opentext™

Data Science and Analytics Supports an Evolution in Farm Data and Farm Decision-Making

Human Interest Story
Analytics and Big Data

At a glance

Industry
Agriculture

Customer
The Climate Corporation

Location
Missouri, USA

Context
Leverage data and data science to help farmers around the world make management decisions that optimize crop yields, field inputs, management efficiency, and farm profits.

Our Response
Vertica Analytics Platform

Impact
- Reduce the impact of hunger around the world
- Minimize environmental impact
- Sustainable and innovative farming with higher yield

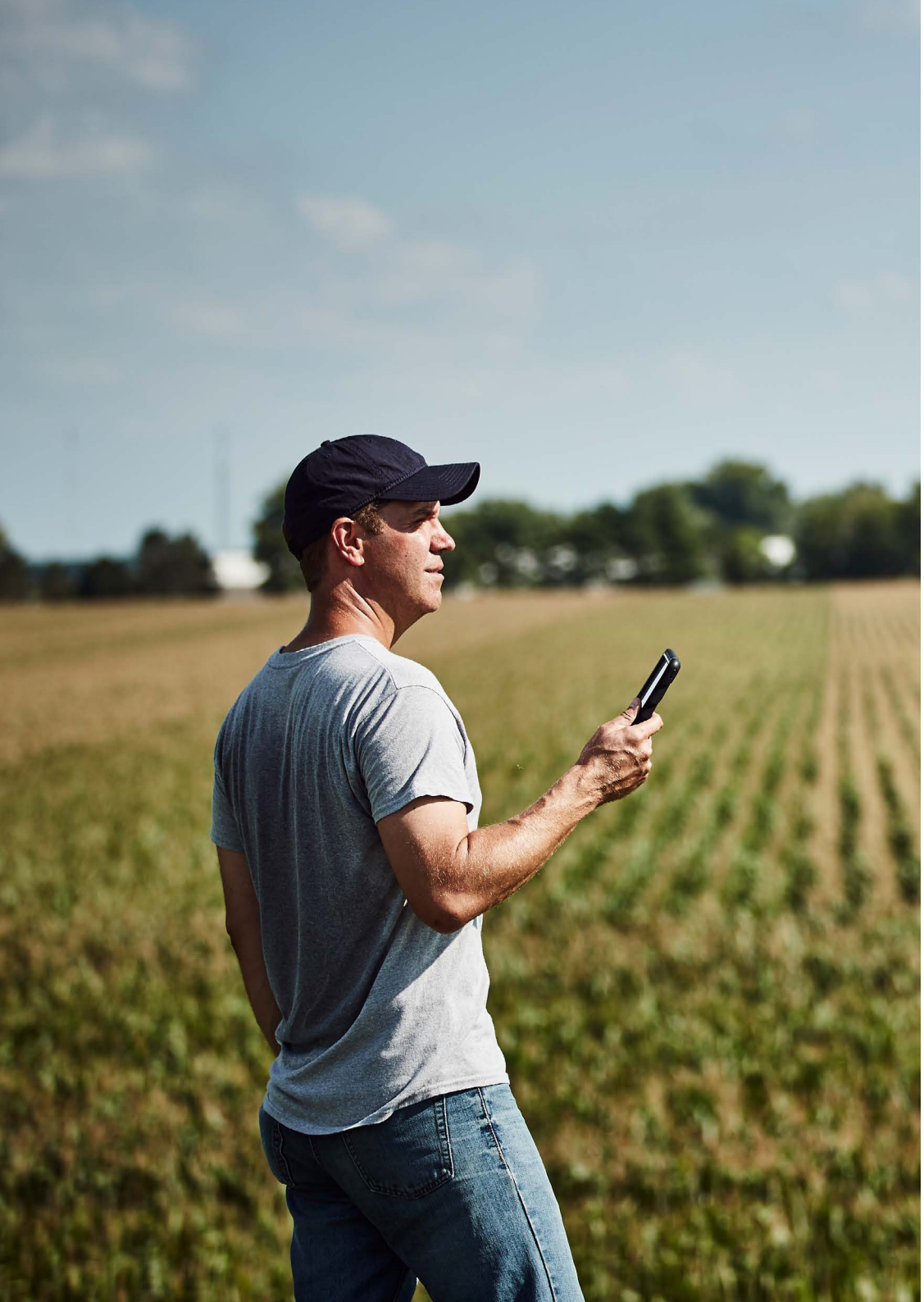
Focus Area
Predictive Analytics

THE CLIMATE CORPORATION

The Climate Corporation is dedicated to creating technologies that transform field data into meaningful insights to help farmers sustainably enhance yield potential, improve efficiency, and manage their risk.

Digital agriculture for actionable insights

Digital agriculture is not only one of the most exciting new frontiers in the advance of technology and science, but serves as a central element supporting one of agriculture's—and humanity's—most pressing concerns: increase crop yields for a growing population, right-size farm inputs to reduce environmental impact, and enable farmers to more purposefully navigate the increasingly complex set of decisions they make for their fields throughout the year.



Just 1.3% of the domestic U.S. workforce[1] is responsible for producing the food we eat. This small portion of the population manages massive amounts of land; in 2017, U.S. farmers managed just over 2 million farms compared to nearly 7 million in 1935[2], representing not only a sharp decline in number of farms but a vast increase in the information being managed by each farmer.

The scale of the data coming off any farm is massive, varied, and complexly interrelated. The need for clean data to drive future mathematical model development and thus actionable insights to farmers is great and urgent. The agriculture of the past, with manual notebooks kept inside tractor cabs, has passed but it's not that far in the past. Digital agriculture has evolved rapidly over the last decade and with it digital solutions.

[1] www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy.aspx

[2] www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/farming-and-farm-income/

The Future of Sustainable Agriculture

Millions of acres of clean data, well curated and organized, across a range of geographical and management conditions, is the future of sustainable agriculture. OpenText™ Vertica™ Analytics Platform plays a key role in the technology landscape at Climate. Erich Hochmuth, Senior Director of Data and Analytics, comments, “Vertica’s (now part of OpenText™) analytical and spatial functions allow The Climate Corporation to sift through the diverse datasets and get an accurate lay of the land to enable decisions from the direction of new products to the accuracy of our scientific models.”

