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TECHNOLOGY BRIEF

OEMs Expand Revenue Models with Low-Code Software

Milking existing capital assets for extra money is the business equivalent of finding quarters among the couch cushions. But using IIoT technologies to deliver revenue-generating services is one better because it offers a much more reliable income stream. And it's what asset-based businesses of all sizes can access thanks to no-code or low-code IoT-specific software, says Steve VanderSanden, COO at Exosite, provider of IIoT solution components.

The off-the-shelf products that Exosite offer help businesses shorten their time to market and with minimal development effort. Exosite essentially enables what VanderSanden labels a "data pipeline." "All that data flowing through improves business efficiencies, whether you're using your own analytics, leveraging AI, or machine learning tools," he says. "OEMs can now transition to more of a service delivery model, where they're charging a recurring fee for equipment maintenance or granting access to data on an ongoing basis," VanderSanden says. "It's a recurring revenue stream instead of a one-time thing."

Striking such a new gold vein is exactly what Fairbanks Morse Defense (FMD), a principal supplier of leading marine technologies, has accomplished thanks to IIoT data facilitated by the ExoSense Condition Monitoring Solution, a low-code software platform. By using Exosite products, FMD sells add-on services like access to machine data and augmented reality walkthroughs of equipment that clients can use as training modules.

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Remote Monitoring and a Breadth of IIoT Solutions

The FMD method of harnessing remote monitoring data from its machines is one way of using IIoT technologies. In addition, it works for a range of industrial operations—from remote diagnostics to tracking environmental conditions and on to predictive maintenance. For IIoT tech to be of use, though, data gathered from operations needs to funnel into solutions that can digest the information and present the results for clients to easily visualize and act on.

The remote monitoring solution from Exosite comprises two discrete components:

- Murano, Exosite's IoT platform ingests data from application-specific sensors, gateways, PLCs, and many other data sources. It also attends to data storage integrations and hosting applications.
- ExoSense is the software that powers the solution and has a user interface through which businesses can manage assets, devices, and the data that flows from them. A simple rules-based engine can act on specified conditions. "If the water level reaches a certain height and sends a text message to an on-call employee" is an example of a rules-based alert.

Enterprises can choose where to host ExoSense: a managed solution within Exosite's cloud-based infrastructure: an on-premises model or a dedicated cloud. Data sovereignty rules. Security concerns, and the cost of data transport to and from the cloud, can all dictate where to host the solution, VanderSanden says: "We architected ExoSense in a way so that it's hardware-agnostic and can be used with compute resources from any cloud services provider."

ExoSense can add on functionality depending on end-user needs. A digital twin, for example, can represent complex assets and help enterprises calculate what-if scenarios for a range of processes while piping in IIoT data from multiple streams.

From Basic Monitoring to New Revenue Streams

Whether companies choose to run with basic monitoring operations or layer on more complex applications, they still can realize operational efficiencies, VanderSanden says.

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Similarly, cellular provider Telecom Argentina wanted to package and sell complete solutions—hardware, software, and connectivity—to key vertical markets. The company uses remote monitoring solutions from Exosite to develop these service-based products. One of the packages Telecom Argentina has built is targeted at independent farmers and focuses on monitoring of grain bins. "From an agricultural perspective, such sensing equipment and connectivity are key," VanderSanden says. So Telecom Argentina delivers not just connectivity, but also uses IIoT monitoring solutions from Exosite to show its end users how they can harness that connectivity to their net benefit.

And "Intel's across the board in our solutions," VanderSanden says. ExoSense uses Intel® Xeon® processors to collect, process, and store data gathered from IIoT sensors. Intel processors also power on-premises servers, industrial PCs, and infrastructure in the cloud, VanderSanden points out.

Exosite leans on systems integration (SI) partners in mutually beneficial partnerships where the SI can bring in Exosite when they work with a client who needs an IIoT solution. Similarly, Exosite calls in solution aggregators like World Peace Industrial when their customers look for installation services or to identify the correct gateways and hardware solutions for various needs.

The Future of IIoT Technology

Expect an increasing demand for localized data processing and analytics with the growth of machine data, VanderSanden says. Transferring large volumes of data to the cloud and back is not only time-consuming but also expensive. Edge computing or on-premises deployments can solve these problems. Edge computing will likely see even bigger growth as the demand for AI inference at the edge increases.

Also, greater numbers of small to medium-size businesses will implement IIoT solutions in the future, VanderSanden predicts. "These organizations are not software companies and don't have the internal expertise to build out a complete solution on their own. But they see value in being able to provide new service offerings for their customers and charging a premium. When there's a barrier to entry for such organizations, companies like Exosite can provide services and solutions to help bridge that gap," VanderSanden says. And even companies that do have a slightly more robust development team can focus on the company's software and products to build vertical solutions rather than having to build from the ground up each time, which would be very expensive.

Companies can leverage advanced technologies to realize operational efficiencies and move from selling widgets to services, which is an important transition, VanderSanden points out. "It's a digital business transformation that is enabled by our IIoT software."

Learn more about the ExoSense Condition Monitoring Solution and other Exosite IoT solutions.