FROST & SULLIVAN

WATER NEXT SOLUTIONS RECEIVES THE 2023 COMPETITIVE STRATEGY LEADERSHIP AWARD

Identified as best in class in the global zero liquid discharge solutions industry

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. WaterNext Solutions excels in many of the criteria in the zero liquid discharge solutions space.

A Market Snapshot

Globally escalating water scarcity issues, stringent wastewater discharge regulations, and changing attitudes towards circularity drive the industrial sector's uptake of innovative water recovery and recycling systems. Within this context, industries show increasing interest in zero liquid discharge (ZLD) solutions as highly efficient water recovery alternatives to conventional wastewater treatment systems. ZLD systems use multiple advanced treatment processes to maximize water usage efficiency and eliminate toxic liquid waste while recovering most of an industry's process water for reuse, even from complex wastewater streams. As a result, the popularity of ZLD systems as the optimal industrial wastewater recovery solution is rising.

However, despite the high resource recovery potential and minimal environmental impact, several factors continue to hinder ZLD solutions' widespread adoption. Primarily based on evaporation, conventional ZLD systems are extremely energy-intensive and considerably more expensive than traditional wastewater treatment processes. For instance, employing a 3.8 cubic meter per minute evaporator and crystallizer system to increase a large industrial facility's liquid waste stream recovery from 80% (via a traditional wastewater treatment system) to 100% doubles the overall treatment costs.[1] Consequently, industrial customers hesitate to implement wastewater recovery systems, limiting their treatment activities to water recycling and reuse.

[1] Growth Opportunities in the Global Zero Liquid Discharge (ZLD) Systems Market, Forecast to 2024 (Frost & Sullivan, September 2023).

Within this context, solution providers must adopt innovative approaches, offer customized ZLD packages, and deploy intelligent technologies (e.g., artificial intelligence and the Internet of Things) to automate process operations, monitoring, and control, thereby improving energy efficiency, enhancing process efficacy, and decreasing overall costs. These measures will prove crucial for companies to succeed in the rapidly evolving industrial wastewater treatment space. Frost & Sullivan's research indicates that WaterNext Solutions (WaterNext) is a torchbearer in this regard.

WaterNext: Specialists Pioneering Sustainable ZLD Solutions

Founded in 2015 and headquartered in Italy, WaterNext is a solution provider specializing in employing biological systems for the sustainable treatment of industrial wastewater streams. The company leverages 100+ years of combined experience in industrial wastewater management across various sectors (e.g., textile, , steel, landfill, electronics and special waste effluent) to work towards its long-term aim of "putting the highest level of world-class technology at the service of the environmental challenges for a sustainable future."[2]WaterNext designs and implements wastewater treatment plants that help its industrial customers reach their sustainability goals, ensure compliance with local government standards, and achieve Zero Discharge for Hazardous Chemicals program-related targets. With offices in Italy, India and Mexico, the company has developed and executed over 3,000 plants in 30 countries, more than 100 of which are industrial wastewater recovery systems.

> *"Unlike contemporary ZLD solution providers, WaterNext implements a completely biological process. To this end, the company's innovative design and technology purifies wastewater by converting discharged pollutants into energy for bacterial activities through biological oxidation without using chemicals and generating toxic waste."*
>
> ***- Julieta Paez***
> ***Research Analyst***

WaterNext builds on its extensive hands-on experience and dedicated focus on treating complex industrial effluents to differentiate itself from prominent global solution providers that prioritize the utility sector. Similarly, smaller regional players implementing the textbook approach to wastewater treatment (heavily based on chemical treatment) lack the necessary know-how to deliver systems that holistically address the entire wastewater management cycle. WaterNext outperforms these local competitors with its rich expertise across each treatment cycle stage (i.e., plant design, execution, and post-operation) and technology (such as primary treatment, secondary treatment, reverse osmosis [RO], etc.), enabling it to address customers' unique challenges across various industrial segments.

Unlike contemporary ZLD solution providers, WaterNext implements a completely biological process. To this end, the company's innovative design and technology purifies wastewater by converting discharged pollutants into energy for bacterial activities through biological oxidation without using chemicals and generating toxic waste. WaterNext follows this biological treatment with various solutions, including filtration (micro, ultra, and nano), membrane bioreactor (MBR) systems, multi-stage RO, and multi-effect evaporator, as required to ensure maximum water recovery (up to 98%). As a result, the company facilitates sustainable water reuse, helping its industrial customers achieve a true zero discharge.

[2] https://www.waternext.it/about-us/, accessed November 2023.

