

KERNEL CASE STUDY

A blue tractor is driving on a dirt road through a field, with a person in a field hat visible in the background.

Working with Miratech was a game-changer for our Digital Agribusiness project. Their expertise, transparency, and commitment to quality were evident from the beginning.



OVERVIEW

Kernel, a leading player in the agribusiness sector, recognized this imperative and embarked on a transformative journey to enhance its operations through digitalization.

Teaming up with Miratech, a distinguished IT services and consulting provider, Kernel sought to revolutionize its agribusiness processes, streamline decision-making, and boost productivity through advanced automation and data-driven insights.

AT A GLANCE

CHALLENGES

- Cutting-edge solutions and expertise
- Comprehensive overhaul of agribusiness
- Real-time data-driven insights
- Intuitive & scalable system
- Seamless integration

BENEFITS

- Enhanced yield & cost reduction
- Streamlined operations
- Data-driven insights
- Improved digitalization





KERNEL IS DRIVING TRUE DIGITAL TRANSFORMATION IN AGRIBUSINESS WITH MIRATECH

OBJECTIVES

The objective of the project was to revolutionize the agribusiness sector through advanced automation, data-driven insights, and technology integration. The project aimed to create a comprehensive platform that would empower agronomists and decision-makers with the tools and information needed to optimize various aspects of agribusiness operations.

SOLUTIONS

Kernel approached this challenge through a strategic partnership with Miratech. The collaborative effort entailed several interconnected systems and microservices to address various facets of agribusiness.



Planning

Agronomists received intelligent recommendations for planting based on historical data, optimizing resource allocation, and enhancing efficiency in seeding, harvesting, and fertilization.



Scouting

Real-time field reports, complete with videos and soil analysis, enabled informed decision-making by providing actionable insights into field conditions.



Field Passport

A comprehensive overview of vital indicators for each field empowered stakeholders with crucial information.



Fertilizer Calculator

Calculation of the needs for active substances for the field, based on many indicators of soil (agrochemistry), predecessor culture and others.



Laboratory Analysis

Detailed analysis of soil composition and other indicators facilitated informed agricultural practices.



Machine Learning

The integration of machine learning enabled the analysis of drone-captured images, enabling the identification of crop issues and optimizing crop planning





KERNEL IS DRIVING TRUE DIGITAL TRANSFORMATION IN AGRIBUSINESS WITH MIRATECH

RESULTS

The three-year collaboration between Kernel and Miratech yielded remarkable results that surpassed expectations. The software is now processing 250,000 photos yearly and more 50,000 scouting fields reports. Kernel got an additional \$25m profit thanks to digitalization and precision agriculture for the last 10 years.



Empowered Agronomists

Access to historical and real-time data facilitated informed decision-making, leading to enhanced yield and cost reduction.



Streamlined Operations

Logistics management and field operations were optimized, resulting in smoother truck scheduling and reduced downtime.



Data-Driven Insights

The integration of machine learning and analytics provided actionable insights, enabling precise planning and problem identification.



Transparency and Accountability

The partnership fostered a culture of transparency, with Miratech delivering quality development and transparent cost reporting.



“Working with Miratech was a game-changer for our Digital Agribusiness project. Their expertise, transparency, and commitment to quality were evident from the outset. The collaborative effort resulted in a comprehensive digital transformation that has revolutionized our operations, empowering our agronomists with data-driven insights and optimizing our agribusiness processes.”

ANDRIY PSHIY

CIO, KERNEL

