



Using Data Technologies to Bring Innovation to Agriculture

JULY 2024
Case Study



Background

In the dynamic world of agriculture, staying ahead requires innovation and efficiency.

An agricultural firm sought to streamline its complex field mapping process to provide better data-driven insights to farmers. Faced with overwhelming data and intricate manual tasks, they turned to ARDEM for its expertise in utilizing technologies in the processing of large volumes of data.

This case study describes how ARDEM utilized GIS Mapping and other automation technologies to bring innovation to agriculture farmlands.

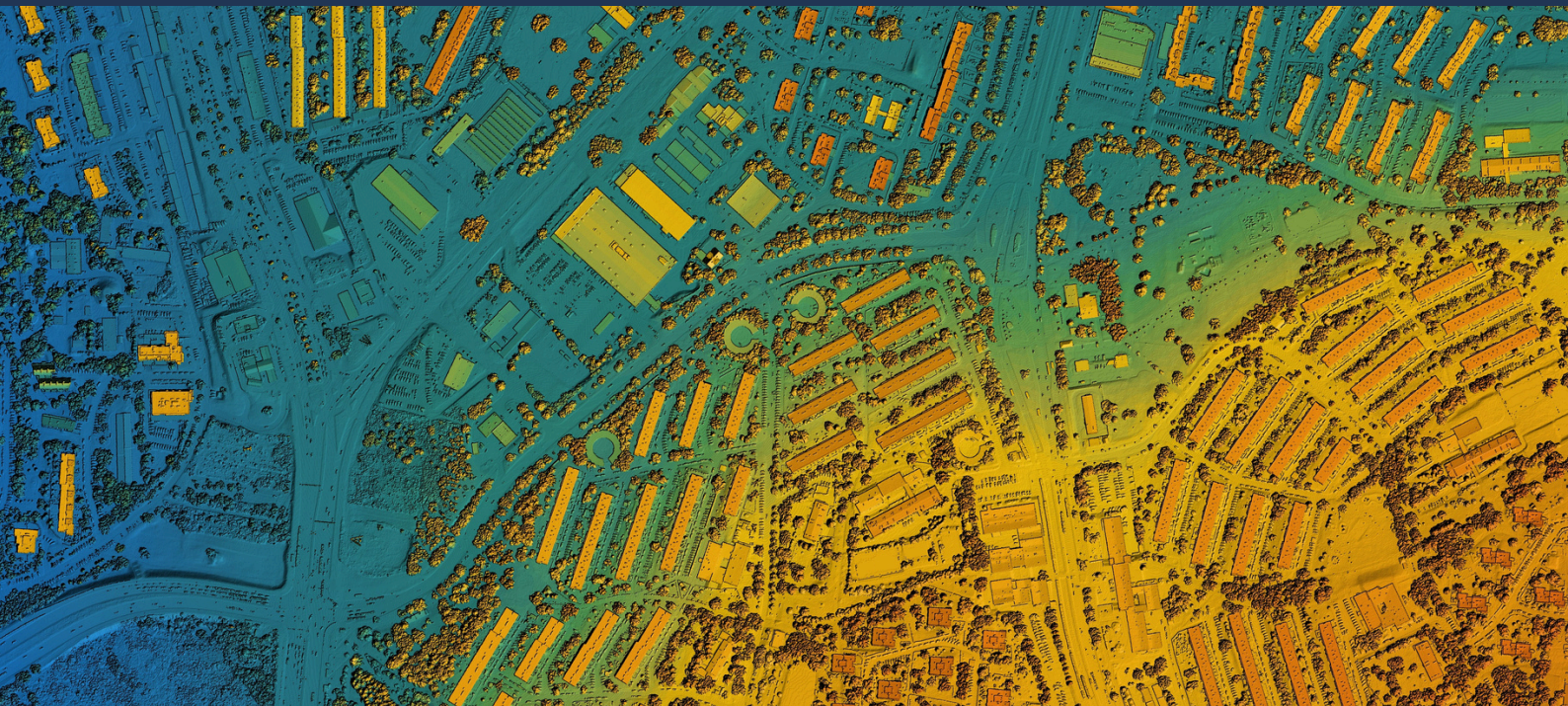


Mapping Challenge

Our Agriculture client required a solution to efficiently digitize and map large tracts of farmland for their enrolled farmers.

