HOW THE ADAMA PASTAGEM APP REVITALIZED RANCHING AND WON BRAZIL'S *VALOR INOVAÇÃO* 2021 AWARD

BRQ Digital Solutions

Scenario

As a global leader in crop protection, ADAMA provides solutions for farmers throughout the world to fight weeds, insects and crop diseases. It boasts one of the world's most extensive, diverse portfolios of active ingredients, as well as latest-generation facilities for R&D, manufacturing and formulation. The company has a staff of 9,000 and a business presence in more than 100 countries.

ADAMA was founded in Londrina, Paraná, in 1970. In short order, Herbitécnica became one of the country's largest pesticide resellers. Five years later, the first formulation unit was launched. In 2001, the company was purchased by Israeli group Makhteshim Agan, which was then incorporated by ChemChina in 2011. Since 2020, ADAMA has been part of one of the world's largest agribusiness holdings: Syngenta Group, a global leader in agricultural science and innovation.

Annual revenue of
USD $726 million (2020)

Installed capacity of
170 million liters/year

Business presence throughout the entire country. **More than 700 employees in Brazil alone.**

Business Challenge

One of the greatest challenges for the ranching sector is identification of weeds that infest grazing areas and consequently reduce potential productivity for pastures.

These plants compete with grass for water, space, light and nutrients. The resulting damage can be substantial. In the case of grain production, for example, losses run on average between 13 and 15% of the crop.

According to Embrapa Soja (Brazilian Farming and Ranching Research Company), crop yield losses could exceed 90% in the absence of a control mechanism for weeds. It is estimated that herbicide-resistant weeds (in the country's most diverse production systems) may generate up to 9 billion reais in damage to Brazi's farming and ranching industry.

The average cost of weed control in Brazil is R$ 120 per hectare.

Business Challenge

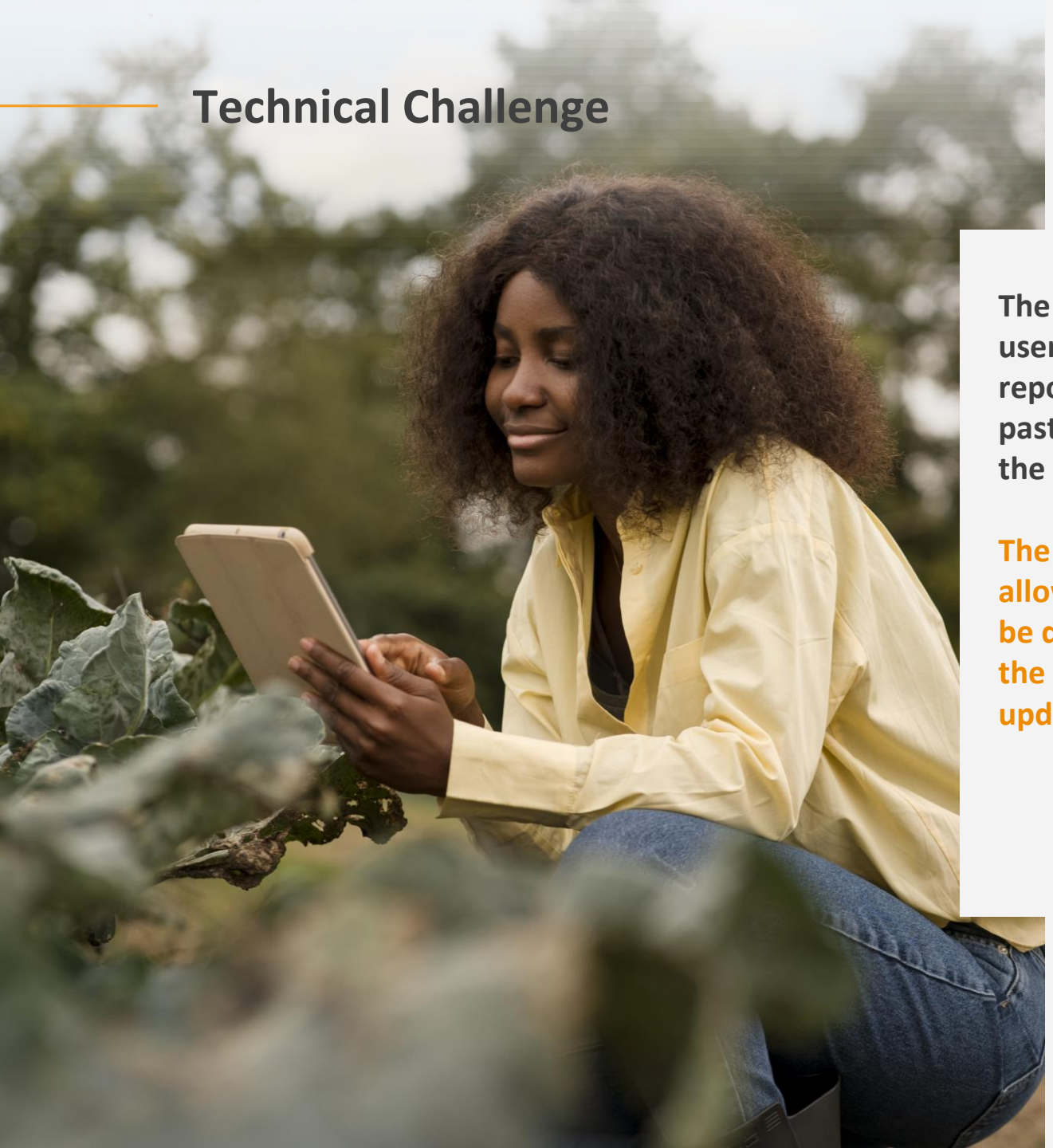
Create an app that can:

