Client Overview

The client is a national, farmer-owned food and agricultural cooperative with sales in excess of $12 billion. The company does business in all 50 states and more than 50 countries. It is a leading marketer of a full line of dairy-based consumer, foodservice and food ingredient products across the United States. It serves its global customers with a variety of food and animal-feed ingredients. It also provides farmers and ranchers with an extensive line of agricultural supplies (feed, seed & crop protection products) and services.

Business Context & Challenges

The client was using a web tool called the R7 Tool that helped in marking the field area on a map and creating a variety of analytical maps. The different maps gave insights into the quality of the field, the type of soil in the field, etc. They also showed the performance of various hybrid products (feed/seeds/crop protection products) across a specific region and on particular kinds of soil.

The client needed a native app for iPad so that sellers could

- Visit the growers’ location (information availability on-the-go)
- Educate them on field conditions
- Suggest products and their quantities they could use on their fields
- Have access to information in offline mode

There were a number of challenges relating to

- User Interface
- App performance (as it involved large amounts of data)
- Synchronization of information with the back-end server the availability in offline mode
Tavant Solution

After ascertaining the client’s requirements and consulting the creators of R7 web tool, Tavant offered an interface design that would look similar to the web tool. One of the various objectives was to maintain the features of the web tool so as to maintain consistency in the usability of the app.

A number of touch gestures were introduced, based on actions within the app in order to increase the application’s features.

The Apple Maps framework posed a challenge by not supporting custom drawings. To deal with this challenge, Tavant designed a custom layer to capture the user interactions of the field border drawing, apply that information on the map layer and present it as a Polygon layer. Tavant also introduced a Magnifier component that would appear on the screen when a user moves his finger across the map to create the field. This allowed the user to draw accurate field borders. A custom control was also developed to apply map images on the fields that could be marked by the user.

The client’s sales team visited a number of growers in rural locations where mobile phone connectivity was a challenge. In this situation, the offline availability of information was a plus. The cache requirements were analyzed and data was saved on the device, depending on the sellers’ usage of the R7 tool at the clients’ location. The seller needed to sync the data of the growers he was visiting (i.e. field & maps) and present the information in the offline mode at the location.

Project Execution Methodology

- Hybrid Agile
  - Three week development iterations
    - Joint development teams (Tavant & Geosys) with clearly defined work items
    - UI design and wireframe signoff before the start of each iteration
    - Client demo of the developed feature to key stakeholders at the end of each iteration
  - Feedback and Retrospective
  - Weekly status reporting
  - UAT (Client side)
  - Production Release

Agile Development

- Define use cases per feature
- Define tasks, risks, and actions for a requirement using JIRA - Green hopper
- Define all other types of scenarios for a requirement
- Declare a requirement as base-lined to control further changes
- Weekly status reporting and application demo to key stakeholders
Business Impact

- Drawing the field area on the map became easy
- Faster app which was more responsive compared to web tool
- The new user interface was highly appreciated
- New graph component added marketing value
- Offline support when the connectivity was not available
- Adding the cached product images made the browsing enjoyable

Technologies

R7 is an iOS Native App developed for the iPad using
- Cocoa Touch Framework
- Objective-C language
- C++ languages
- Apple Xcode 4.6 with iOS 6
- Core Location, Core Data, Core Graphics and Map Kit have been the frameworks used in this App

About Tavant

Tavant Technologies is a specialized IT solutions & services provider that leverages its expertise to provide impactful results to its customers. We have leveraged our unrivaled capabilities and domain insights to create game changing results for leading businesses across chosen industry micro-verticals. We are known for our long-lasting customer relationships, engineering excellence and passionate employees. Founded in 2000, we are headquartered in Santa Clara, California and service customers across North America, Europe, and Asia-Pacific.