

2021

Product Leadership

Global Al-based Machine Health-as-a-Service Industry Excellence in Best Practices

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. Augury excels in many of the criteria in the machine health space.

AWARD CRITERIA	
Product Portfolio Attributes	Business Impact
Match to Needs	Financial Performance
Reliability and Quality	Customer Acquisition
Product/Service Value	Operational Efficiency
Positioning	Growth Potential
Design	Human Capital

Match to Needs

Manufacturers across the board have accelerated their digital roadmaps, and a number of digital use cases have been put to the forefront. Machine health, which creates fast and clear exponential value, is an essential digital use case for manufacturing companies, especially in developed countries where machines drive a significant percentage of the gross domestic product. Moreover, machine health is at the heart of manufacturing. COVID-19 is another factor accelerating digital capabilities in manufacturing,

"Augury is strongly committed to its vision (i.e., a world where people can always rely on the machines that matter), permeating all the way through its business model and strategy."

- Sankara Narayanan, Senior Industry Analyst including the machine health digital use case. As there are fewer people on the production floor, supply chains are broken. Digitization and digital initiatives can help mitigate the situation. Frost & Sullivan notes that manufacturing companies need end-to-end solutions and services and not merely standalone solutions that increase cost and complexity.

Amid this scenario, Augury offers artificial intelligence (AI)-based Machine Health-as-a-Service. Frost & Sullivan finds that Augury displays its leadership based on several fronts, discussed below.

First, Augury is strongly committed to its vision of a world where people can always rely on the machines that matter. To that end, Augury's Machine Health-as-a-Service offering is divided into four

sub-categories (i.e., Monitor, Diagnose, Guide, and Act). Each sub-category correlates with the other, creating a virtual cycle of continuous improvement due to AI and machine learning. As a result, the system is significantly more robust. The sub-categories are as follows:

- Monitor: Augury believes monitoring should be ubiquitous and standardized in terms of data. The company's hardware capabilities are designed to support its vision. Moreover, system sensors capture and continuously transmit data to the Augury platform. Augury offers not only hardware (e.g., sensors to monitor machines and collect data), but also ML and AI to conduct diagnostics, predict machine malfunctions, and provide alerts. Furthermore, the company's web applications, software, and visualization tools provide full visibility of machine health across a facility. Such capabilities make Augury a full-stack company compared to competitors that offer the hardware or software, but not both.
- Diagnose: Augury offers highly accurate (99.9% detection accuracy) Al-driven prescriptive diagnostics, insights, and analytics leveraging the entire history of the machine. The company's Al subsequently detects issues, explains underlying causes, and prescribes recommended courses of action. As a result, Augury's manufacturing customers know not just what is happening in their machine at a component level, but can determine when a problem will occur, the level of severity/root cause, and either fix or avoid the issue. Augury Al also allows the system to identify and mitigate multiple simultaneous problems in the machine.
- Guide: Augury's highly accurate diagnostics provide guidance to support dynamic production schedules. The platform's AI insights and support from experts enable users to prioritize and plan machine health activity.
- Act: Augury can visualize a tremendous amount of data, allowing it to serve as a single source of truth and as a data platform for assets and operations. Frost & Sullivan notes that frontline employees have a significant amount of knowledge that is siloed. Augury's platform supports digitized collaboration and knowledge sharing, resulting in better and more informed decisions. Augury's collaborative platform can also be used to discuss the results of initiatives taken. The platform can be likened to a "Microsoft Teams for machines", where users, technicians in different plants, and Augury's experts as well as external experts, like OEM SMEs, can share issues, actions taken, and results. By facilitating communication among the various silos present in customers' businesses, Augury fosters an environment that encourages collaboration rather than conflict in the decision-making process.

Frost & Sullivan applauds Augury for its holistic approach and ability to support insight-driven manufacturing. Chief among Augury's differentiators is its full-stack Machine Health-as-a-Service offering. While competitors offer standalone point solutions that do not suffice to address today's machine health challenges, Augury delivers sensing and AI as a service. Moreover, the company does not take responsibility for just diagnostics or analytics but to drive guaranteed outcomes.

Positioning and Design

Leveraging Augury's Machine Health-as-a-Service Offering to Support Industry 4.0 and Digital Transformation

Augury is expanding its portfolio and capabilities in multiple directions. For example, the company is now correlating machine health insights with operational parameters, productivity goals, and sustainability, creating more capabilities for its customers.

