

VIBCO turns IoT data overload into actionable insights with Praemo's Razor™



VIBCO needed a way to turn IoT data into insights

Manufacturing company VIBCO had mountains of raw data, but no easy way to make sense of it.

Implementing Razor™ from Microsoft partner Praemo

VIBCO implemented Praemo Razor, an Azure-based analytic engine, to analyze their data.

Customer lead times cut in half and near-zero scrap rates

With Praemo Razor, VIBCO is serving customers twice as fast and pushing their scrap rates to new lows.

The manufacturing industry is changing, and it's changing fast. "The globe has shrunk—you have competition everywhere you look, domestic and abroad. There are many companies, old and young, that are being aggressive with technology, and if you want to keep up, you need a world-class team with world-class technology."

That's Karl Wadensten, CEO of VIBCO Vibrators, a Rhode Island-based manufacturing company specializing in industrial vibration products used in construction, manufacturing, and infrastructure. "If you don't keep up with the times and utilize technology to the fullest extent possible in your operations, other companies are going to eat your lunch," he explains.

Modern technology has revolutionized virtually every industry on the planet, manufacturing included, but the inherent complexity of most manufacturing operations can make it difficult to make big changes or implement new solutions. Altering factory processes can be costly, time-consuming, and risky if something goes wrong. As a result, some manufacturers are cautious about implementing new technology. Not VIBCO. Their competitive spirit and ongoing pursuit of improvement imbues everything they do, and recently, it's been the driving force behind their Industry 4.0 Initiative. "Data is going to be absolutely critical to every manufacturing operation going forward—honestly, it's critical today. It helps us better serve our customers, and it helps us run a more efficient operation," notes Wadensten. "That's what our Industry 4.0 Initiative is all about at

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VIBCO: finding new ways to collect as much data as possible from our operations, and then quickly turning that data into valuable insights.”

One of the most important sources of data for VIBCO has become IoT sensors spread out across their factory and equipment. These sensors feed real-time data about machine performance, efficiency, and critical machine data like vibration back to VIBCO so they can make informed decisions about how to improve their processes, maintain their machines, and reduce downtime. When the data started pouring in, VIBCO was ecstatic, but they quickly realized they were facing a problem: how do we make sense of this mountain of data?

VIBCO needed a solution that could leverage all of their disparate data as-is and apply AI modeling to identify anomalies and opportunities for improvement without the added time and expense of unifying it into one structure. Thankfully, their partner Praemo had the perfect solution to fit the bill: Praemo Razor™.

Turning data into insights with Praemo Razor

Working with IoT data can be challenging, but it doesn't have to be. Praemo Razor is a prescriptive analytics engine hosted on Microsoft Azure that connects to a company's IoT data and systems, utilizes the data as-is, where it is, and then applies AI and machine learning to identify healthy and unhealthy events, flag anomalies in real-time, and immediately alert an operator or machine to take action as needed. Essentially, Razor serves as an AI mentor to manufacturers, directing them to address important issues before they can manifest themselves as machine downtime, reduced quality, and hindered performance.

Praemo Razor comes with a multitude of benefits for users, but one of the most impressive is its ability to scale. Because it's a cloud-based solution, it easily scales up or down with the needs of the customer. “Our engagements typically start with customers sending us a small portion of their historic data that we use to expose the insights they

are missing,” explains Paul Boris, President and CRO at Praemo. “Once we run it through our analytics engine and send them back insights, they want to know how quickly they can deploy live. This is easy for us thanks to the scalability of Azure. With the cloud, there's no limit on how much data we can analyze, and there's no extra work required for our customers. That's an incredible differentiator for us.”

But Praemo isn't just using Microsoft Azure for its scalability; Razor also utilizes Azure Kubernetes Service to deploy its code, Azure Virtual Machines to run that code, Azure Active Directory to securely enable single sign-on and multi-factor authentication for employees, and Azure Blob Storage to securely store customer data. Praemo's wide-ranging use of Azure services within Razor goes to show that when businesses build their solution on Azure, they get more than just a cloud—they get access to a variety of industry-leading services that can further enhance their solution.

Reacting to challenges quicker than ever before

Razor has significantly impacted VIBCO's operation in a few ways. The first is that it's helped reduce their customer lead time by half, meaning VIBCO can now deliver their products and services to customers twice as fast as they were able to without Razor. Additionally, it's helped them respond to labor, materials, and resource allocation shortages stemming from the COVID-19 pandemic. With Razor, VIBCO can better understand which team configurations and processes are most efficient, enabling them to make quick adjustments if an employee gets sick or has to take time off work. It's also helped them overcome a materials shortage by identifying new ways to reduce scrap, enabling VIBCO to push scrap rates to new lows.



“The value in Razor is that it alerts to unexpected process behaviors, providing VIBCO the ability to focus their continuous improvement teams on a specific problems that improve efficiency, and remove cost and waste,” says Boris. “It simultaneously helps them solve technical problems and better manage all their resources.”

Previously, consistent disruptions created a lot of stress for VIBCO employees, but Razor is helping reduce such disruptions. “When you get tools like Razor into the hands of your people on the factory floor, tools that help them do their jobs better, they get excited,” adds Wadensten. “You can’t put a price tag on that, your people becoming more participative. I see our people and processes improving every single day. That’s been a huge win.”

Praemo and Microsoft – better together

Like most truly innovative cloud-based solutions, Praemo’s Razor wasn’t built overnight. Praemo’s partner journey began back in May of 2018 when they joined the Azure for startups program through a local incubator in Ontario, Canada. From there Praemo worked closely with a few Microsoft teams, to design their solution architecture and make Razor available on Azure Marketplace and Microsoft AppSource. Since listing their solution, Praemo has worked closely with the Azure Marketplace Rewards team to utilize the benefits available to them as a member of the Microsoft Partner Network including the sponsorship of a few customer deployments, a 2020 case study about their work with VIBCO,

Azure credits, and the opportunity to host a webinar showcasing their solution.

“Azure Marketplace has been the primary location where we’ve made our solution available, and the various industry teams within Microsoft that we’ve worked with were super helpful in getting Razor listed,” notes Alexander Kelly, Director of Solution Architecture at Praemo. “They walked us through the process and helped us work through some of the technical requirements. Overall, working with Microsoft has been incredibly valuable.”

Looking ahead – innovation never rests

Innovative manufacturers like VIBCO know that digital transformation is no longer optional—it’s a matter of survival. “If you aren’t using IoT in your manufacturing operations and you don’t have something like Praemo Razor to make sense of your data, you’re pretty much going to be extinct in the near future,” notes Wadensten. As competition grows in the manufacturing industry, one takeaway has become clear: world-class operations require world-class tools.

Going forward, the Praemo and VIBCO team plan on continuing to innovate together, collaborating wherever possible to refine the Praemo Razor solution, its implementation at VIBCO, and VIBCO’s operation. “We hear from manufacturers all the time that they think their IoT data is too complicated to be useful,” notes Boris. “The truth is, it isn’t. They just need a way to filter out the noise and pull out the important stuff. That’s where Razor really shines.”

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