e-Zest Improves Farming Operations With Flexible ERP Solutions For Farmers

With many years of experience in the farming space and IT, this farming solutions company is started and run by two key founders. The client who was initially running a cloud based ERP for SMEs, later co-founded the company which offers farming solutions to the farmers based in Ireland. The company is dedicated to help the farming community in Ireland to minimize and simplify the farming related regulations and paperwork.

Situation analysis

Back in 2011 as paperwork was increasing due to EU regulations, the time taken by farmers for maintaining their records on inventory, transactions, compliance and vendor management was much more than the actual time taken for farming related activities. Furthermore, the client observed the needs in farming largely vary in its functions from every farm which demands for a system that can be widely used by all farmers regardless of the kind of farming they are doing.

The vision

While there were many solutions available in the market designed to suit the large-scale farmers in Ireland, those were too complicated to understand and use and cost thousands of dollars to suit the concerns and budget of small and medium-scale farmers.

Recognizing this growing need for an effective and easy to use solution, client envisioned an ERP solution for farmers that eliminate manual monitoring and paperwork due to increased EU regulation.

Our solution

e-Zest team of developers understood the requirement for a solution that is very simple and easy to use by all kinds of farmers, and designed a farm management software with a elaborate architecture that includes every farming specific activity as described by the client. Soon 200 farmers signed up to trial the application and provided feedback. The farmers were extremely satisfied by the performance and based on their feedback we integrated various functions into the application.

Technology stack

- ASP.NET MVC
- NHibernate as ORM tool

- HTML5.0
- Knockout
- jQuery

How we did it!

The client wanted a very light weight application for farmers. Also, performance was a major criteria. Hence, we suggested MVC Framework with HTML5/Knockout as frontend for building this application.

Farmers could use this application to check and manage various farming activities with ease. The application's dashboard gave them a quick overview of the farm with a brief status on different activities, crops, locations, inventory and purchases. Any transaction or purchase order is synced with Xero online accounting software, this generates different reports and data analytics on the overall spends and inventory status.

The development team after much brainstorming, integrated Bing maps for its accuracy. This feature was very useful as the area of various farms can be marked and viewed directly through the application. The area is automatically calculated once the farm is marked.

For easy online compliance management, we integrated various APIs for compliances such as BCMS (for UK) and AIMS (for Ireland). This very unique feature of the app was also highly challenging to integrate.

As UK and Ireland have a lot of regulations on the quality of the beef and live stock animals, the solution was successfully built to support many key functions of herd management such as beef and dairy farming.

Project highlights

- Integrated various APIS for compliance such as BCMS (UK) and AIMS (Ireland)
- Integrated Xero online accounting software
- Integrated dynamic Bing maps
- Test Driven Development to write clear, maintainable code and improve the application design

Challenges

- The architecture in itself was very challenging with CQRS design pattern. Understanding each and every farming specific activity while and before designing architecture was an elaborate process which was challenging.
- One more challenge was integrating knockout, as the team had to integrate it in MVC which was a complex process.
- The Xero integration with accounting software solution provider was another challenge as the team faced many technical issues integrating this third party API successfully within the application.

Business benefits for farmers

- The software's ability to capture farm events on real time allows farmers to update their records quickly, giving them time to focus on their core business i.e. farming.
- Farmers can efficiently plan their activities, track inventory, and operational costs and record various farming related data on-the-go.
- As the application is web based, farm records can be accessed from any place and any device making the information available to the farmers at their fingertips.

- The intuitive interface of the application and responsive design makes the application available to both desktop and mobile users.

Business value for the client

- The application has won many prestigious awards and also has been shortlisted as one of the 10 best farming applications across Ireland of the 150 applications available.
- Recently the application achieved certification from AIMS which is a government body in Ireland taking care of compliance related to Herd/Beef Farms.
- After winning various awards, client is targeting different countries with similar model. The success of this application has increased the user base expanding the client's business.

Conclusion

e-Zest helped define the scope of the project, ultimately delivering the first ERP solution for farmers in Ireland and within the company's ERP environment. With e-Zest's solutions, the farmers can ensure timely compliance. The application features and dashboard gives a total overview of the farm on a real-time. Farmers can track their activities, inventory, farm locations and weather reports at just a press of a button saving them the much required time for farming.

e-Zest was successful in delivering the farming solution as per the client's expectations with unique features which was the first of its kind in Ireland and within the client's ERP ecosystem winning them many prestigious awards.

e-Zest