While machine health use cases are typically considered just a part of stable operations, Augury drives many different digital use cases beyond machine maintenance and reliability. For instance, within its digital road map for manufacturing customers, Augury drives additional use cases foundational to Industry 4.0: intelligent reliability, intelligent production (including worker productivity), intelligent quality, spare part inventory optimization, sustainability, and energy management.

- Intelligent Reliability: Augury's platform enables a suite of services to help customers optimize their maintenance and reliability operations following successful implementation of machine health. M&R Forecasting, equipment reliability tracking, analysis of common issues across facilities, best practices, training, maintenance playbooks, and adoption and engagement success are part of expanded capabilities that are enabled by Augury's offering after the initial roll-out of their Machine Health solution.
- <u>Intelligent Production</u>: One example is a major CPG company effectively utilizing Augury's insights to make better decisions and optimize their production processes. This customer already has clear visibility into their equipment health at the machine, production line, and facility level, and now Augury is helping them correlate operational data with machine performance based on specific product recipes and formulations. By helping the customer understand exactly how machines perform with a specific formulation Augury has thus helped them identify issues that contribute to certain formulations being produced better at a specific production line versus another. Such information enables the customer to intelligently determine dynamic production scheduling (e.g., deciding which production line is most suitable for a given formulation). Such a level of correlation between operations and machine health was not previously available prior to implementing Augury.
- <u>Intelligent Quality:</u> The mechanical health of a machine or production line often affects quality. However, the correlation is not easy to understand unless all insights concerning the mechanical health of a machine are readily available. A classic example is filler on a beverage production line. If the filler is even slightly out of balance, the bottles will be filled at different levels, affecting scrap. Augury enables predictive quality in such scenarios.
- Spare Part Inventory Optimization: Augury currently partners with a top supply chain company, wherein Augury issues an alert for a specific fault. A spare part is subsequently automatically ordered.
- <u>Sustainability and Energy Management:</u> Sustainability is another area Augury is pursuing. Well-maintained machines operate efficiently and use less energy, impacting energy management.
 - Frost & Sullivan believes machine health is not just about asset performance. Instead, it can act as a

bridge between assets and operations, as evidenced by the use cases Augury is currently driving for its manufacturing customers. Frost & Sullivan is especially impressed as Augury's Machine Health-as-a-Service is becoming foundational to Industry 4.0.

Customer Acquisition, Growth Potential, and Financial Performance

Augury has diagnosed more than 80,000 machines across industries, including fast-moving goods, consumer packaged goods, food, beverage, pharma, cold storage, medical device components, and chemicals. Augury's customers include thirty Fortune 500 companies and 6 of the top 10 consumer goods firms. Leading clients include Colgate-Palmolive, Heineken, Hershey's, Grundfos, Carrier, ICL and Essity.

Augury offers a fast return on investment (ROI), with an average 3X ROI within months. At the same time, it serves as the foundation for enterprises' larger digital transformation, regardless of where its customers are on the maturity curve concerning factors such as manufacturing, operations, and maintenance. Augury primarily participates within the continuous manufacturing sector (i.e., for critical

"Augury is so effective that it drives adoption very quickly, growing with the customer and quickly scaling across the organization."

- Sankara Narayanan, Senior Industry Analyst rotating equipment applications). However, Augury is expanding its machine health coverage to secondary equipment types (e.g., less critical production and utility assets) allowing it to expand its customer base. Frost & Sullivan notes that combining machine health to cover both critical and less critical secondary equipment will generate a lot more data across the facility, enabling Augury to drive an even better and more precise asset strategy for customers.

At present, Augury positions customers to scale easily, grow quickly, and readily update their operations as their businesses evolve in tandem with emerging market trends. Due to its efficacy and proven business model, Augury drives enterprise-wide adoption quickly. Frost & Sullivan finds that Augury's success is due to its ability to deliver value quickly, even from day one. It is typically implemented at 1 or 2 sites and, within less than 6 months, expands to more than 5 times the number of sites initially covered. Within a year, Augury is usually expanded even further within a given organization (e.g., covering the entire business unit, comprising as many as 60 sites). Such results provide Augury's consistency and value.

The company's business development and partnership strategy hinge on close working relationships, especially with technology platform providers, rotating equipment OEMs, facility service and management companies, and strategy and insurance companies. The company has built an extensive global machine health ecosystem with some of the most prominent names in the industry, including Microsoft, Accenture, DSV, SAP, Schneider Electric and PTC. Augury is working particularly closely with OEMs of rotating equipment like Grundfos and Carrier where it is integrating its solutions into the rotating equipment these companies produce and service.

To deploy its technology faster during the COVID-19 pandemic, Augury is utilizing augmented reality (AR) to implement its sensors. Such an approach has allowed it to support an expanded rollout for

Colgate quickly.

