Case Study:
Battlefield Farms

A commercial greenhouse boosts its IT services into the cloud with a focus on security and analytics.

About our customer

Battlefield Farms, Inc. is a commercial greenhouse that supplies hanging baskets, bedding plants, decorative planters, and holiday plants to retail vendors. The farm is 45 acres of covered production area and about 20 acres of outdoor production area in a beautiful, rural location in central Virginia.

The facility is monitored by state-of-the-art, automated AI-based technology to ensure optimal growing, watering, irrigation, flooring, soil mixing, light, and more for every plant varietal. They supply plants to national chains like Lowe's as well as smaller nurseries and outlets year-round. This digital transformation case study offers insights into how a leading agriculture business is overcoming challenges and rising to the top.

Challenges

- Rural location with spotty connections due to poor infrastructure
- Multiple systems with a lack of standardization
- Unnecessary waste and costs due to over-shipping and over-planting
- Increase in phishing and security threats

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>
> – Bob Haynes, IT Manager, Battlefield Farms

Bob Haynes, a savvy IT Manager at Battlefield Farms, approached Ricoh several years ago with a goal to bring digital transformation in agriculture to the farm and modernize its servers, network, bandwidth, Wi-Fi and receive ongoing IT support. Due to the farm being in a remote area, internet and cloud availability were unreliable and causing challenges. With the initial projects completed, Haynes was ready to take the next step in shoring up the farm's IT infrastructure.

With the farm's internet coming from a microwave tower, the farm often experienced internet outages due to high winds. Haynes began pushing heavily on the local government to request the installation of fiber cables. Since Battlefield Farms is the county's largest employer, Haynes ultimately convinced the county to lay fiber cables for better infrastructure and connectivity.

Simultaneously, Haynes was growing increasingly concerned about security threats in the form of phishing emails sent to employees. Of the farm's 50 users, those who occasionally logged in to check email posed the greatest phishing risk due to the hurried nature of their online sessions. With the new fiber cables installed, the farm could move its IT infrastructure to the cloud, focus on other pressing IT issues and minimize risks.

Results

- Cloud environment adds more resources and flexibility
- 97% decrease in search time for data: from 8 minutes on-premises to 15 seconds in the cloud
- Saved hundreds of thousands of dollars by eliminating unnecessary overplanting and waste
- Increased profitability with improved forecasting and planning with a business intelligence app
- New firewall security and servers are saving IT 5 to 10 hours per week
- Phishing email viruses will be isolated and mitigated immediately if clicked on
- 15 cyberattacks have been successfully thwarted

Battlefield Farms embarked upon a comprehensive overhaul of its IT systems, processes, migration to the cloud, and modernizing servers. Using Ricoh's support and services, the farm standardized its applications on cloud-based Microsoft 365. Working together, the teams also addressed security to prevent ransomware and other attacks.

"There's been great synergy between products and all of the projects we've worked on together," said Haynes. "Ricoh's IT Services have made a huge impact on our business, driving efficiency, security, and insights."

How we did it

- Provided ongoing IT concierge services with customer adoption specialists
- Enabled modernization to the cloud, tapping into better technologies and new applications
- Recommended Microsoft 365, including SharePoint's developer apps to prevent over-shipping, and Power BI to improve visibility and forecasting decisions
- Combated and prevented security threats and ransomware, selecting RansomCare by BullWall and SentinelOne

"Having the Ricoh team there to help support IT operations makes my job easier and frees up time for me to do other projects. Our regular meetings are also helpful for simple things like reminding me that a warranty is coming up for renewal, so nothing, including the minutia, slips through the cracks."

With fiber cables in place, Battlefield Farms began transitioning to create a stronger cloud infrastructure, lowering costs while gaining more resources. They consolidated servers and removed a major bottleneck, and greatly increased search speed. Before, it took about 8 minutes to search for information on-premises, while now, it only takes 15 seconds.

Together, the team implemented Microsoft 365, a powerful, cloud version of Microsoft applications. "With the help of Ricoh IT Services, we were able to eliminate a disparate number of applications and standardize on Microsoft 365. It's been a lot easier now. I've been dreaming about this for two years," said Haynes.

Using Microsoft 365, Battlefield Farms could address the costly problem of receiving more plants than they had ordered by developing a tracking app. It was a common practice that vendors would over-ship, leading to the use of more labor and resources — none of which were trackable. Now, the receiver takes pictures of the plant shipments and the app tracks it, enforcing the correct amount.

"SharePoint had a flexible app that we developed to create a tracking method for incorrect deliveries, which saved us a huge headache and hundreds of thousands of dollars, maybe more. It's a cascading impact. We now get the right amount of goods and are more operationally efficient."

Adopting Microsoft Power BI, a robust analytics and business intelligence tool, enabled the team to get quick access to data and make more timely operational decisions. Now, visualizing data that used to take 40 clicks and six reports happens in under a minute. "On the new SQL server with Power BI, we have visibility into what's selling and what's not. We can see how many plants are attributed to waste. And we can plan better for next year," said Haynes.

Other digital transformation benefits include the ability to integrate with the reports from large retailers (such as Lowe's). "With accessible data, we have the intelligence to make better decisions and forecast growing needs."

With the right tools in place, Haynes turned his focus to security. He attended a Ricoh webinar to learn more about phishing and how to prevent ransomware attacks. With Ricoh's guidance, preventative measures included employee training, new servers, a new firewall, and a world-class ransomware solution, RansomCare. The day after installation, three phishing attacks were detected immediately, causing security triggers to isolate the instance and lock down the infected computers. "The new firewall and servers have saved us five to ten hours per week not having to deal with phishing emails and other issues!" reported Haynes. "RansomCare works like a champ and provides the protection we need."

Battlefield Farms also fortified their security using SentinelOne, an innovative AI platform that defends against cyberattacks. In the first few months, they estimated the solution has prevented around 15 attacks.

With Haynes' extensive IT expertise combined with Ricoh's depth of resources and knowledge, Battlefield Farms can scale, increase profitability, and strive for operational excellence. The possibilities of digital transformation in agriculture are sprouting and flourishing — let's see what blossoms next.

To read more on digital transformation case studies or explore how Ricoh can help your organization digitally transform, visit our solutions pages: [Cloud & Infrastructure](#), [Business Process Management](#), [Digital Experience](#), [Cybersecurity](#) and [IT Services](#).

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