

Envirosuite Recognized as the

2021

**Entrepreneurial
Company of the Year**

Global Digital Twin Technology
for Water Industry

Excellence in Best Practices

 **envirosuite**

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. Envirosuite excels in many of the criteria in the digital twins for water space.

AWARD CRITERIA	
<i>Entrepreneurial Innovation</i>	<i>Customer Impact</i>
Market Disruption	Price/Performance Value
Competitive Differentiation	Customer Purchase Experience
Market Gaps	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Passionate Persistence	Brand Equity

Digital Twin Technology in the Water Industry

Water utility networks are data-rich environments; information silos make it challenging for operators to ensure that energy- and cost-intensive assets work in concert and at peak performance. Typically, operators can identify a problem in isolation; yet, the system-wide impact may not be fully understood. Any delay in rectification could prove detrimental and costly as effects cascade through the network.

In the water utility market, digital twins (a digital replica of physical assets) provide a complete visualization of water intake, treatment, and distribution processes, allowing utility operators to make

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- Maksym Beznosiuk, Best Practices Research Analyst

more informed decisions about design, construction, and operation from a single source of truth. In the operation and maintenance phase, data-driven analytics can provide information related to or leak detection, asset optimization, predictive maintenance, and what-if scenario analysis. Thus, vendors must prove a solution’s return on investment via lower capital and operational expenditures, fewer carbon emissions, higher productivity, and less unplanned maintenance¹.

¹ Frost Radar: Digital Twins in the Global Water Industry, 2021 (Frost & Sullivan, October 2021)

Envirosuite: A Fast Growing Digital Twin Technology Company

Envirosuite is an Australian technology company that provides environmental intelligence solutions for water, wastewater, mining, industrial, construction and aviation industries. Envirosuite's technology platforms: EVS Water, EVS Omnis and EVS Aviation, enables users to solve operational transformation challenges by offering predictable and actionable insights that reduce environmental impact, enable responsible and sustainable progress, while delivering shared value for businesses, their communities and stakeholders. By utilizing its hands-on environmental intelligence expertise and maintaining a stellar position among its tier 1 clients, the company outpaces its competition in the digital twin technology for the water market.

Despite harsh competition and a challenging economic environment, Envirosuite facilitates its position in the market by developing world leading technology platforms including an effective digital twin solution for water customers globally, EVS Water. In 2021, Envirosuite demonstrated exceptional commercial performance, doubling its total revenue from \$23.8 million in 2020 to \$48.6 million in 2021.² From its origins in Australia, the company has expanded its commercial presence to the Americas (e.g., the United States and Canada), Europe (e.g., Denmark, Spain, and United Kingdom), and Asia (e.g., Taiwan, China, and South Korea). Envirosuite is working to grow its global capabilities to support its fast-growing customer base across developed (North America) and emerging (the Asia-Pacific) markets. To this end, in June 2021, the company raised \$14 million to accelerate the development and distribution of its digital twin solution for the water industry. This allows the company to further invest in the development of its other products and expand its presence in North America to support the versatile needs of this dynamic market.³ Frost & Sullivan believes that its sizeable funding enables Envirosuite to advance the commercialization and implementation of its cutting-edge digital twin solution in the water segment and attract new potential customers worldwide.

Simultaneously, the company is actively boosting its market penetration through acquisitions. For instance, in August 2020, Envirosuite acquired AqMB Holdings (AqMB), a water modeling research and development technology software company.⁴ This acquisition strengthened Envirosuite's digital twin capabilities and EVS Water product suite by leveraging neural network-based machine learning tools to model biological and chemical processes in water treatment plants to optimize and predict operations for water network assets in industrial production, mining, and waste and wastewater segments.⁵ A trial run of AqMB, now EVS Water Plant Optimiser, digital twin solution in one of the largest water treatment plants in Beijing indicated a potentially substantial annual cost savings in the hundreds of thousands, along with significant energy and chemical consumption savings at the plant. Envirosuite has identified 25,000 water and wastewater treatment plants across the globe that could benefit from this technology.

