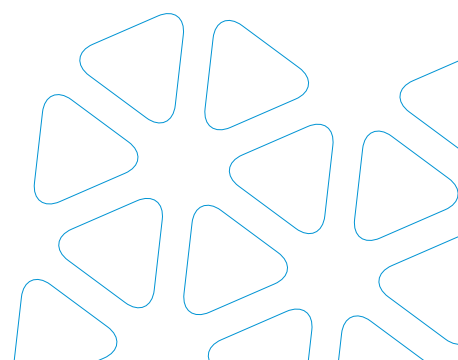


Farmers Edge: Visualizing Geospatial Data

A STORY OF OWNING CHANGE

Global AgTech firm Farmers Edge utilizes a Google Cloud data lake for efficient IoT data management, organizing information gathered by thousands of IoT devices deployed on farms around the world.



Farmers Edge Owns Change

Farmers all over the world rely on Farmers Edge, a global leader in digital agriculture, for data management and analytics. The rich data they capture comes from multiple sources and formats, which makes storing and structuring it a complex process for effective IoT data analytics.

THE CHALLENGE: HERDING IOT DATA Revitalizing a Homegrown Data Warehouse

Farmers Edge uses IoT devices to pull data from unorthodox places on farms all over the world. This includes their very own brand-agnostic telematics tool, the Gen. 2 CanPlug, which wirelessly streams operational data to user devices via Bluetooth. Many of these devices collect geospatial heartbeat data, providing regular “pulses” of information from a farmer’s fields that can notify customers of potential outages. Their mission? Help farmers scale faster, mitigate risk and increase their revenue. They capture everything from equipment performance readings to soil reports to livestock behavior. Organizing this IoT data into digestible, easily accessible reports is a tall order, one that their existing solution was no longer suited for as they have continued to grow.

They wanted to build a new Google Cloud data lake, one that would ramp up their analytics capabilities by integrating with tools like BigQuery and Looker. Ideally, their new system would allow them to organize data in a visual dashboard, enabling comprehensive IoT data visualization that would provide near real-time status updates on thousands of IoT devices at once. As a Google Cloud Premier Partner, TEKsystems was more than ready to round up their data sources.

OUR SOLUTION: AN ORGANIZED HARVEST Building an IoT Data Management Pipeline in Controlled Sprints

Farmers Edge knew where they wanted to go. Our job? Get them there quickly with smart data analytics services for cloud modernization. We built a project plan consisting of six controlled sprints, one to build a data pipeline within Google Cloud BigQuery and five dedicated to QA and the deployment of Looker. BigQuery would allow them to normalize the

unstructured data. As a business intelligence platform, Looker would give them the tools to build customized IoT data analytics applications.

The end goal? Make all Master CanPlug IoT device data readily available in their new environments to share with customers in real time. Farmers Edge wanted to aggregate the geospatial heartbeat data from these devices in a digestible visual dashboard. This would provide Farmers Edge with the ability to monitor the status of individual devices and quickly identify issues, improving their overall data quality.

POWERFUL PARTNERSHIP: STEP BY STEP Scrum Ceremonies With the CTO

To ensure we efficiently separated the wheat from the chaff, our team worked closely with the Farmers Edge chief technology officer. We wanted to ensure the data we captured was accurate before it was fed into the dashboards our experts built. Every deliverable was designed to solve a specific issue, and we held regular scrum ceremonies to ensure the work was completed according to the project timeline. Given our background as an experienced Google Cloud Partner with proven skill in IoT data analytics services and infrastructure optimization, Farmers Edge trusted us to promptly deliver results.



Real-World Results

Through our dedicated sprints and scrum sessions, we easily built the data pipeline and normalized the data stored in BigQuery. Farmers Edge now has IoT data visualization, powered by Looker, pulling near real-time data from thousands of IoT devices globally. This dashboard gives Farmers Edge the ability to organize devices by region, convey information in heat map formation and provide reports on heartbeat data readings. All of this will increase both the reliability and availability of information to Farmers Edge customers while providing a scalable model for future growth.



Improved data quality



Increased reporting accuracy

“TEKsystems’ expertise in the latest cloud technologies has allowed us to improve our IoT pipeline’s scalability and security. With their support, we’ve gained better observability and monitoring capabilities, ensuring that our systems are not only robust but also are optimized for future growth and will support the continued momentum for our managed service offerings for large-scale agribusiness clients. We look forward to continuing our collaboration as we push the boundaries of innovation.”

—Manoj Regmi, VP of Technology at Farmers Edge

About TEKsystems and TEKsystems Global Services

We’re TEKsystems. We accelerate business transformation for our customers. We bring real-world expertise to solve complex technology, business and talent challenges—across the globe. We’re a team of 80,000 strong, working with over 6,000 customers, including 80% of the Fortune 500 across North America, Europe and Asia, who partner with us for our scale, full-stack capabilities and speed. We’re strategic thinkers, hands-on collaborators, helping customers capitalize on change. We’re building tomorrow by delivering business outcomes and driving positive impacts in our global communities. TEKsystems is an Allegis Group company.

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