

ARMA modernizes Polish farming sector services with Red Hat



Software and services

Red Hat® Enterprise Linux®

Red Hat OpenShift®
Container Platform

Red Hat JBoss® Enterprise
Application Platform

Partner

Linux Polska

Poland's Agency for Restructuring and Modernization of Agriculture (ARMA) is responsible for developing the country's farming sector, including managing subsidies and food production programs. To improve how farmers apply for European Union (EU) payments, the agency undertook a digital transformation project to shift from manual, paper-based requests to an online application. This pioneering effort is supported by Red Hat container and application platform solutions. Combined with DevOps and agile approaches, the new platform has helped ARMA gain 99% adoption of its new application, simplify data storage and analysis, and attract top IT talent. The success of this project is inspiring change across Poland's public sector.



Public sector

12,000 employees

Benefits

- Replaced paper-based process with digital application for 1.35 million farmers, improving productivity and reducing errors
- Adopted DevOps and agile approaches, successfully demonstrating advantages of in-house IT approach
- Enhanced IT talent recruitment with position as innovation leader

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Sebastian Jaworski
CIO and Vice President, ARMA



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"Our agency is the best example of a success story in this field. We've demonstrated that IT is better managed in-house."

Sebastian Jaworski
CIO and Vice President, ARMA

Modernizing agriculture programs from paper to digital

The Agency for Restructuring and Modernization of Agriculture (ARMA) is responsible for developing Poland's farming sector, a critical component of the national economy. Poland is one of Europe's largest food producers, and millions of people are employed in its agriculture sector. As part of the European Union (EU), Poland must comply with the Common Agricultural Policy, a system of subsidies and programs to stabilize food production and manage the environment. ARMA manages these subsidy payments on behalf of the EU, paying out more than US\$42 billion to Polish farmers since 1994.

Each year, ARMA receives 1.5 million subsidy payment applications. To process these applications more efficiently, reduce manual errors, and simplify data storage and analysis, the agency sought to move from a paper-based system to an online application.

Poland's public sector followed the project carefully, as ARMA planned to use in-house talent and innovation to take a more dynamic, DevOps-focused approach instead of the country's typical practice of outsourcing IT functions to third-party service providers.

"ARMA's board and the Ministry of Agriculture were not sure if investing in our own IT staff to maintain and develop in-house systems was the right approach," said Sebastian Jaworski, CIO and Vice President at ARMA. "We knew that to succeed, we'd need the right technology to support this working model."

Building an agile environment for more efficient work

After evaluating several vendors during the procurement process, ARMA decided to work with enterprise open source provider Red Hat to adopt innovative yet stable software as the foundation of its new payment applications platform. The agency has had long-term success using Red Hat technology and open source applications within its IT environment.

"Red Hat's sales advisors helped create a detailed analysis of our needs and those of our beneficiaries," said Jaworski. "They offered innovative solutions, validated by detailed tests and proofs of concept, at an affordable price."

The core of this platform is Red Hat Enterprise Linux, an enterprise operating system that provides a stable, supported foundation for IT innovation. Within this environment, Red Hat OpenShift Container Platform provides a single platform for ARMA's IT operations and development teams to work together to develop, deploy, and manage applications throughout the agency's IT infrastructure.

In addition, ARMA uses Red Hat JBoss Enterprise Application Platform (EAP), an application server that helps ensure high performance and scalability of Java™ applications across environments. JBoss EAP complements DevOps practices and offers the latest components for continuous test and development capabilities when combined with Red Hat OpenShift.

ARMA worked with local Red Hat partner Linux Polska to successfully launch its new IT environment, including receiving technical assistance and training on its new Red Hat software.

With this new IT foundation, the agency began its shift to a more agile, collaborative work approach. In 2018, ARMA launched its online payment application, E-WniosekPlus. "The E-WniosekPlus architecture is built entirely on open source, protecting ARMA against potential vendor lock-in and aligning with our strategy of developing using our own resources," said Jaworski.

