



COSOL

Case Study

Arch Resources, Inc.

Mining

Ellipse Evergreen Migration

June 2020



Long story short, Evergreen
has been a game changer."

Marty Zambo

Director, Application Services | Arch Resources, Inc.

Background

Arch Resources (Arch) is a premier producer of high-quality metallurgical products for the global steel industry. The company operates large, modern and highly efficient mines that consistently set the industry standard for both mine safety and environmental stewardship.

Arch had experienced problematic migrations on their Ellipse Enterprise Asset Management (EAM) and Enterprise Resource Planning (ERP) solution. They were sitting on a dated version of Ellipse with numerous custom fixes and workarounds embedded, with a new licensing agreement and a major upgrade on the horizon.

As a result of falling behind in the upgrade process, their system was inefficient, and they were not benefiting from new functionality and features available in the current version of Ellipse. Arch knew they needed to migrate from Ellipse 8.8 to the current 9.0.15 – and they knew they wanted a streamlined and successful migration experience – but they weren't sure where to start.

Arch approached COSOL (at that time known as AddOns, Inc.) to learn more about the Evergreen Ellipse solution.



Challenges

Arch had previously experienced resource-intensive and problematic upgrades when migrating from legacy Ellipse 5. These previous upgrades were expensive, lengthy projects requiring extensive work to bring their system up to date for go-live. In addition, their Ellipse system incorporated a great deal of custom code and inbuilt workarounds. The scope of this additional work contributed to further upgrade hesitancy.

Arch was sitting on Ellipse 8, recognizing the business imperative to upgrade but with no formal Ellipse migration strategy in place, they did not see a smooth and efficient path forward to Ellipse 9. Particular pain points around their upgrade process included poor service management, lack of root cause analysis, lack of KPIs and SLAs, unanswered questions, and ticket resolution and reporting.

Arch didn't have confidence or competence in the Ellipse migration process and COSOL's solution needed to address their immediate needs and embed a better process to manage efficient and timely Ellipse upgrades into the future.

"The 2-3 upgrades we had performed prior To Evergreen were significantly over budget, Extended well past the initial deadlines and were disruptive to our operations.



Combine the upgrade issues with the degradation of the Ellipse product in the eyes of our users – for example, slower performance, bugs introduced during the upgrades, etc – and Arch was seriously considering a migration to another platform. We knew we had to do something differently if Ellipse was going to remain a viable solution moving forward."

Marty Zambo
Director, Application Services | Arch Resources, Inc.



COSOL solution

COSOL Evergreen for Ellipse is a unique subscription service designed to ensure Ellipse enterprise systems are always current, by delivering a cost-effective and minimally disruptive continual upgrade solution for Ellipse Evergreen clients.

COSOL Evergreen removes common Ellipse migration roadblocks, such as large one-off upgrade costs, budget overages, and distraction and disruption from core business activities.

As a strategic partner of Hitachi ABB Power Grids, COSOL tracks and manages quarterly Ellipse releases to ensure each upgrade is thoroughly pre-tested for common and client-specific customizations for COSOL Evergreen clients.

The goal is for Evergreen clients to be able to limit their involvement in the upgrade process, once onboarded, to decision forum participation and user acceptance testing,

With more than 20 years' experience in Ellipse practice, COSOL leverages best practices developed through hundreds of COSOL implemented migrations to achieve timely, problem-free upgrade outcomes.

As a result of falling behind in the upgrade process, the Arch system was inefficient, and they were not benefiting from new functionality and features available in the current version of Ellipse.

Arch approached COSOL as they were keen to maximize any further Ellipse investments and were impressed with the ability of Evergreen to improve business outcomes through each cycle.

For Arch, the 16 weeks initiation and implementation and four to six weeks onboarding timeframe were especially appealing compared to the 18-to-24 month timeframe for their previous 'big bang' migration projects.

Arch considered the benefits of implementing COSOL Evergreen and investigated the success of existing COSOL Evergreen sites. Their research included speaking directly with Mike Moscarino at Cleveland Cliffs about their experience with COSOL Evergreen.

