

COMPANIES ARE STRUGGLING TO MANAGE IOT DATA. HERE'S WHY

December 18th, 2019 • Street Fight • Stephanie Miles

The devices around us are getting smarter. From the consumer's perspective, that means refrigerators are sending notifications when the milk is running low, and thermostats are turning down the temperature when there's no movement in the house. Businesses are relying on the data generated by connected devices to improve algorithms and make their existing products even smarter, but collecting and managing large volumes of data is creating a new set of challenges.

Globally, the IoT market is expected to reach \$212 billion by the end of this year. With the worldwide number of IoT-connected devices projected to top 43 billion by 2023, the challenges associated with managing large amounts of data in real-time are growing at a rapid pace.

IoT devices have the ability to generate more than 1.6 billion terabytes of data, and yet the majority of businesses still aren't

sure how to properly store that data in a way that is both secure and allows for easy access. Companies should be spending more time properly configuring their data to make it more accessible. They should also be doing a better job of leveraging historical data to unlock new insights and industry trends, says Heikki Nousiainen, chief technology officer at Aiven, a cloud technology startup that's developing a portfolio of database-as-a-service products.

"The amount of data collected by IoT devices is growing, and now more than ever, businesses are wanting this data in real time," Nousiainen says.

To keep up with the growing demand, Nousiainen says businesses should look to the cloud to store their IoT data. By bolstering their data pipeline, companies could also reuse data streams to benefit different applications and help produce

better products.

But the challenges surrounding the management of IoT data go beyond volume. While it's true that more connected devices are being brought into people's homes than ever before, the data from those devices is only nominally useful by itself. Businesses need to connect data streams in order to create holistic views, but that requires having a solid plan and a centralized database.

Simple, right?

Unfortunately, as more companies begin to implement IoT devices, storage requirements are skyrocketing. So even though companies have the ability to access increasing amounts of data, they can't utilize that data to enhance daily and ongoing business practices unless they're storing and analyzing it properly.

"IoT devices allow business to achieve optimal data collection.

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This should be viewed by businesses as both a benefit and a tool ... If they do not secure and manage their data properly, they can be taking risks, or not getting the best benefit from the data,” says Kevin Beasley, chief information officer at the ERP software developer, VAI. “Many find that businesses often add IoT devices as an attempt to find a solution for automating or streamlining in-house practices. Although these devices can help manage these tasks, companies must remember that applying the devices is only the first step in the process.”

Beasley uses the example of companies in the food industry implementing IoT devices, such as inventory sensors and temperature devices. These can be helpful for operations; however, both gather large amounts of data that must be managed in a specific, traceable way. To leverage this, any devices that specifically collect data directed toward day-to-day business procedures should be connected to a platform that can be referred to easily. Beasley says companies should use AI and analytics tools to analyze the trend points in the data, as well.

“As nearly every piece of technology is concerned, having a solid, scalable, and secure platform is the first step, and the benefits tend to follow after. In order to manage data, it must be collected and stored properly. Without this, companies are more vulnerable to attacks or not having the traceability required,” Beasley says. “This will help when looking back to reference any of the information, which is often one of the main reasons companies decide to add IoT devices to their technology ecosystem.”

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