The challenges they faced:

1. **Volume of Work:** The sheer number of farmers and fields enrolled each season was overwhelming. The farmers provided field maps with specific nomenclature that needed to be digitized on an online mapping tool.
2. **Manual Process:** The task required manual drawing of intricate field boundaries on a digital platform, which was time-consuming and labor-intensive.
3. **Limited Internal Resources:** The company's team lacked the internal capacity and infrastructure to handle the volume of work, especially within the short timeframes required.
4. **Seasonal Peaks:** The enrollment of farmers and fields happened twice a year, creating peak periods of intense activity that further strained their resources.



ARDEM Solution

ARDEM was engaged to address these challenges. Here's how ARDEM leveraged its technical and large volume processing expertise to help the client:

Expertise in GIS Mapping

ARDEM utilized GIS Mapping analysts trained in arc GIS and other GIS Mapping software to map the fields. This expertise ensured that the digital maps were accurate and complied with the firm's specifications.

Training and Onboarding GIS Mapping Team

The GIS Mapping assignment required a rapid ramp up of trained resources. GIS Mapping Analysts were trained on the client's work instructions for creating digital maps.

A large team of analysts plus additional back-up analysts were trained over a short period to take on the assignment. Analysts had to be trained to do the GIS Mapping accurately and quickly.

Each analyst's work was tested for accuracy before allowing them to perform the mapping work for our client.

Handling Large Volumes of Mapping Data

150,000 fields, covering nearly 4,000,000 acres of agricultural land, needed to be digitally mapped within a two-month period.

Rapid scaling up of the team with qualified GIS Mapping Analysts, the need for quick and complete training and the daily management of assignment was required for an on-time completion of the assignment against the very tight time deadline.

Daily performance was tracked against daily targets of acreage that needed to be mapped.

Outsourcing GIS Mapping for a Cost Saving

Outsourcing GIS Mapping tasks to ARDEM was a cost saving for our client. The high cost of hiring a large team for a short-term project was saved. The cost of daily management and supervision of a large team was saved.

Training costs were saved. Costs related to dismantling the team after the short assignment were saved. Costs related to talent acquisition were saved. Having quick access to qualified and knowledgeable GIS Mapping Analysts at ARDEM was a definite plus.

Flexible and Scalable Mapping Team

The assignment required rapid scaling up of the GIS Mapping team. As more work came in during the execution phase, more members were added to the team. This is seasonal work for our client. Tapping into ARDEM allowed them to meet their client deadlines on time and with 100% satisfaction.

GIS Mapping Process

GIS Mapping is a systematic process to ensure accuracy and efficiency.

- **Data Collection:** The team collected field maps and the relevant field data provided by the farmers.
- **Digitization:** Using a Google-like mapping tool, the team created the field boundaries as per the specifications.
- **Quality Assurance:** Each map was reviewed for accuracy to ensure it met the mapping specifications.
- **Nomenclature:** The fields were named using the provided nomenclature, which included the farm name, tract name, and field name.

Large Volumes of GIS Mapping

**150,000
Fields**

**4,000,000
Acres**

**100% Accuracy
100% Client Satisfaction**

Success

Outsourcing the GIS Mapping tasks to ARDEM proved to be a winning decision for our client. The GIS Mapping of four million acres of agricultural land was completed on time. The mapping was accurate. Outsourcing the mapping was a cost-effective solution. Using technology, qualified GIS Mapping Analysts and expertise in managing large processing assignments, ARDEM delivered success to our client.



ARDEM Incorporated

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