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About Sword

Liisa Kinnear leads Sword's Modern Workplace Practice. With over 20 years of experience, Liisa and her team help customers to modernise and improve their business operations.

As the North Sea's largest provider of data and digital services, Sword focuses on solving the industry's most critical business technology challenges by enabling our clients to capture, manage, and utilise data to make informed decisions. This is supported by technology adoption and people engagement, together with modern ways of working to give confidence that the right decision is made every time.



Liisa Kinnear

SOFTWARE DEVELOPMENT: BEHIND THE SCENES IN DIGITAL ACCELERATION

As the energy sector looks to accelerate its data and digital maturity to reduce costs, increase efficiencies and remain competitive, one key consideration is 'Should you build or buy your software?' The answer is really both, and a hybrid approach is often the best option.

Our industry runs on an astonishing amount of software for data capture, interrogation and decision making. This has been the case for decades, however rapid technology evolution coupled with people becoming increasingly digitally savvy, means that the age of the 'citizen software developer' is upon us.

The energy industry is full of paper-based activities, old aging systems and products on the periphery, and these are where we can focus on shifting into modern ways of working. Using advances in technology, we have access to reliable tools from mainstream software providers that we can use to create bespoke solutions that accelerate an organisation's digital maturity.

Software development to accelerate digital transformation

At Sword, we often work with customers using a 'low-code' software development approach, which aims to optimise the development process to accelerate delivery. Some of our most significant digital transformation projects have utilised Microsoft's development platform, Power Platform. Our developers explain that the cloud-based platform's capacity to combine low-code application development with workflow automation, artificial intelligence (AI) and data analytics tools mean Sword can take on the role of a digital partner to tackle our customer's complex challenges with confidence.

We enable our customers to allow their business users to develop their own applications within clearly defined boundaries, sticking to newly streamlined processes that enable organisations to make the most of modern tools and techniques. Microsoft Power Platform works particularly well for small-scale productivity applications with customers' empowered users – who have the best handle on which processes should be streamlined – which helps bring a common approach across a multitude of organisational activities into a single platform.

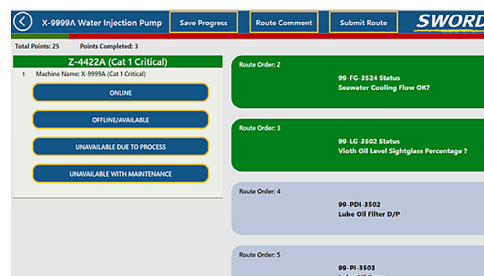
Business critical applications need to be designed and developed in such a way that they have the correct, rigorous controls in place to reduce security risk. With the right level of ongoing guidance and support, our customers can use their tools to continually meet their organisations' increasing digital demands and benefit from the efficiencies such a powerful platform brings, like improved data accuracy and real-time data access.

Solving energy sector problems with software development

Sword recently worked with an oil and gas operator's offshore teams to replace multiple systems for data entry and paper-based processes. Cumbersome, legacy applications were superseded by easy-to-use, mobile-friendly applications for the likes of instrument reading, observations, and maintenance planning. The results included greatly improved efficiency and enhanced system integration, both offshore and onshore and all on a single enterprise platform.

The diagram shows a machine inspection application we developed, designed to be used on offshore assets on rugged tablets. This replaced an expensive legacy application that was no longer being used to its full potential as the hardware required to run it was obsolete. In some instances, staff had started reverting to paper based processes!

Using components of Microsoft Power Platform, we created a simple user interface,



with a centralised cloud storage solution and a single data entry point that integrates with the organisation's wider modern data platform. This gives both offshore and onshore teams the ability to administer the process to provide consistent data capture, as well as enabling automated compliance reporting and opening opportunities for improved data insights and future planning.

Sword works collaboratively with our customers, adopting an agile software development approach. We provide the technical know-how and encourage subject matter experts from our business to guide the development process.

We work through three development phases to ensure the foundations are in place from technology, people, and processes perspectives. Once we are set up for success, we proceed with development, applying DevOps best practices to build iteratively with regular testing and feedback. We can now get something into a customer's hands much more quickly than traditional development. This allows customers to input feedback more quickly too - progress and updates take hours, days, or weeks rather than weeks, months, and years.

The development itself can sometimes outpace the business adoption and readiness for change, so our final phase is to support the adoption of the new application. As the business gets to grips with the opportunities the new application offers, we help capture and prioritise ongoing improvements, taking advantage of any new features or functionality that the platform offers.

To gain the most transformational benefits from any software development investment, we recommend choosing a digital partner who has proven success in delivering business technology solutions to overcome energy sector organisations' most complex business-critical challenges.

