



CASE STUDY

SYDVED ACHIEVES DEVOPS GOALS AND OPTIMIZES IBM i APPLICATION DEVELOPMENT WITH ARCAD SOLUTIONS

Sydved



The Customer

Sydved AB trades green wood, felled timber, and stands of trees in Sweden. It also offers forestry services including mechanized thinning operations to forest owners. The company was founded in 1979 and is based in Jönköping, Sweden. Sydved is jointly owned by Stora Enso Oy and Ahlstrom-Munksjö.

Sydved's applications are customized for their Enterprise Resource Planning needs, handling 3 main areas of delivery:

1. Physical Logging Business

- Logging the physical raw materials (wood) in forests, cut to customer requirements
- Coordination of downstream logistics both within the forest and at the processing plants

2. Pricing of the end products to gain competitive advantage

- Complex pricing process to ensure accurate payment to landowners (logging directly or via 3rd party contractors)
- Invoicing to end customers (of large trees and commodity sales e.g. pulpwood, timber and biofuels).

3. Compliance with Complex and Legally binding Pricing processes

- Accounting for the end users and quality checks required by Swedish law on accurate timber measurement from "independent adjudicators" to safeguard landowner interests.
- Profit unit co-ordination and enhancement of pricing models in an ever-changing market where weather conditions impact demand and quality. ♦



The Challenge

Sydved's applications have evolved over many decades to cope with the specific nature of their business and are characterized by a large and diverse RPG code base developed on IBM i. Due to the mission-critical 24 x 7 x 365 nature of Sydved's business and the large number of users, the "cost of failure" in the event of system downtime is particularly high, meaning zero tolerance of delays due to the "manual re-work" of application defects.

Further, with such a large and sometimes transient user base, Sydved faced the challenge of developing a complex role and permission-based authentication system to secure access to specific application functions.

Sydved applications are integrated the Swedish "forest industry information hub" SDC (Skogsbrukets DataCentral - Forest Data Central). The challenge ahead is to adapt to SDC's (soon Biometria) new ERP-system "VIOL3" which will have a massive impact on Sweden's forestry industry. In this context and with the scale of application changes involved it is vital to have a robust DevOps framework in place.

DevOps goals and targets

The integration of adapting Sydved's custom application to SDC's/Biometria's new ERP system is a complex project that will take several years to complete. In order to manage this complexity, while reducing risk and also satisfying the rapid development cycles demanded by their user base, the Sydved IT team took the decision to select a best-in-breed DevOps solution for IBM i that would also take into account the dependencies between native IBM i components and their .NET development.

"We chose ARCAD in order to secure the success of our development projects and eliminate the bottlenecks which divert our developers from their most valuable task of developing code. We are now able to make deep application changes while satisfying our customers and user demands for more and more rapid features. "

Örjan Vorrei, CIO, Sydved



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The team defined a set of principal DevOps goals, and by matching ARCAD features against their goals they identified several key advantages:

DEVOPS GOALS	ARCAD ADVANTAGE
Best-in-class toolset	ARCAD recommended by IBM
Agile development	Concurrent (parallel) development branches and precise control over the content of each release
Versioning	Automated and controlled source code and version handling
Reduced development timescales	Pre-emptive detection of defects. Accelerated delivery of IBM i application updates on IBM i
Centralized source control	Cross-reference impact analysis between RPG artifacts (and .NET – RPG dependency analysis for future use)
Quality	Automated code cleaning, archiving of unused objects
Fast and accurate delivery of program changes	Graphically analyze for impacts across source code and database with minimal effort
Optimized build and test phases	The ARCAD repository ensures that only dependent components are recompiled and tested
Secure deployment	Synchronized application Deployment to any number of Dev, QA, Production environments
Database changes	Auto-deploy of database structure changes
Zero downtime	Eliminated downtime caused by faulty deliveries, automatic rollback on error
Reduced IT cost	Manual effort replaced by automated analysis, build, integrity checking, deploy
Change management process	Defined and documented role-based Release Management processes
Process improvement	End-to-end automation, higher release quality
Documentation	"Knowledge base" of application architecture, structure and dependencies
Governance	Compliance reporting, Audit trail of application changes

Solution: ARCAD for DevOps

In collaboration with PDB, one of Sweden's leading IBM i consultancy companies merged with Orango, ARCAD worked with Sydved through a value stream mapping process to deliver a bespoke ARCAD solution that unlocks the value of their existing code base, and frees the bottlenecks one-by-one in the current process to deliver maximum value in the shortest possible time.

ARCAD's DevOps solution on IBM i has secured a significant Return on Investment for Sydved, and future-proofed Sydved application assets for the years to come.

With ARCAD, Sydved target specific value in the following areas:

- **Optimization of the current change management process** to enable RPG developers to more effectively understand the X-references between the 2 code bases with ticketing managed in JIRA.
- **Superior Analysis of the legacy code base** to ensure that a new generation of RPG developers can more rapidly understand the legacy code more effectively and build integrations quickly and efficiently without risking quality.
- **Optimization of the testing process** to prevent the loss of valuable developer time at the testing stage, eliminate bottlenecks and accelerate the delivery of new application functionality. Sydved can now deploy code to Test LPARS in minutes rather than weeks.
- **Out-of-the-box Guidance using the ARCAD Repository** means that that Developers' work is continuously updated into a "metadata" application knowledge base. Unique to ARCAD, this repository "gold mine" guides the developers' work, flagging any potential issues arising from other teams' changes, and increasing automation and accuracy at each stage in the DevOps cycle.

This preemptive approach allows staff to focus on Coding and automate the complex tasks of defect analysis, level checks and verification of deployments.

- **Automated and fully auditable deployment and release management** onto the recently acquired Power 9 LPARs with continuous improvement of release process with "dependency based" builds and testing i.e. only deploy the components that have changed.
- **A constant and measurable "Shift-Left" of defects** allowing the Sydved development team to accelerate their delivery process in line with more aggressive continuous improvement goals and ISO27001 compliance standards. Sydved's teams are able to pack more functionality into each release whilst maintaining their consistently high levels of quality.
- **Preparation of the Sydved team for the future of social development and collaboration** is a key future driver for the management team. ARCAD's solutions allow a complete integration with Git and the GitHub platform and will equip Sydved with the modern tooling required to attract new talent to their IT Department.

"With the criticality of our business and a large-scale development project coming up, **we needed to deliver changes faster and avoid defects by carrying forward changes automatically on our project branch.** Using ARCAD solutions we will optimize our DevOps cycle to automate all routine and error-prone tasks that have held up the development team. ARCAD is a world-class solution **that helps us meet our delivery timescales, safeguards the quality of our software and minimizes the risk of application downtime.**"

- Örjan Vorrei, CIO, Sydved



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