



CASE STUDY



SMARTFARMING

Eastern Enterprise worked with SmartFarming - an Agro startup - to develop an app that helps farmers maximize their yields and profits.



Eastern Enterprise

About SMARTFARMING

SmartFarming is an exciting new startup in the agriculture industry based in Netherlands. The company was founded back in 2014 by two young agriculture research students Rob & Sven. Their backgrounds, experience, as well as their passion for agriculture and technology, are the perfect foundation to serve B2B customers to their needs.

SmartFarming Tech in collaboration with Eastern Enterprise developed an Android-based app to help farmers improve farming production, deal with crop diseases, improve weather forecasting and in general, improve farm incomes.

Project Challenges

SmartFarming - rather than just an enhancement, it is a necessary innovation, which if correctly implemented could help farmers to deal with all the challenges they face in farming. Moreover, the rich insights derived by the application could help farmers be more precise in their use of pesticides and fertilizers, thus mitigating some environmental impacts. Technological deployment in agriculture can address many challenges and increase the quality, quantity, and cost-effectiveness of agricultural production.

Considering the above reasons, the client wanted to develop an application to help farmers improve farming production, deal with crop diseases, improve weather forecasting and in general, improve farm incomes. Likewise, the app should manage different variety flow, daily advices, and irrigation cycle of the particular user base. The app should also guide the farmers by notifying what needs to do. Further, the client also wanted to implement a spraying module which was the most challenging task faced by our developers, as we had to manage the spraying advice based on the weather forecast condition got from OpenWeathermapAPI.

Our Solution

Just like any other living organism, crops too are susceptible to diseases. On one hand these diseases have dangerous effect on the vital function of the crops, on the other hand, it also affects the life of the farmers who struggle tremendously to achieve a high and healthy yield from their crops. After going through the client's requirements, Eastern Enterprise proposed a solution to develop an android app for both cotton and potato with a CMS which would be used by the SmartFarming Team to guide the farmers in India. The app provides guidelines for the following farmer tasks:

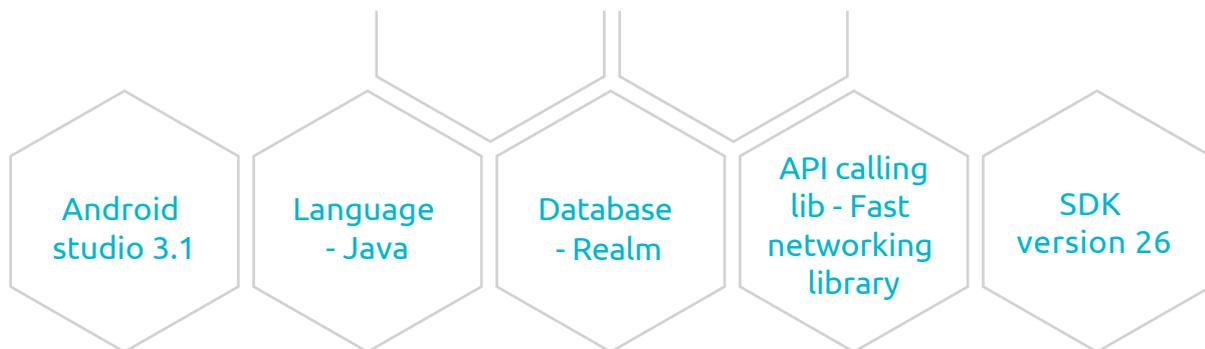
- **Pre-sowing** – provides suggestion on how to sow the seeds.
- **Daily-advice** – provides advice on a daily basis on what is to be done and when.
- **Irrigation** – suggests the farmers if the irrigation is needed or not, if needed how much water is needed for irrigation.
- **Fertilization** – suggests the farmers about what amount of fertilizer to be applied on the farm.
- **Spraying** – lets the farmer know when they need to spray.
- **Identification** - lets the farmer know how the crop will look at each stage. The identification flow may vary based on the variety set in user profile.

The SmartFarming app is a decision supporting tool for sustainable potato and cotton farming. Further, the app provides the farmers with information about their crops which involves:

- Integrated pest and disease management
- Pre and post-harvest techniques
- Good agricultural practises
- Measures to prevent pests and plagues
- Soil and water management

The solution was built using the technology stack:

App Side



CMS (Back-end)



End Result

The client was extremely satisfied with the end-result and commended us on our approach towards the project. The app provides farmers an improved ability to identify economically-important pests, diseases and nutrient deficiencies and manage them in order to safeguard crops and livelihoods. The app further offers advice on remedies ranging from conventional control options to preventive measures.

By using the app in crop management, the farmers are able to minimize external inputs and increase yields. The app will support farmers to grow better quality crop and help farmers to prevent their crops from being harmed. In this way, the potato and cotton farming becomes more profitable. The app is now used by 5000+ users and it is still increasing day by day.

Key Benefits

- Optimized crop treatment such as accurate planting, watering, pesticide application and harvesting directly affects production rates.
- Automating processes in planting, treatment and harvesting can reduce resource consumption, human error and overall cost.
- Analysing production quality and results in correlation to treatment can teach farmers to adjust processes to increase quality of the product.
- Accurately tracking production rates by field over time allows for detailed predicting of future crop yield and value of a farm.
- Local and commercial farmers can monitor multiple fields in multiple locations around the globe from an internet connection. Decisions can be made in real-time and from anywhere.

We are experiencing the collaboration with Eastern Enterprise as very pleasant. We especially like the direct contact with the whole team, their flexibility and commitment. The team always thinks critically along with us to get to the best solution for our situation.



Rob van Oudheusden,

Director Product & Technical / Co-founder, SmartFarming



About Eastern Enterprise

Eastern Enterprise is a Dutch IT services company specialized in crafting software solutions for startups, small & medium enterprises with passion and dedication. We are a strong team of 250+ technology artists helping 100+ clients across Europe in creating software solution that are robust, creative, modern, user centric, logical and secured.

We are specialized in software product development, mobile app development and custom application development for startups. With our mature quality processes, agile development approach and unique engagement model we ensure that we deliver perfect solution for all your business needs.

We work as a trusted technology partner that provides end-to-end solutions for all your software development requirements. We don't just develop solutions but we craft them for your custom business needs using the cutting edge technology platforms.

For more information, please visit:

<https://www.easternenterprise.com>