

Revolutionizing Agriculture with IoT and Big Data

About the Customer:

The Central Ministry of Agriculture and their District level Department of Agriculture located at Kaithal, Haryana and Morena, Madhya Pradesh.

The Challenge

The Central Ministry of Agriculture and their District level Department of Agriculture in Kaithal, Haryana and Morena, Madhya Pradesh faced a challenge connecting farmers with agriculture experts, providing consulting services for farming communities, and organizing data collection and analysis to improve productivity.

How Quantela Helped

Quantela provided a custom-built smart agricultural platform that uses IoT sensors, non-IoT databases, and satellite images to collect and relay real-time soil content, moisture, weather, and other parameters. The platform runs on analytics and compute engines to extract insights on crop yields, weather patterns, plant disease patterns, soil quality, moisture content, forecasting, and other data, and makes it available to farmers and government officials through a mobile app. This helps reduce collaboration time between farmers and experts, improve productivity, and enable organized data collection and analysis. With the help of Quantela's holistic solution, farmers can make informed decisions on what crop to grow, what variety of seed to use, and what best practices to adopt to maximize the yield.

Outcomes Delivered

- ✓ **Facilitated communication and reduced time:**
The Citizen Mobile app enables farmers to log incidents with proper snaps of the farm/crop and receive appropriate advisory from department experts.
- ✓ **Data-Driven Decision-making:**
The IoT soil sensors measure and monitor soil and ambient temperature, helping to identify accurate irrigation requirements and plan crop calendars. Temperature variation is an indicator of crop stress and pest probability, which can be monitored and correlated with incidents. The platform also enables yield estimation, contingency planning and crop rotations, damage assessment, and compensation execution, and food grain sourcing planning for better food security.

Facts

Kaithal is a Municipal Council that falls under Kaithal District. The district of Kaithal is a flourishing agricultural area known for its cotton and rice

Morena is an agricultural trade centre. Oilseed milling and cotton weaving are the chief industries



Deployment Screenshots

