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Business Domain

Geospatial sector,
Agriculture

Project Type

GIS WEB System/Service

Transforming Productivity in Agriculture: Intetics' GIS Solution Empowers Government and Individuals with Informed Decision-Making, 20% Lower Development Costs

Client

The Client actively engages in R&D of tailored data analytics solutions for policy makers and business entities in one of the largest Central Asian countries.

Project

Development of a GIS portal to (1) collect, analyze, and display agro-ecological data, (2) remotely control agricultural land, and (3) support operational decision-making, forecasting, and planning of agricultural operations.

Objective

- The Client's needed to create comprehensive all-in-one GIS systems and services that
- Meet the needs of companies, government, and the entire country;
 - Store, analyze, control, and facilitate agronomic planning based on field data;
 - Ensure the utmost accuracy and relevance of the displayed data for users;
 - Exhibit robustness, stability, and the ability to handle high workloads effectively.

Team Reinforcement

Intetics has assembled a specialized team, including Front-End, Back-End, Business Analysts, Quality Assurance, and Project Managers, with extensive expertise in GIS technologies and a profound domain understanding.

Challenge

The Client aimed to establish a user-oriented service offering comprehensive agricultural data to support operational decision-making for private farming, agricultural production, and the industry's state administration.

The Client didn't have experience developing such complex GIS projects, so they were looking for a reliable partner with relevant expertise.

Quick Facts

- ✓ Designed 98% of the Client's data management system in one web service
- ✓ Most of the end users immediately implemented the system
- ✓ Extensive system of access rights
- ✓ Development costs reduced by 25%

Technologies

Angular9 / PostgreSQL12 / PostGIS3 / PHP8 / Laravel6 / Nginx / Redis / Bootstrap4 / HTML5 / SPA JavaScript / RESTful API / Swagger / primeNG

Solution

★ 01

The GIS solution helps the government and individuals make informed agricultural business decisions.

★ 02

The system allows data on fields and crops to be stored, processed, and analyzed. It also provides advice about increased yields and the need for irrigation. The users have data on weather, relief, and allocation of soil.

★ 03

The government can analyze the effectiveness of irrigation, regional yield, and the usage of agricultural lands. It can also monitor crop conditions and analyze the results of agroecological solutions.

★ 04

The turnkey solution guaranteed precise data and enabled interactive integrations with diverse systems and services.

★ 05

With the expertise of GIS professionals and business analysts, the ODT® team independently designed, developed, and delivered the solution to the customer.



Client Reference



The solution allowed for enhanced data-driven decision-making for both the government and businesses dealing in the agricultural industry. The data is of high quality and provides a comprehensive view of the industry's state in real time.

Benefits and Results

- ★ The Client introduced an all-in-one GIS solution to store, analyze, and control field data, as well as to facilitate agronomic planning and enable informed decision-making.
- ★ The system enables remote control of agricultural land, which includes operational monitoring of sown areas, forecasting, and planning of agricultural operations.
- ★ The Client's data management system has been optimized by 98%.
- ★ The system offers guidance on improving yields, crop conditions, and irrigation requirements. It also allows the government to monitor agricultural land utilization and analyze the outcomes of agroecological interventions.

Techstack:

Angular9, PostgreSQL12, PostGIS3,
PHP8, Laravel6, Nginx, Redis, Bootstrap4,
HTML5, SPA JavaScript, RESTful API,
Swagger, primeNG

Team: 8

front end, back end,
DevOps, BA, QA,
Manager, GIS specialists