Creating a foundation for innovative, scalable services

Achieved 99% first-year adoption of online payment application

Of the approximately 1.35 million Polish farmers who were encouraged to switch to the new online payment application, ARMA has seen 99% of them use the digital process in the first year since its launch.

"The most challenging task was to convince beneficiaries to use digital tools. We put a lot of effort into training and public relations. When that effort paid off, we needed to make sure the platform was 100% reliable," said Jaworski.

Red Hat OpenShift Container Platform helps the agency ensure that its online application responded to this massive shift and can also meet future growth demands. Additionally, OpenShift addresses security throughout the application life cycle with automated installation, upgrades, and life-cycle management capabilities to maintain data security at scale.

"When we created the application, we built in high-performance requirements so that the OpenShift-based infrastructure could handle 50,000 simultaneous sessions. While we aren't up to that volume yet, we know we have the extra capacity if needed," said Jaworski.

Created environment for agile and Devops approaches

A key part of this project is ARMA's transition to new approaches to application development and deployment. Its microservices-based IT environment created with Red Hat software supports agile and DevOps methods that have helped the agency create and maintain more than 40 applications in house.

By providing enterprise open source technologies to its technology staff, ARMA has reduced lock-in to third-party service and software providers, creating a path to future long-term time and financial savings. The success of ARMA's new approach could also help attract investment to achieve similar results and cost efficiency in other areas of the agency.

"Our agency has successfully demonstrated that IT is better managed in-house. Analysis we conducted at the end of 2018 showed that we reduced time to market from 3-4 months to 2-3 weeks," said Jaworski. "We also calculated that our 2016-2018 savings totalled €62 million, and we anticipate even greater savings in 2019 and looking forward."

Enhanced IT talent recruitment efforts

Its transition from legacy, paper-based processes to a modern online application is also helped ARMA distinguish itself as a leader in digital transformation in Poland. Its reputation as a hub of innovation attracts ambitious IT talent seeking to work at national and EU-wide projects using the latest technology and architectures.

One year from the launch of E-WniosekPlus, ARMA has created a new division within its IT department and more than doubled the number of IT employees. "We now have approximately 250 IT specialists working for us," said Jaworski. "This growth has given us real momentum to continue making the most of our investment and maintain this internal development model."

For existing employees, the agency continues to seek ways to help its staff enhance their skills and explore emerging technology. "The engagement between ARMA and Red Hat generates many non-measurable benefits," said Jaworski. "Red Hat's software is reliable and fairly straightforward, but it still requires technical knowledge to use successfully and apply to new use cases."

Inspiring change across Poland's public sector

The success of ARMA's paper to digital transition has bolstered Poland's reputation as a progressive, modern member state within the EU and has inspired other public sector groups. For example, the Ministry of Digitization and the Social Insurance Institution are looking closely at the success of its IT transformation project as they evaluate adopting a similar internal-focused development model.

ARMA plans to continue using its new, online application environment to not only further reduce errors and increase digital adoption but also gain insight from more easily accessible data. For example, the agency is working with Red Hat and Linux Polska to see how an advanced artificial intelligence (AI) program could identify geographical areas covered by subsidies. ARMA is also building tools for aggregating and analyzing data in many of its regional field offices.

"Our partnership with Red Hat has been an important part of our journey and significantly more than the standard seller-customer relationship. Red Hat has been with us every step of the way," said Jaworski. "We hope the knowledge we've gained from this project will spread and applied in other public institutions."

About ARMA

The Agency for Restructuring and Modernization of Agriculture (ARMA) was established by the Polish government in 1994 with the aim to support actions for the development of agriculture and rural areas. ARMA closely cooperates with the Ministry of Agriculture and Rural Development and is responsible for implementing European Union and national funds. The agency's structure comprises three levels: the headquarters, 16 regional offices, and 314 local offices.

About Red Hat



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