Moreover, WaterNext's biological approach enables it to substantially reduce operational expenses (OpEx) by eliminating (or significantly reducing) the need for expensive chemicals and energy-intensive treatment processes. The company reduces OpEx by at least three times compared to a chemical-based plant of the same size. Moreover, WaterNext designs its plants for easy operation and maintenance by minimizing the number of steps in the water recovery cycle, pioneering the use of MBR systems to combine up to five filtration steps into a single process. Additionally, the company builds automation and remote monitoring capabilities into its ZLD systems to run plants of any capacity with minimal manual intervention. As a result, WaterNext's ZLD solutions are environmentally and economically sustainable.

"Moreover, WaterNext's CO2 recovery solution allows companies to avoid using costly acids, thus reducing OpEx, minimizing the use of toxic materials, and cutting down on carbon emissions. In doing so, the company establishes a fully closed, sustainable loop for the industry, offering the optimal solution for companies looking beyond zero discharge to address the more significant challenge of greenhouse gas reduction and carbon capture."

- Sama Suwal
Best Practices Research Analyst

WaterNext strengthens this competitive differentiation through novel innovations that promote circularity in the industrial wastewater treatment space. The company's recent development of a carbon dioxide (CO2) recovery system, based on its extensive experience in the textile industry, is an excellent example of this approach. Appropriate for textile, tanneries, and food production companies, this innovative system recovers the CO2 emissions from an industry's boiler fumes and reuses them as input for neutralizing wastewater with extreme pH levels. Moreover, WaterNext's CO2 recovery solution allows companies to avoid using costly acids, thus reducing OpEx, minimizing the use of toxic materials, and cutting down on carbon emissions. In doing so, the company establishes a fully closed, sustainable loop for the industry, offering the optimal solution for companies looking beyond zero discharge to address the more significant challenge of greenhouse gas reduction and carbon capture.

Roadmap to Success: Transparent, Customer-centric, Continuous

With its customer-centric corporate philosophy, WaterNext operates on the central tenet that its success depends on customer satisfaction. This philosophy permeates the company's daily practices as it supports customers at each stage of ZLD system development, commissioning, and implementation. WaterNext's internationally experienced and highly responsive team, comprised of engineers, technicians, and sales and service professionals, empowers its customers to achieve their economic and operational goals. For instance, the company encourages prospective customers to visit its existing clients' wastewater treatment plants at different phases of operation to witness its innovative ZLD systems' superior performance and unique advantages first-hand. Moreover, urging customers to visit operational plants allows WaterNext to validate the quality, consistency, and excellence of its technology design and services. As a result, customers feel confident they have chosen the best solution for their specific needs.

WaterNext works closely with customers to understand their unique requirements and develop customized systems to deliver the required outcomes. Unlike competitors, the company believes in designing plants for lower water recovery (92% to 95%) and optimizing plant performance to improve the parameter to the desired levels (up to 98% water recovery) rather than requiring customers to invest

more by overdesigning their systems. To this end, upon installation, WaterNext works closely with its customers during their plants' start-up phase to help them improve performance by troubleshooting issues and tweaking parameters.

Moreover, WaterNext offers 24/7/365 technical post-sales support to remotely ensure the seamless operations of its customers' ZLD systems, guaranteeing excellent customer satisfaction. Within this context, the company requires its customers to fill in extensive daily reports, which its dedicated team reviews weekly or biweekly to detect potential issues. Once customers become accustomed to running their plants, WaterNext reduces the frequency of these report reviews to monthly, quarterly, or semi-annually. This approach's success is evident in the long-term performance of the company's ZLD plants. For instance, WaterNext's Sri Lankan sites are among the few ZLD systems in the country that have been running successfully for the last eight years.

With this customer-centric approach and differentiated technology offerings, WaterNext has added prominent companies in the textile and oil and gas segments across India, China, Sri Lanka, Bangladesh, and Mexico as customers over the years.

Use Case: Birla Century Ltd (Aditya Birla Group)
In 2022, Birla Century Ltd., one of the oldest Textile Mills in Gujarat, India, leveraged WaterNext's services to install a well-designed sustainable system to achieve its ZLD goals in response to the local government's increasingly stringent effluent discharge regulations. Birla Century was running a conventional effluent treatment and RO plant for nearly 10 years and WaterNext convinced the decision makers to adopt the advanced BIO MBR systems. WaterNext designed, supplied, executed, and handed over an entire biological MBR and RO plant to the customer providing a compact plant in the middle of existing structures close to their old effluent treatment plant. The customer is now treating and recovering over 92% of wastewater effortlessly, seamlessly, and sustainably.

