# SUCCESS STORY

## Heartland Coop Modernizes IBM i Development with ARCAD for DevOps and Git, improving cycle times by 50%.

## CUSTOMER



**Heartland Coop** is a leading agricultural cooperative in the United States, providing essential services to farmers, agribusinesses, and communities. The organization runs its core operations—including inventory, logistics, and financial transactions—on robust, custom-built IBM i applications that have been enhanced and refined over more than three decades. To ensure long-term sustainability and leverage their investment in IBM i, Heartland Coop recognized the need to modernize development practices and move to a DevOps approach.

**Todd Stewart**, Senior Application Engineer, DevOps certified and member of the COMMON Americas Advisory Council, drove the modernization initiative on IBM i. Rather than a big-bang approach, Todd recognized the need to adopt DevOps progressively, to improve collaboration and increase the speed & security of application delivery.

## CHALLENGE: LEGACY DEVELOPMENT METHODS SLOWING INNOVATION

With a mission critical application on IBM i, Heartland Coop was highly motivated to modernize development methods on the platform, to overcome multiple challenges that hindered efficiency and innovation:

- **Legacy tools** and mounting issues with their old change management software were consuming valuable developer time and driving up costs.

- **Slow delivery cycles** due to manual development and deployment processes, causing delays in introducing new business features.

- **"2-speed IT"** where massive projects came into conflict with short-term fixes. When managed manually, parallel development was challenging to test and risked the reliability of application releases.

- **Limited version control** made it difficult for developers to track changes, collaborate efficiently, and manage code history.

- **Technical debt** where the accumulation of unused source and objects made modifications and enhancements risky **and** time-consuming.

- **Lack of integration with modern DevOps tools**, preventing the team from adopting best practices such as CI/CD (Continuous Integration/Continuous Deployment).

Without an automated and structured workflow, Heartland Coop faced significant bottlenecks in their development pipeline. One long-term project - expanding an attribute in the location table - impacted 90% of the application, causing code conflicts and hindering the delivery of high priority fixes. Todd and his team needed a solution that could seamlessly integrate with IBM i while providing modern **DevOps capabilities such as concurrent development, CI/CD automation, and traceability of changes.**

> When asked how to get started with DevOps and Git, Todd's advice is to "Just go ahead and do it"

## SOLUTION: ARCAD FOR DEVOPS WITH GIT INTEGRATION

After an extensive evaluation of available solutions, Heartland Coop implemented ARCAD for DevOps, a comprehensive and IBM i-native DevOps solution. A key driver was ARCAD's seamless integration with Git, which simplified Git adoption while revolutionizing how the team managed source code and deployments.
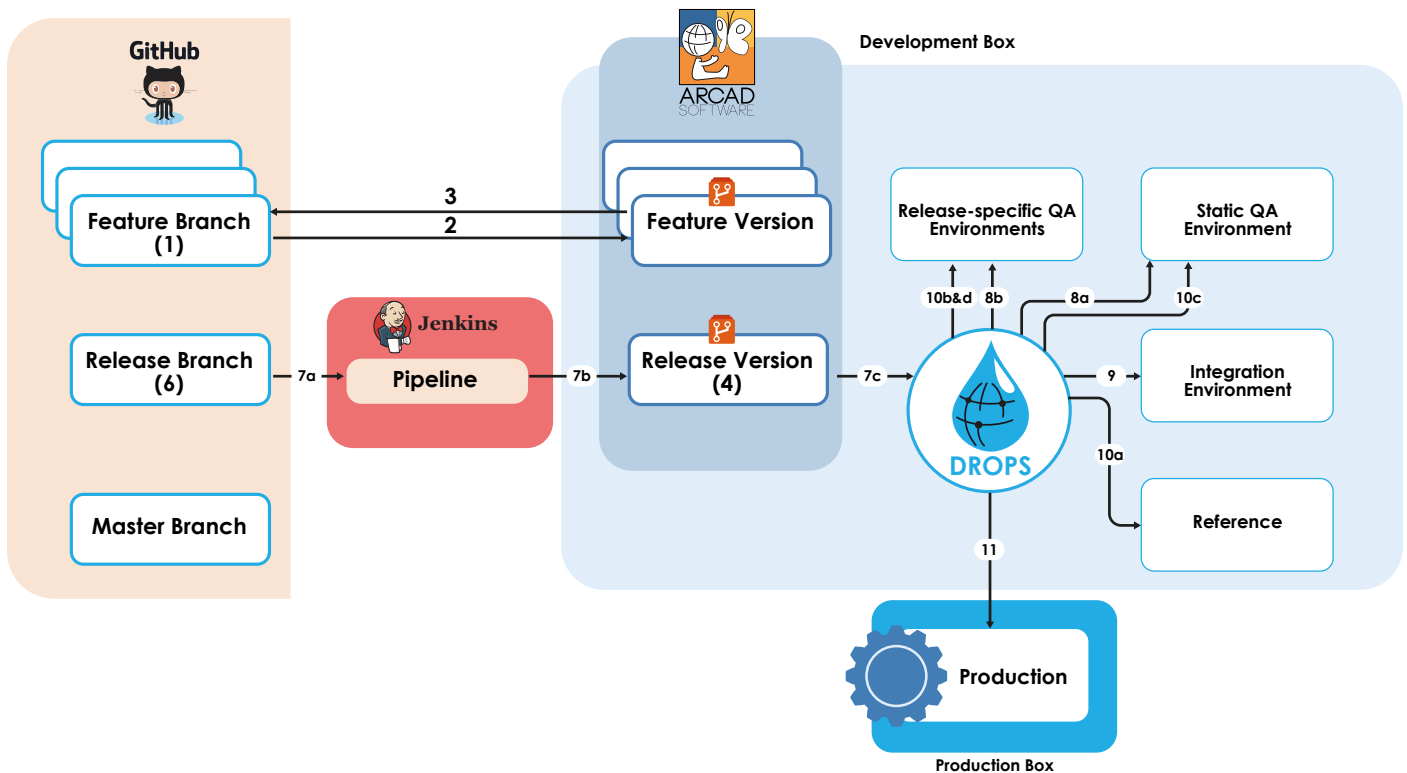
The key features and benefits of ARCAD for DevOps that addressed Heartland Coop's challenges included:

- **Automated version control with Git:** By leveraging Git, the team eliminated the inefficiencies of manual code tracking. Developers could now rely on a clear and structured version history, making it easier to track changes and rollback when necessary.

- **Parallel development:** The integration with Git meant multiple developers could work on different features simultaneously without conflicts, significantly improving productivity. The team was now able to work on large development projects (such as field expansion) while at the same time efficiently delivering high priority features to the business.

- **Visibility over changes:** End-to-end automation ensured that all code changes went through the same proven, repeatable process with audit trail at the line level, reducing the risk of errors and vulnerabilities.

- **Seamless CI/CD integration:** ARCAD integrated within a standard Jenkins pipeline, ensuring that changes deployed efficiently with minimal manual intervention.

- **Faster development and deployment cycles:** With Git, developers could easily share and merge code changes, leading to better teamwork and faster issue resolution.

**The transition to ARCAD for DevOps** was smooth, thanks to ARCAD's **comprehensive training and support**. Todd emphasizes that moving to full DevOps on IBM i is a progressive process. For a rapid ROI, he advises to start right away by automating the most tedious and repetitive tasks in the development cycle.

**GitHub**

Feature Branch (1)

Release Branch (6)

Master Branch

Jenkins — Pipeline

**Development Box**

ARCAD SOFTWARE

Feature Version

Release Version (4)

3

2

7a · 7b · 7c

Release-specific QA Environments

Static QA Environment

DROPS

10b&d · 8b · 8a · 10c

9

10a

11

Integration Environment

Reference

Production

**Production Box**

# RESULTS: FASTER, MORE SECURE, AND AGILE IBM i DEVELOPMENT

**With ARCAD for DevOps and Git,** Heartland Coop achieved tangible improvements in their IBM i development process:

- **50% faster delivery cycles:** By automating workflows and eliminating manual inefficiencies, new features and updates reached production in half the time previously required.

- **Enhanced code security and quality:** Automated ARCAD features for detecting anomalies in the code base, such as unused objects, objects without source, etc. significantly reduced technical debt in the IBM i application. Having a proven, repeatable process for build and deploy prevented erroneous code from reaching production.

- **Greater development efficiency:** Developers spent **less time on administrative tasks and debugging** and more time on innovation and feature development.

- **Easier compliance:** With Git, every code change was **tracked, documented, and auditable,** making it easier to comply with industry regulations and best practices.

- **Shorter learning curve:** ARCAD implementation services ensured that Heartland Coop was able to adopt ARCAD for DevOps and Git **without disrupting ongoing operations,** ensuring business continuity.

Thanks to ARCAD's Git integration and end-to-end DevOps automation, the team successfully modernized IBM i development practices, achieving faster releases, higher quality code, with complete traceability. The new solution gave tighter control and flexibility, making it easier to integrate IBM i code with external systems.

For more detailed information, listen to our Roundtable:

https://www.arcadsoftware.com/arcad/news-events/on-demand-webinars/git-and-devops-real-life-experiences/

ARCAD SOFTWARE