Moreover, Envirosuite builds successful relationships with various industry leaders and technology companies around the globe. In September 2021, Envirosuite commenced a proof of concept with Western Australia's Water Corporation, a principal supplier of water, wastewater, and drainage services

² <https://smallcaps.com.au/envirosuite-more-than-doubles-revenue-society-strives-be-more-responsible/>

³ <https://smallcaps.com.au/envirosuite-raises-fund-global-expansion-strategy-environmental-technologies/>

⁴ [https://itwire.com/listed-tech/envirosuite-to-acquire-aqmb-holdings-for-\\$1-35m.html](https://itwire.com/listed-tech/envirosuite-to-acquire-aqmb-holdings-for-$1-35m.html)

⁵ <https://envirosuite.com/news/strategic-acquisition-to-boost-our-offering-to-global-wastewater-treatment-customers>

throughout the state of Western Australia.⁶ Envirosuite will work closely with Water Corporation to demonstrate the SeweX product which provides insights that lower future costs of odor and corrosion management, facilitate effective asset operation and extend the sewer network life. SeweX helps companies and governments to monitor and manage essential infrastructure, while reducing chemical dosing and environmental emissions that can have a direct impact on climate change.

Frost & Sullivan recognizes that Envirosuite meets customers' needs and exceeds their expectations as multiple clients and partners value the top-performance and business impact of its digital twin technology:

“Using the technology, the students can efficiently design water treatment plants and simulate a variety of treatment processes. EVS Water Plant Designer has been very helpful for teaching the principles of water and wastewater treatment.”

- Assistant Professor, Contaminant Hydrology and Hydrogeology (Trinity College, Dublin)⁷

Helping Companies with Effective Digital Twin Solution for the Water Industry

Envirosuite offers three competitive digital twin platforms that focus on designing and optimizing water and wastewater treatment plants and managing corrosion, odor, and safety in sewer networks. The Envirosuite Water Plant Designer, Water Plant Optimiser, and SeweX are cloud-based, artificial intelligence-driven products developed to identify process improvements, deliver operational savings, and drive improvements in environmental performance.

Today, the design of water and wastewater treatment relies on repetitive, manual practices for engineering design. Thus, companies in the mining, construction, industrial, and other industries seek tools to minimize time to create accurate and efficient treatment plant designs.

Envirosuite offers innovative digital twin solutions that help clients work on engineering design with high speed, precision, and productivity unmatched by the competition. Its recently introduced Water Plant Designer (WPD) platform enables clients to achieve higher teamwork and efficiency.⁸ This platform offers several competitive advantages such as:

- **Ease of use:** Envirosuite's WPD platform has an intuitive drag-and-drop interface and pre-populated assumptions for standard designs allowing users to generate scenarios of potential engineering designs in less than 24 hours. In this regard, the company's platform enables users to access a broad range of best practice biological and industrial treatment models with more than 50 various process units covering over 60 different parameters. At the same time, its easy-

⁶ <https://www.sustainabilitymatters.net.au/content/wastewater/news/envirosuite-and-western-australia-s-water-corporation-enter-into-sewex-proof-of-concept-281502079/>

⁷ <https://envirosuite.com/news/hands-on-learning-using-cloud-technology-for-design-of-water-treatment-processes>

⁸ <https://envirosuite.com/news/evs-water-plant-designer>

to-use interface and collaborative change control and audit trail functionality accelerate design times as engineering teams can interact and adjust design simultaneously.

- **Efficiency:** The company's WPD platform enables users to jointly analyze and assess numerous model configuration scenarios and develop crucial lifecycle performance and lifecycle metrics. As a result, clients can streamline the process of wastewater management, boosting the efficiency of design development and implementation. On average, the WPD platform allows users to cut design time significantly compared to traditional approaches, ensuring smooth and adequate water and wastewater treatment.