Furthermore, WaterNext strives to deliver exceptional customer experiences by continually improving its customer service capabilities. It centers these efforts around its belief that it can consistently exceed customer expectations by working together, sharing insights, and fostering a culture of continuous improvement. For instance, recently, the WaterNext India team convened in Coimbatore for its Customer Delight and Customer Satisfaction Meet with the purpose of brainstorming strategies to enhance its services to cater to its growing customer base. With its collective efforts, the company aims to build long-lasting client relationships to impact the environment positively through its sustainable ZLD solutions.3

As a result of this customer-first approach, WaterNext registered steady growth in the post-pandemic market, with a healthy year-on-year growth rate of approximately 15%. Continuing this impressive growth momentum, WaterNext intends to expand its presence in water-stressed and high-growth (rapidly industrializing) regions, such as the Asia-Pacific region and Latin America, by delivering its customer-centric and low OPEX ZLD systems. Similarly, the company strives to strengthen its position in new markets, with significant client wins helping it enter the lucrative electronics and automotive sectors. Frost & Sullivan believes the company is well-positioned to drive the ZLD space into its next growth phase, capturing market share and sustaining its leadership in the coming years.

[3] https://www.waternext.it/blogs/growing-together-and-achieving-greater-milestones-in-the-future/, accessed November 2023.

Conclusion

Frost & Sullivan believes that innovation and growth opportunities drive future success; many factors contribute, yet having a competitive strategy is critical. WaterNext Solutions (WaterNext) understands this core concept and is leading the zero liquid discharge (ZLD) market due to its focused strategies, helping it to outpace competitors.

The company builds on its extensive hands-on experience, dedicated focus, and rich expertise in treating complex industrial effluents to differentiate itself against both prominent global solution providers and smaller regional competitors. Similarly, WaterNext adopts a unique approach to wastewater management by implementing a completely biological process to purify industrial wastewater without using chemicals and generating toxic waste. This approach enables the company to significantly lower operational expenses (at least three times less than traditional systems), achieve higher water recovery (up to 98%), and reduce the overall environmental impact. Moreover, WaterNext strengthens this competitive differentiation through novel innovations that promote circularity in the industrial wastewater treatment space, such as its innovative carbon dioxide recovery system. Overall, WaterNext develops and implements its strategies with its customers in mind, securing its position as a trusted partner and market leader.

With its strong overall performance, WaterNext Solutions earns Frost & Sullivan's 2023 Global Competitive Strategy Leadership Award in the zero liquid discharge solutions industry.

What You Need to Know about the Competitive Strategy Leadership Recognition

Frost & Sullivan's Competitive Strategy Leadership Award recognizes the company with a stand-out approach to achieving top-line growth and a superior customer experience.

Best Practices Award Analysis

For the Competitive Strategy Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Strategy Innovation

Strategy Effectiveness: Effective strategy balances short-term performance needs with long-term aspirations and overall company vision

Strategy Execution: Company strategy utilizes Best Practices to support consistent and efficient processes

Competitive Differentiation: Solutions or products articulate and display unique competitive advantages

Executive Team Alignment: Executive team focuses on staying ahead of key competitors via a unified execution of its organization's mission, vision, and strategy

Stakeholder Integration: Company strategy reflects the needs or circumstances of all industry stakeholders, including competitors, customers, investors, and employees

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

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The Growth Pipeline Engine™

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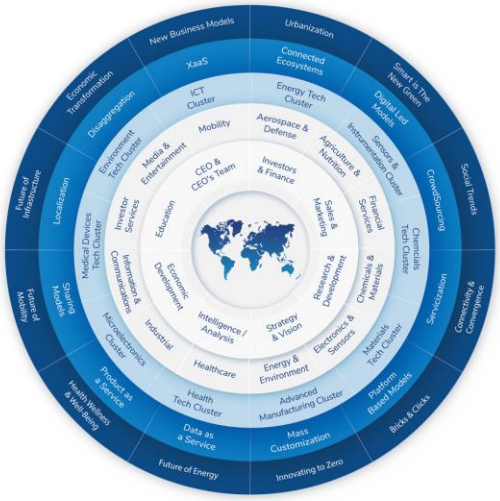
- **Innovation Culture:** *Optimized Customer Experience*
- **ROI & Margin:** *Implementation Excellence*
- **Transformational Growth:** *Industry Leadership*

The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.



Analytical Perspectives:

- Mega Trend (MT)
- Business Model (BM)
- Technology (TE)
- Industries (IN)
- Customer (CU)
- Geographies (GE)