When it comes to the need to transform the way data is managed on the farm, understanding that data is a key piece. OpenText has enabled critical insights coming out of our trove of FieldView™ data. The team responsible for deployment of the FieldView products use OpenText to better get a sense for how Climate customers are using its apps, and all of the core metrics of success are computed and powered from OpenText.

Maximize Yield Through Advanced Analytics

Agronomic recommendations are made available back to the farming clients via a SaaS application to assist them in picking the best seed for next season. OpenText's analytics and spatial capabilities helped enable Climate's data science teams to build and validate the models powering these agronomic recommendations, and drive insights to help its customers successfully use Climate products.

Hochmuth, on the nature of the data Climate has to correlate and analyze, "At Climate we're working with data not just coming from what's being planted, but from the clouds and weather in the sky down to the composition of the soil that holds the crops in place. Traditional data solutions couldn't make sense of the multitude of data layers a farmer has to care about. OpenText's analytics and reporting functionality greatly reduces the time our teams would need to spend synthesizing data into insights."

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>
> **Erich Hochmuth, Senior Director of Data and Analytics**

Doing More With Less

Hochmuth concludes, “Vertica (now part of OpenText™) is a critical technology that helps Climate collect, clean, and organize the big data within FieldView. One of my favorite things about FieldView is how it enables farmers to see all their data in one place. Having access to organized data that paints a clear picture of what’s happening on a field is step one; step two is pushing that data a little further to help enable farmers to make the best on-farm decisions they can, raising their yields, their profits, and the sustainability of their land.”

This is the real impact of FieldView: doing more with less. Over the next several decades, the demand for food will greatly increase while the land available for, and suited to, the cultivation of crops that the world needs will decrease or remain flat. Data and analytics are driving us toward the future of farming in which we’re producing more, making the best decisions possible, and feeding the world.