In addition, Envirosuite's Water Plant Optimiser platform possesses fast, easy-to-use, and highly flexible functionalities that enable customers to analyze vast data volumes and develop engineering designs effectively, saving time and costs quickly. By utilizing the company's Water Plant Optimiser platform, users across different segments can achieve high-quality, actionable insights that enable them to make informed decisions about design development and implementation at a much faster pace compared to regular competitive digital twin offerings.

Best Practices Example Confirms High Performance and Ultimate Reliability

Frost & Sullivan analysts applaud Envirosuite for the high-quality performance of its digital twin solution for water customers, as demonstrated by the following use case:⁹

Best Practices Example: Envirosuite aided School of Engineering (the School) at Ireland's Trinity College by enabling hands-on learning using cloud technology to design water treatment processes. Specifically, with the arrival of the COVID-19 pandemic, the School faced difficulty teaching the wastewater treatment process design due to limited in-person interaction and the impossibility of delivering benchtop studies. The School was researching landfill leachate treatment and required tools to simulate the treatment processes to understand the implications of various treatment alternatives better while also educating on the principles of the accompanying treatment technologies and techniques. Envirosuite provided its WPD solution to facilitate various research projects on simulation of landfill leachate processes at the School. Specifically, the client chose the WPD solution because it is cloud-based, suitable for collaborative and remote learning, enabling different users to collaborate on the same design and review functionality where needed. In this regard, the client opted for the WPD solution. It helped it compare and assess numerous model configuration scenarios to provide the most

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- Maksym Beznosiuk, Best Practices Research Analyst

precise and reliable calibrated model configurations for the desired design. Also, the WPD solution allowed the client to accelerate the calibration and optimization process. Additionally, it allowed the client to access information directly from the Irish Environmental Protection Agency to understand best practice models and how they influence process design, leading to improved research and learning of wastewater treatment process design.

⁹ <https://envirosuite.com/news/hands-on-learning-using-cloud-technology-for-design-of-water-treatment-processes>

Envirosuite's customer-focused digital twin portfolio, along with its hyper-growth of 200% over the last couple of years, has enabled Frost & Sullivan to position them among the leaders on the Frost Radar™ Growth Index in the Frost Radar report titled Digital Twin in the Global Water Industry. Envirosuite is an innovative and ambitious environmental intelligence company that targets its water business's \$2.8 billion serviceable addressable market. Frost & Sullivan believes it is well-positioned with a visionary product roadmap of becoming a leading global innovator in the water industry in the next five years.

Conclusion

Currently, companies in mining, industrial, wastewater treatment, and other industries rely on repetitive, manual practices for engineering design. They seek solutions that can help them quickly process vast volumes of design data, ensure effective team collaboration, and generate compelling insights at high precision and speed.

Envirosuite leads the way by providing a customer-focused EVS Water platform that enables clients to ensure effective team collaboration on engineering design development and implementation, saving time and costs. In addition, the SeweX product in the EVS Water portfolio enables organizations to rapidly identify safety, corrosion and odor hotspots in sewer networks to extend infrastructure life, while reducing emissions that have a direct impact on climate change.

With its unrivaled expertise and experience, innovation-driven solutions, and customer-centric approach, Envirosuite earns Frost & Sullivan's 2021 Global Entrepreneurial Company of the Year award in the digital twins for water market.

What You Need to Know about the Entrepreneurial Company of the Year Recognition

Frost & Sullivan's Entrepreneurial Company of the Year Award recognizes the best up-and-coming, potentially disruptive market participant.

Best Practices Award Analysis

For the Entrepreneurial Company of the Year Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Entrepreneurial Innovation

Market Disruption: Innovative new solutions have a genuine potential to disrupt the market, render current solutions obsolete, and shake up competition

Competitive Differentiation: Strong competitive market differentiators created through a deep understanding of current and emerging competition

Market Gaps: Solution satisfies the needs and opportunities that exist between customers' desired outcomes and their current market solutions

Leadership Focus: Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

Passionate Persistence: Tenacity enables the pursuit and achievement of seemingly insurmountable industry obstacles

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

