

# EdgeMethods

Award-Winning IoT Company  
Driving Digital Transformation,  
Energy Management and  
Operational Excellence



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By ingesting and standardizing real-time data across all operational systems, we empower businesses to unlock actionable insights that drive efficiency, cost savings, and sustainability. Our platform enables companies to break down data silos, optimize energy usage, and make informed decisions on critical areas like process improvements, equipment upgrades, and sustainability initiatives. This comprehensive approach supports digital transformation, ensuring seamless integration of our Industry 4.0 aligned solutions for long-term growth and success.

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**Stuart Lowe**  
Co-Founder & Managing Director

## Overcoming Industry Challenges through Advanced Data-Driven Solutions

Today's manufacturers face immense pressure to meet a broad range of business objectives, including improving efficiency, reducing energy consumption, having full visibility into their data and reducing costs. However, many struggle with siloed data, outdated systems, and operational inefficiencies that hinder progress. These challenges, along with the growing need

for real-time insights and predictive capabilities, create substantial barriers to achieving operational excellence. EdgeMethods addresses these issues by providing innovative solutions that integrate data, optimize energy usage, and enhance Overall Equipment Effectiveness (OEE) through advanced OEE AI, helping businesses overcome these barriers.

At the heart of EdgeMethods digital transformation is their Industry 4.0 Data Platform, which standardized

data across all industrial systems. By eliminating data silos and centralizing data into a consistent format, businesses gain real-time visibility into every aspect of their operations. "Our Industry 4.0 platform allows businesses to seamlessly integrate data from all operational assets and historical data into one system, providing clear visibility into their processes," explains Stuart Lowe. "Our platform lays the foundation for our customer's entire digital transformation strategy, enabling advanced analytics and insights

that consider both real-time and historical patterns and performance.

As energy costs rise and regulatory pressures rise, efficient energy management has become essential for manufacturers to stay competitive. EdgeMethods delivers cutting-edge energy management solutions that leverage real-time data and AI-driven insights to help companies meet their sustainability targets and move closer to their net-zero goals. By reducing their customers' environmental footprint and aligning with evolving regulatory requirements, EdgeMethods support customers in meeting not only immediate cost-saving objectives but also long-term sustainability commitments.

By integrating IoT sensors, virtual meters, and advanced analytics, the platform provides real-time visibility into energy consumption across all operations. This enables companies to swiftly identify inefficiencies, minimize waste, and reduce their environmental impact.

Clients can easily visualize their energy consumption trends through their intuitive analytics, helping them implement targeted strategies for both cost reduction and enhanced operational efficiency.

"Using AI-driven insights, we map energy flows throughout customers manufacturing processes for example, pinpointing significant energy losses. This enables clients to make decisions on initiatives such as upgrading machinery, adopting new processes, or providing real-time alerts to operators, explains Stuart Lowe.

## Comprehensive Energy Management with Digital Twin Technology

EdgeMethods adopts a comprehensive approach to energy management by leveraging energy cascade models to identify both static and dynamic energy losses, ensuring that no area of waste is overlooked. In addition, the use of digital twin technology allows EdgeMethods to map and analyze the interactions between various energy sources—such as electricity, gas, and hot oil—and the assets on the manufacturing floor. This holistic view enables the identification of areas where metering data is incomplete or missing.

To address these data gaps, cost effective virtual metering is used to calculate energy consumption in areas lacking measurement. These models dynamically adjust to reflect changes in production levels and operational conditions, delivering precise, real-time insights into energy usage – without cost of installing meters throughout the entire production en-

vironment.

With a complete and accurate view of energy consumption, manufacturers can make data-driven decisions to reduce costs, optimize efficiency, ensure regulatory compliance, and advance their sustainability goals.

## Operational Optimization

EdgeMethods' OEE AI solution optimizes operations by leveraging AI-driven analytics and machine learning to enhance traditional OEE metrics. While OEE remains a critical measure of production performance, OEE AI automates data collection and delivers real-time analysis, tapping into insights that would have previously been undetected. This allows manufacturers to identify inefficiencies and drive higher levels of productivity and operational efficiency.

By continuously monitoring equipment performance, OEE AI provides manufacturers with actionable insights to reduce downtime, optimize cycle times, and improve product quality.

## Case Study

A leading manufacturer of Peak Polymers, Victrex PLC (FTSE 250), faced several challenges in its quest to improve energy management practices and reduce its environmental footprint. The company struggled with inefficient energy usage, reliance on manual processes for estimating energy consumption, and a lack of data-driven insights to guide improvement projects.

EdgeMethods implemented an automated energy management system utilizing physical and virtual meters, mapped against a sustainability digital twin for advanced data analytics. The system helped Victrex pinpoint inefficiencies and potential improvement projects, significantly enhancing the accuracy of energy usage data, unlocking hidden trends, and reducing the time spent on data collection and analysis.

Customer Quote: "The ability to monitor and investigate our production processes in real-time is revolutionary. We are now able to answer questions at speed with the relevant supporting data – we are now believers," said a spokesperson from Victrex.

As a result of this early implementation, Victrex is set to achieve the following gains:

- 20% reduction in overall energy consumption through real-time monitoring and predictive analysis.
- 15% reduction in their carbon footprint, supporting their broader envi-

ronmental goals.

- 10-20% improvement in operational efficiency, driven by enhanced visibility into energy usage, enabling informed decision-making and proactive maintenance strategies.

## Building a Secure Future

EdgeMethods is positioned for substantial growth, driven by its ongoing expansion into new markets and commitment to advancing its technology offerings. Earlier this year, the company launched its Industry 4.0 Data Platform, Energy Management, and OEE AI solutions on the Microsoft Azure Marketplace, making its cutting-edge solutions more accessible to a broader range of clients.

Customer satisfaction and long-term partnerships remain at the heart of EdgeMethods' strategy. By prioritizing close relationships with clients, the company ensures their evolving needs are consistently met, and they feel fully supported throughout their journey. Built on the secure and reliable foundation of Microsoft Azure, EdgeMethods' solutions are designed to deliver high-performance capabilities tailored to meet diverse industry challenges.

As EdgeMethods expands geographically and continues to evolve alongside Industry 4.0 and 5.0 trends surrounding Automation, AI and Advanced Analytics, the company remains focused on helping clients achieve operational excellence, sustainability goals, and long-term growth.

Under the leadership of Stuart Lowe, EdgeMethods fosters a culture of innovation and empowerment. Stuart believes in nurturing the potential of his team by encouraging creativity and fostering an environment where all voices are heard. This leadership approach has been instrumental in driving the company's growth, as employees are empowered to develop new ideas and deliver impactful solutions that benefit both the company and its clients. Stuart's commitment to innovation and open communication has helped shape EdgeMethods into a dynamic company, where employees are encouraged to grow both personally and professionally, contributing to the company's continued success.