The Evergreen solution needed to operate within the Arch tenancy and the COSOL team needed to work closely with Arch Azure partners to create the Ellipse environment and undertake the migration.

COSOL would have a specialist team on the project but Arch valued the single point of contact combined with the Evergreen implementation project methodology.

Once the Ellipse migration from 8.8 to 9.0.15 was executed, Arch would move to a regular upgrade cycle of up to two per annum. COSOL would manage all upgrade activity with minimal disruption to the business. Arch could be confident their Ellipse system would always be current, leaving their functional resources available to undertake their core role and focus on higher-value activities.

“My advice to others considering the COSOL Evergreen solution is don’t wait.



Evergreen enables scheduled incremental Ellipse version advancements that enable rather than distract our day-to-day business. COSOL helps by reviewing and testing new Ellipse releases to determine which release is best suited for stability and advancement in our organization. Before implementing Evergreen our Ellipse upgrade process was a time-consuming process, and the worst part was discovering problems and working to get them addressed prior to Go Live. I’d recommend COSOL’s Evergreen solution for other organizations looking to avoid these issues.”

Brent Grant
Materials Manager | Arch Resources, Inc



COSOL delivery

The unique COSOL Evergreen solution relies on COSOL's in-house testing environment to perform baseline and standard core functionality testing on each Ellipse release as it becomes available – and prior to rolling out Ellipse upgrades to Evergreen clients.

The process is designed to keep COSOL's Evergreen clients closer to the latest releases, ensuring that clients benefit from the latest releases in the shortest timeframe possible.

For Arch, the COSOL Evergreen onboarding experience took approximately eight weeks. It included COSOL running extensive validations and testing on Arch Ellipse information in-house before executing the migration onto the Arch Azure environment.

COSOL then maintains all the information processed through the migration, keeping it updated and ready for reuse in future upgrades.

Project deliverables

Deliverables across the four phases of the Ellipse migration from 8.8 to 9.0.15 project included:

Phase I: Initiation

- Establish project timeline
- Determine project charter
- Prepare communication management plan
- Develop project stakeholder registry
- Develop client stream lead packet.

Phase II: Planning

- Develop infrastructure plan
- Develop software plan
- Develop security plan
- Develop data plan
- Develop testing plan
- Develop training plan
- Develop go-Live plan.

Phase III: Execution

- Prepare environments
- Undertake delta Analysis, configuration workbook, migrate-compare, configured software and security configuration activities
- Commence internal testing including unity testing, ticket testing and RICP testing
- Undertake mock go-live
- Implement training
- Undertake user acceptance testing using COSOL Test Scripts.

Phase IV: Closure

- Undertake surveys
- Prepare for project close-out
- Internal Post Implementation Evaluation (PIE) meeting
- External PIE meeting.

“The Evergreen process took a lot of the upfront burden off of Arch, allowing our resources to focus on their day job. COSOL did the analysis and initial testing, bringing forward a recommendation of which version Arch should move forward with.



The results exceeded our expectations. We plan to upgrade Ellipse every year moving forward unless there is a business case not to. Had we proposed that to our user community two years ago, we would have been laughed out of the room. We have earned their confidence back and are not currently looking to move away from Ellipse. Evergreen and our partnership with COSOL has been a great success to date.”

Marty Zambo

Director, Application Services | Arch Resources, Inc

Project summary

Arch was nearing end of life on their current version of Ellipse but hesitant to upgrade having had bad experiences with migrations in the past.

After an in-depth review of COSOL and the Evergreen solution, Arch determined the COSOL Evergreen Ellipse would deliver immediate and ongoing benefits to their organization.

Through the onboarding process, a catalog and testing process for Arch custom code was developed and throughout the Delta process, the core functionality was tested. Jira software was utilized to create and document all testing scripts, which resulted in roughly 300 unique items to test.

The COSOL Evergreen testing environment was utilized to allow multiple types of testing to occur at once, prior to implementing and testing in the Arch Azure environment.

