



**Case Study:** IoT/Manufacturing

# IoT enables data insights and innovation at heavy equipment company

Cognizant delivers scalable telemetry infrastructure on Microsoft Azure to monetize data and drive innovation.

A leading U.S.-based manufacturer of heavy machines and construction equipment recognized an opportunity to leverage volumes of telemetry data to provide differentiated data-based services to its customers using the internet of things (IoT) and data sciences.

The client had been collecting telemetry data to enable fleet and equipment management for more than a decade, but the solutions were disjointed and the work of each strategic business unit was siloed. The manufacturer sought our help to adopt enterprise-wide analytics and monetize information.

The client engaged Cognizant Digital Business to lead a transformation initiative leveraging Microsoft Azure, to create a better telemetry solution that would influence remote configuration, predictive analytics and data monetization at scale.

## At a Glance

A leading heavy equipment manufacturer sought to overhaul its approach to telemetry to better utilize analytics and drive innovation.

## Outcomes

- Improved scale by increasing the installed connected machinery the company can support in the field from 300,000 to 2 million.
- Scaled data collected in the field daily from 15 gigabytes to 6,000 terabytes.
- Consolidated data and processes to drive consistency and innovation.
- Lowered the time needed to access equipment and job data from weeks to hours, increasing the discernable performance and productivity insights.

## Real-time access to equipment data means better insights and new revenue opportunities for the manufacturer

Cognizant helped the client build an enterprise-wide telemetry platform using Microsoft Azure and its specialized services for IoT. The unified platform stores, manages and analyzes telemetry data from all equipment and products while centralizing data collection and enabling easy exchange of information across applications.

By leveraging the Azure-based platform's IoT services, including Event Hub and Apache Storm on HDInsight, the manufacturer can collect and parse data from various generations of existing sensors already affixed to its equipment. To support the size of the data being processed, Cognizant used Azure's Blob Storage and other NoSQL data storage infrastructure for reliable storage and file ingestion.

We created proprietary parsing routines in line with the diversified nature of on-field usage and customer product service cycles, which support diverse file sizes and schedules and include data about equipment usage hours, fuel levels, location, productivity and diagnostics. The scalability of Azure's various IoT services will enable the manufacturer to support more than 2 million installed machines, compared to the current 300,000 pieces.

Powered by Cognizant-enabled connected data initiatives, the client now manages data across business units and product lines with one enterprise-

wide data warehouse. This enables the company to develop advanced analytics to discover important insights. While the data collected from equipment in the field powers many of the client's applications, it is also accessible to other applications when needed through an API layer.

The accessibility means the client can take advantage of monetization opportunities, such as enabling other entities (including dealers, customers or any entrepreneurs) to develop solutions consumers can access in the field, from equipment performance data. Each entity can intelligently decipher a product's continuous communication and in turn broadcast how to use those meaningful insights to target consumers in near-real time. This feature positions the company's products more favorably against competitors and strengthens its customer relationships as value-adding solutions are developed.

With a single cohesive IoT platform for enabling data analytics, the client is now better positioned to leverage the opportunities telemetry offers than before. Through a more cohesive and accessible set of enterprise-wide data, the company can provide better solutions, drive innovation internally with partners, and scale faster and more sustainably.

### Learn more

To learn more about Cognizant and the internet of things, please visit [www.cognizant.com/iot](http://www.cognizant.com/iot).

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## About Cognizant

Cognizant (Nasdaq-100: CTSI) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 193 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at [www.cognizant.com](http://www.cognizant.com) or follow us [@Cognizant](https://twitter.com/Cognizant).

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