- Identify weeds in pasturelands;
- Recommend weed control products from the ADAMA portfolio;
- Facilitate communication between the rancher and ADAMA;
- Provide a database with photos and information about major weeds.

In Brazil, the market for selective herbicides used on pastureland was approximately USD $600 million in 2022. According to Vinicius Bolete, ADAMA Product Manager, Herbicide adoption (% of area treated vs. total area) in pastureland is still low when we look at potential use. The reality today is that producing meat or milk on grass costs less.

"Losses in grass productivity (reflected in milk or meat production) are huge, they easily go from 20% to 60% reduction in productivity, for example," Boleta concludes.

Technical Challenge



The innovative element of this app is the way it allows users (consultants, representatives or ranchers) to send reports and identify infestations occurring in the pasture, then receive product recommendations from the ADAMA portfolio to fight the weeds.

The app was built with offline-first architecture, which allows all queries and records of infestation reports to be done offline. Only later, with a Wi-Fi connection, will the app sync to send reports and receive database updates.

What BRQ did

BRQ developed the app using the *Flutter* cross-platform framework to reduce costs and speed up development. The BRQ team also developed all APIs and integrations with the ADAMA system.

We made the entire service available on the AWS Cloud. A web portal was developed for the system administration environment.

**BRQ's tailor-made services follow a process that encompasses several stages, each with a specific purpose.
Stages we used for this project included: *Discovery*, *UX*, Execution, Implementation and Support.**

Discovery: BRQ worked to discover true obstacles and needs, building a tailor-made project to meet ADAMA's demands and expectations in a way that is viable, agile, and on-time.

UX: *User Experience*. BRQ applied this methodology to prioritize the app user's experience. Our goal was to provide simple, intuitive interaction with the new work tool.

Some tools and technologies adopted during the process:

Cloud: AWS | Mobile: Flutter | Backend: Java/SpringBoot | Web: Angular

What BRQ did

Main app functionalities:

1. Database of major weeds;
2. Communication between the STR (Sales Technical Representative) and the rancher;
3. Visit reports and history;
4. Reccomendations from the ADAMA portfolio;
5. Offline access.

Impact and Results

Main results from the development of the ADAMA Pastagem app:

- More than 900 active users on the app;
- Engagement rate: 68% (from user interaction);
- Average time spent on the app: 10 minutes, 9 seconds;
- Brazil's Valor Inovação 2021 Award, category: Agribusiness, 3rd place in the ranking, the ADAMA Pastagem app was listed as the most significant innovation.
- The app helped improve communication between users and ADAMA: information can be submitted through the app, and ADAMA suggests the best crop management solution from its portfolio.

Access the app at ADAMA's website

FACING A SIMILAR CHALLENGE? SCHEDULE A CHAT WITH OUR SPECIALISTS

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