COSOL's close partnership with Hitachi ABB Power Grids proved to be of enormous benefit as COSOL worked with Hitachi ABB Power Grids to request and deploy a Priority one fix on an Arch Ellipse performance issue around searching equipment.

Arch benefited greatly from the 16 weeks initiation and implementation phase and six-week onboarding timeframe, compared to the 18-to-24-month timeframe for their previous 'big bang' migration projects.

In addition to the quality of the implementation and significant cost and efficiency benefits of such a comparably short run-up and seamless go-live, the COSOL Evergreen solution will continue to deliver ongoing cost savings and efficiencies for Arch.





Arch Resources Evergreen experience

By Marty Zambo

Arch Resources Director, Application Services

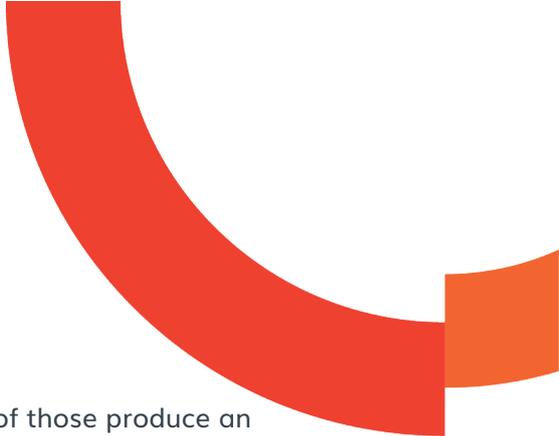
“Long story short, Evergreen has been a game changer.

The 2-3 upgrades we had performed prior to Evergreen were significantly over budget, extended well past the initial deadlines and were disruptive to our operations. Basically, the trifecta of sadness when it comes to a project. Combine the upgrade issues with the degradation of the Ellipse product in the eyes of our users (slower performance, bugs introduced during the upgrades, etc.), Arch was seriously considering a migration to another platform.

We knew we had to do something differently if Ellipse was going to remain a viable solution moving forward. We also knew we had a solid foundation to build upon with our existing technical and functional resources, but we couldn't continue to try and execute upgrades in the same fashion as we had. This is where Evergreen came into play. We started discussions in May 2019 and signed a larger agreement for both Managed Services and Evergreen for Ellipse.

COSOL (formerly AddOns, Inc.) became our primary Ellipse support provider in December 2019 and we kicked off our first Evergreen project in February 2020, right before COVID-19 really started disrupting everything. Even that couldn't deter us, though. The Evergreen process took a lot of the upfront burden off of Arch, allowing our resources to focus on their day jobs. COSOL did the analysis and initial testing, bringing forward a recommendation of which version Arch should move forward with.

Further testing, training and communication ensued. We found a Priority 1 issue (P1) with the initial release, but we found it before going live. Historically, we may have missed the issue or



decided to push forward and troubleshoot in production. Neither of those produce an outcome that is palatable to end users, so we made the right decision to delay a month. COSOL leveraged their influence with Hitachi ABB to find a solution for the P1 and we went live a month later.

The results exceeded our expectations. Even with the delay, we went live within our targeted upgrade window. There were issues, but nothing that was a showstopper. Evergreen is part of our annual subscription, so costs are controlled as well. This go round, we were on time, on budget and did not disrupt the business. Everything you look for in a project.

Historically, we had taken Ellipse down for upgrades for 60 or more hours, taking a key application away from our end users and hindering their ability to do their job efficiently. The first Evergreen upgrade was completed and returned to our end users in approximately 13 hours. We have since upgraded again, with an outage of only eight hours. This one was also on time, on budget and without significant disruption to our end users.

We plan to upgrade Ellipse every year moving forward unless there is a business case not to. Had we proposed that to our user community 2 years ago, we would have been laughed out of the room. We have earned their confidence back and are not currently looking to move away from Ellipse.

Evergreen and our partnership with COSOL has been a great success to date.





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