Mobile Pest
Disease Model
Data Analytics
Platform

VERSION 1

Origin Group plc is a focused Agri-Services Group. The main focus of the Group is to be the leading provider of value-add services, technologies and strategic inputs that support the delivery of sustainable and profitable food production solutions for primary producers.

Agrii is a leading agronomy company, offering independent and innovative advice to arable, fruit and vegetable growers. Agrii harnesses the power of skilled agronomists and the best intelligence to deliver unrivalled expertise and support for sustainable and profitable farming systems in Europe.

The Customer's Challenge

As a leading provider of agronomy services, technology, and strategic advice, Agrii combines excellence and innovation with the latest research and development to ensure our customers can meet today's farming challenges with knowledge and confidence. The challenge presented to Version 1 was to produce a means for Origin agronomists in the field to be able to retrieve the most up to date risk status for a given weather station against certain pests and diseases.

Solution

Version 1 designed and built two mobile tablet applications for iOS iPads using the Ionic framework with Angular JS on top of Apache Cordova. Both applications incorporate Mapbox Maps with points plotted using a geoSpacial library called LeafletJS. Each point on the map represents a Weather Station and the icon changes based on the current risk of being affected by certain pests and diseases.

The user is presented with a summary of the station details and current risk status and further detail showing details of the risk status based on crop sowing and spraying dates. The details page on the other application shows a timeline based on emergence and egg-laying. Both applications use a local SQLite database refreshed daily through Azure Mobile Services pointing at an Azure SQL Database.

The database is populated nightly by a two-stage process. The first stage is an Azure WebJob which runs on a schedule and calls out to the Weather Station API's, iterates through each weather station and retrieves the required air and soil temperatures down to 15-minute intervals and places that data in a staging set of database tables. The second stage is to use this data to generate the analytics models to output the data to both applications.

Business Benefits Delivered

The previous process was for the Origin scientists to manually retrieve the weather data, cleanse and prepare it and then using Microsoft Excel, produce tables and charts to populate PDF's for email distribution. The whole process could take some months to complete. However, the new process automatically retrieves the data, generates the model and outputs to both apps daily. Therefore, the users always have the most recent data on hand when required.

To find out how Version 1
can support your Digital
Transformation, contact us:

www.**version1**.com