

# Water & Chemicals Management

Revolutionary AI-enabled optimization transforming water and chemical management across the entire Oil & Gas value chain.



# Water: Energy's Hidden Challenge

## The Critical Challenge

Water is essential across the entire energy lifecycle, from production to refining. Yet it remains one of the highest sources of operational cost, chemical consumption, and ESG risk in the industry today.



### Overdosing Problems

Manual dosing leads to chemical waste, unnecessary emissions, and increased operational costs that impact both profitability and environmental compliance.



### Underdosing Consequences

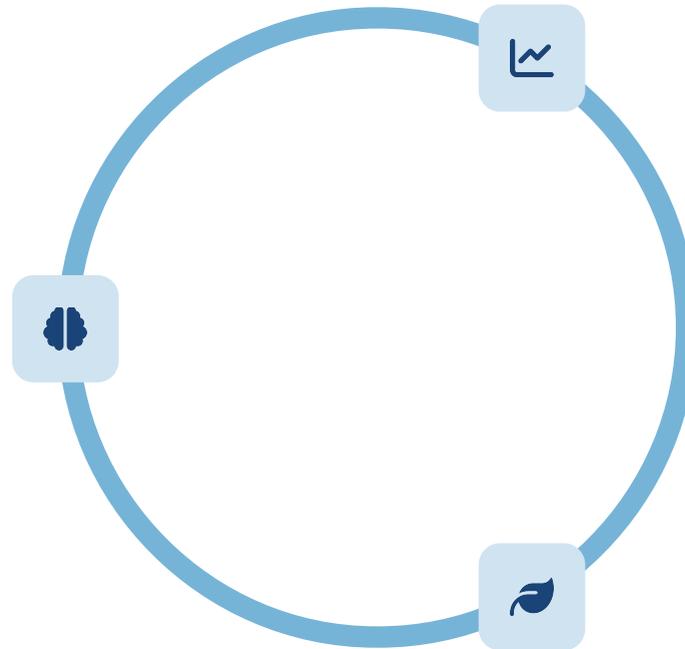
Insufficient chemical treatment triggers scaling, corrosion, and costly downtime that disrupts operations and reduces equipment lifespan significantly.



# Optvance AI: Intelligent Solution

## Real-Time Intelligence

Our AI continuously learns from process data, analyzing patterns and predicting system behavior to optimize chemical dosing automatically for maximum efficiency and minimal waste.



## Predictive Optimization

Advanced algorithms predict equipment behavior and adjust chemical treatments proactively, preventing issues before they occur while maintaining optimal operational performance.

## Sustainable Balance

Achieves the perfect balance between operational performance and environmental responsibility, transforming manual reactive processes into intelligent sustainable operations.

# Connected Intelligence: Wellhead to Refinery

## Upstream Operations

Optimizes demulsifier, scale, and corrosion control for efficient water separation and improved produced water quality.



## Midstream Processing

Maintains chemical stability in water treatment and reinjection systems while preventing fouling and improving reliability.



## Downstream Refining

Optimizes catalysts and additives for cleaner refining processes, better heat recovery, and significantly lower emissions.



## One Ecosystem

Unified intelligence platform driving performance and sustainability improvements across every stage of energy operations.

# Measurable Impact: Transforming Performance

## Cost Efficiency

Transform water management from a cost center into a competitive advantage through optimization.

- Reduced chemical consumption and operational waste significantly.
- Lower maintenance costs through predictive optimization.
- Enhanced equipment reliability and extended lifespan.

## Environmental Impact

Achieve sustainability goals while maintaining operational excellence and regulatory compliance.

- Cleaner discharge and dramatically improved water quality.
- Reduced carbon footprint and energy consumption.
- Enhanced ESG performance and regulatory compliance.

## Operational Excellence

Intelligent automation that transforms reactive maintenance into proactive optimization strategies.

- Real-time monitoring and automated chemical dosing.
- Predictive maintenance and reduced unexpected downtime.
- Consistent performance across all operational conditions.

# **Intelligence that drives sustainability. Performance that powers the future.**

## **— Optvance: Transforming Energy Operations**

**With AI-driven chemical optimization, Optvance transforms water management from a cost center into a sustainability advantage. Empowering energy operators to achieve smarter, cleaner, and more efficient performance at scale across the entire energy value chain.**

