Driving digital transformation at Morse Hydraulics with Pythian and SAP S/4HANA

Industry
Manufacturer

Technologies
• S/4HANA

• Fiori

• ABAP

Overview
A global manufacturer had evolved past the limitations of its legacy SAP ECC system and couldn't keep up with the firm's growth or support much future innovation.

Business need: Enhance business processes and upscale revenues with a more composed, consistent environment. Also required better performance and stability, new functionality, better runtime analytics, and improved mobility while migrating

Performance improvements include a reduction in SAP reporting time from two hours to less than five minutes.

A sustainable technology platform is essential for any business to support rapid growth and innovation. Eventually, however, most companies outgrow their on-premises enterprise resource planning (ERP) system, leaving them unable to meet business demand or innovate effectively.

That was the case at Morse Hydraulics, a global organization founded more than 20 years ago that focuses on high-pressure applications and solutions such as hydraulic hoses and connectors, along with related field engineering, on-site assembly, crimping, and cutting services.

The company had evolved past the limitations of its legacy SAP ECC system, which still used **Classic GL** accounting and couldn't keep up with the firm's growth or support much future innovation.

But that wasn't the end of Morse Hydraulics's technical challenges under its previous system, which included:

• A time-consuming and needlessly complex reporting process that often frustrated internal business users

• Poor user experiences, inefficient decision-making processes, and no room to deploy new optimizations, which left the company feeling stuck

"We realized that to achieve our goal, we needed an expert migration partner that was able to blueprint the entire project, walk us through each potential challenge, and who had the bandwidth and expertise to invest a significant amount of preparation time in our project."

- IT Manager, Morse Hydraulics

Pythian

Morse Hydraulics needed to enhance business processes and upscale revenues with a more composed, consistent environment. The company also required better performance and stability, new functionality, better runtime analytics, and improved mobility while migrating from Classic GL to New GL, but its IT team wasn't confident about executing such a dramatic change on time and within budget.

With Pythian's help, Morse Hydraulics ultimately decided on SAP's latest technology – S/4HANA – to achieve this digital transformation. Morse Hydraulics also needed a vendor-agnostic migration partner with the bandwidth to blueprint the entire project, walk them through potential challenges, and provide cost-effective hardware sizing solutions.

Fortunately, Pythian's expert teams were able to guide Morse's IT team through what can sometimes be a technically fraught process. Ultimately, the new system provided dramatic improvements in performance, including a reduction in SAP report execution time from nearly two hours to less than five minutes.

Pythian's S/4HANA migration plan and approach

Morse Hydraulics first had to decide which type of migration made the most sense: A greenfield, bluefield, or brownfield conversion. Each has different implications around cost savings and business impact.

- In a **greenfield conversion**, all business processes and implementations in the new system are developed from scratch

- A **bluefield conversion** involves a selective approach of some older and net new processes and implementations

- **Brownfield conversions** allow migrations without re-implementation, resulting in only minor business process disruptions

Pythian and Morse Hydraulics' IT team first evaluated SAP's functional configuration for organizational structure, configuration values, master data, transaction data, and historical data access. We also considered effort and cost factors such as project timelines and available resources, initial hardware requirements, and operational support.

The company ultimately decided on a brownfield conversion to ensure minimal business disruption.

Pythian next conducted an SAP assessment using our standard technical and functional questionnaire to gauge the client's SAP system landscape. While these assessments can sometimes be time-consuming, prompt cooperation from Morse Hydraulics allowed us to complete this step in a matter of days.

We used several self-serve SAP tools to aid Morse Hydraulics' transformation journey:

1. **Transformation Navigator** was used for organization- and industry-specific guidance to help accelerate the move to SAP S/4HANA, specifically around the organization's previous IT landscape, usage information, deployment strategy, industry trends, and future needs.

2. **Process Discovery**, formerly known as a Business Scenario Recommendation Report, maps benefits and issues around previous processes and suggests improvements based on your company's goals. Running Process Discovery provided insights into Morse Hydraulics' business process performance, system usage, and industry benchmarks.

3. **Readiness Check** is another key tool for building a foundation for a successful transition. Readiness Check provides an overview of the compatibility of the previous system with updated applications in the target release, along with detailing the preparation steps that will be required.