"We're planning one of the fastest technology global rollouts we've ever had." – Warren Pruitt, VP, Global Engineering Services, Colgate

Augury's ROI falls across two impact categories—business and behavior. Augury is changing the metrics by which maintenance teams are measured. Implementing the Augury platform allows customers to avoid a majority of critical failures and quantify what such avoidance means in monetary value to the organization. In the case of Colgate, Augury's ongoing impact is millions of dollars saved in downtime and asset maintenance costs per year across the portfolio. Augury sees very similar impact metrics across the majority of its enterprise customers.

The beauty of Augury is that it delivers not only business impact but also behavioral impact (i.e., change management). Due to its ability to drive data-driven decision-making to the operational production floor level, it is accelerating digitization efforts. For example, digital roadmaps that initially forecast a 3 to 5 year transition from preventive to predictive maintenance approaches are implementing full-scale digitization after 6 months.

Frost & Sullivan notes that some of the greatest customer value Augury creates is its ability to drive usage, engagement, and adoption across the organization. Augury is so transformative that it currently has a 90% engagement rate with reliability management and maintenance teams. Moreover, such teams leverage the technology to build new skill sets and roles such as machine health specialists and managers.

Augury's customers have promoted the offering internally, even creating videos sharing how, within a year of deployment, the program paid for itself many times over. Clients also share about experiencing zero downtime and equate Augury's AI capabilities to having an "army" of round-the-clock reliability experts and analysts. Augury provides full and continuous machine health monitoring and support, whereas competitors typically only sample twice a day. As Augury's AI performs high-level analysis, it enables the company's human team to solve even higher-order problems within the manufacturing environment.

Frost & Sullivan is further impressed that, in 2020, Augury began guaranteeing its results. For example, if Augury's software incorrectly assesses that a given machine is in good working order, and it breaks down, the company will repair or replace the machine. Such measures further drive Augury's product adoption and growth.

To that end, Augury is well-funded, with \$106 million in venture capital funding raised to date. The company is in a rapid growth mode, tripling its growth in the last 2 years, even in the wake of the COVID-19 pandemic. Frost & Sullivan notes that, due to the pandemic, the need for machine health has become even more acute. The company currently has 9 patents and continues to innovate. Moreover, it is on a hiring spree to support its rapid scaling, adding 60 employees in the last 3 months. Augury is also expanding its core advisory board (essentially a representation of its customers) and leverages its input at the highest level of decision-making. Such expert and high-level input helps Augury define its vision as it grows.

Conclusion

Manufacturing companies require solutions that can guarantee the reliability of machines that matter. Augury's full-stack, artificial intelligence (AI)-based Machine Health-as-a-Service software successfully addresses this need. With its highly accurate prescriptive diagnostics, scalability, and guaranteed outcomes, Augury drives insight-driven manufacturing. Moreover, customers average 3X their return on investment within months. Augury is so autonomous, effective, and transformative that it drives behavioral impact and change management across an organization, from the plant floor to the corporate office. The company's vision to cover all machines that matter, including less critical secondary equipment, further enhances its already unparalleled customer value proposition.

For its strong overall performance, Augury earns Frost & Sullivan's 2021 Global Product Leadership Award in the AI-based Machine Health-as-a-Service market.

What You Need to Know about the Product Leadership Recognition

Frost & Sullivan's Product Leadership Award recognizes the company that offers a product or solution with attributes that deliver the best quality, reliability, and performance in the industry.

Best Practices Award Analysis

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

Product Portfolio Attributes

Match to Needs: Customer needs directly influence and inspire the product portfolio's design and positioning

Reliability and Quality: Products consistently meet or exceed customer expectations for performance and length of service

Product/Service Value: Products or services offer the best value for the price compared to similar market offerings

Positioning: Products serve a unique, unmet need that competitors cannot easily replicate

Design: Products feature innovative designs, enhancing both visual appeal and ease of use

Business Impact

Financial Performance: Strong overall financial performance is achieved in terms of revenues, revenue growth, operating margin, and other key financial metrics

Customer Acquisition: Customer-facing processes support efficient and consistent new customer acquisition while enhancing customer retention

Operational Efficiency: Company staff performs assigned tasks productively, quickly, and to a high-quality standard

Growth Potential: Growth is fostered by a strong customer focus that strengthens the brand and reinforces customer loyalty

Human Capital: Commitment to quality and to customers characterize the company culture, which in turn enhances employee morale and retention

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

The Innovation Generator™

Our six 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)

The Growth Pipeline Engine™



