have built-in intelligence to predict and adapt to operational challenges in real time?
- ☐ Can your current solutions scale or flex with your evolving needs — like changes in water sources, capacity increases, or tighter regulations?
- ☐ How long does it take to implement changes or troubleshoot critical issues?
- ☐ Are you still relying on manual service visits for issues that could be solved remotely with better digital tools?
- ☐ Can your partner support multi-site operations or specialty needs across regions?
- ☐ Are they solving problems holistically — or just applying "quick fixes"?
- ☐ How often do your current suppliers bring new ideas to the table before you ask for them?
- ☐ Do you have full visibility into system performance and chemical consumption — anytime, in real time?
- ☐ Are you using data to continuously improve your process — or just to react when things go wrong?
- ☐ Does your current provider help you forecast, model, and plan for future water needs using data and AI?
- ☐ Can your provider demonstrate how their solutions help you meet ESG goals — not just compliance?
- ☐ Are you confident your systems are future-proofed against changing discharge regulations?
- ☐ Are you getting substantial, quantifiable, long-term value?
- ☐ Do you feel confident that your current provider is helping you reduce total cost of ownership across your water systems?
- ☐ Is your provider enabling your growth — or bringing you standard offerings?
- ☐ If you had to scale your operations tomorrow, would your current provider be ready for whatever challenge you gave them?

Let's Talk About How the Gradiant Difference Can Turn Your Water System into a Strategic Advantage

Are you ready to experience the Gradiant difference? We'll start with a blank slate and rethink what an ideal system would look like for your operation. Talk to one of our experts today.

CONTACT US