Pythian also brought three homegrown migration tools to bear on the Morse Hydraulics project, starting with our HANA Enterprise Cockpit (eHEC), which helps organizations automate preparation and planning through faster landscape testing and discovery.

FixMyCode, another proprietary tool, was used to reduce testing time by identifying how many objects would be impacted, which objects were in use, and how many schemas and third-party interfaces were in the company's previous system.

Pythian also deployed a third proprietary tool, Security Map, which helps update security authorization objects by automatically listing previous SAP roles and defining these roles within the target system.

Additionally, Pythian reviewed nearly 400 SAP simplification lists to determine which simplifications were appropriate for this scenario.

Pythian's S/4HANA migration plan and approach

We next conducted a deep dive workshop with the client's functional, technical, and infrastructure teams to drill deeper into the company's previous system architecture, processes, and pain points and help procure the target SAP landscape.

Important functional data structures and apps – such as company codes, number of plants, accounts in use, Profit Center, and Balance Sheet – were reviewed to understand and map existing functionality to S/4HANA. In conjunction with Morse Hydraulics' SAP security team, we converted previous SAP roles and authorizations and mapped them to the target system.

The company's SAP Basis team was next consulted to better understand Morse Hydraulics's previous landscape, third-party software integrations, and add-ons.

Finally, we held a detailed session with the SAP Advanced Business Application Programming (ABAP) team. This session was critical because migrating custom code to S/4HANA is typically one of the most complex tasks in any conversion. Indeed, intensive study is required to identify and assess the use of custom code during the preparation phase of any conversion. Custom code can be a major factor in deciding if the system can be converted or should be re-implemented.

S/4HANA migration execution and functional alignment

Pythian worked with the client's leadership and subject matter experts to craft a three-phase S/4HANA transformation roadmap, including a two-phase system conversion combined with an optimization phase.

After reviewing options from various vendors and providing recommendations, Pythian's infrastructure and migration teams also helped Morse size and select the appropriate hardware.

During the conversion Pythian's advisory services helped standardize, simplify, integrate, automate, and optimize Morse's critical business processes – including inventory management, financial reporting, management reporting, budget control, and monitoring and reporting – to develop a client-centric solution for inventory reporting, real-time decision-making, and a dramatically enhanced user experience.

The underlying challenges of migrating from older versions of SAP OS/DB were mitigated by a series of compatibility checks conducted by Pythian's migration team.

Morse's brownfield conversion approach meant its previous important functionalities also had to be mapped to the relevant new (and upgraded) functionalities in S/4HANA.

Near-real-time analytics and performance improvements on a sustainable platform

SAP S/4HANA's unique architecture, which runs in-memory with data stored in columns, now provides Morse Hydraulics with fast, near-real-time analytics and compute capabilities. Instead of merely recording data, SAP S/4HANA provides active, data-driven decision support in real-time.

The Morse Hydraulics team immediately experienced several performance improvements and efficiencies, including:

- SAP report execution time shrank dramatically, from nearly two hours to less than five minutes, thanks in part to a data model change and the way relevant data is selected

- Decision-making improvements of around 30 percent thanks to activation of Fiori business app creation features for non-technical business users

- Credit management control improvements of around 20 percent

- Improved customer interactions and satisfaction thanks to performance improvements in the sales team's 360-degree customer dashboard

- Reduced time spent closing relevant activities by approximately one full day, thanks in part to performance improvements around month-end transactions and processes

SAP S/4HANA brought profound simplification to the management and administration of Morse Hydraulics's IT landscape, thanks in part to the simplicity of SAP's S/4 application structure. SAP S/4HANA enables the centralizing of hardware and network resources, serving as the digital core of business process simplification by harnessing the power of its HANA in-memory database.

Additional benefits experienced by the Morse Hydraulics team included S/4HANA's Business Partner object, which provides a single point of entry to maintain Business Partner, Customer, and Supplier data. And its Sales Order Fulfillment Cockpit has maximized the company's no-touch order rate significantly by identifying bottlenecks and issues with sales orders.

"Choosing a migration partner was a huge decision for us, that had we chosen wrong would have been hugely negative to our business. During the partner evaluation process, it was clear to everyone that Pythian was the right choice.They had the right team and technical expertise, and proved that we made the correct decision by providing the right guidance and options when we needed them. "

- IT Manager, Morse Hydraulics

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