



WHITE PAPER

DIGITAL TRANSFORMATION FOR BETTER PROJECTS – 5 KEY PILLARS

Using Digital Data Workflows to Deliver and Operate Renewable Energy Projects Profitably, Efficiently and Safely



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EXECUTIVE SUMMARY

In the rapidly expanding renewable energy sector, digital transformation is essential for improving project efficiency, accuracy, and reliability. The transition from manual to digital processes in data collection and management is imperative to address challenges such as delayed project delivery, interface and quality issues, compliance failures and poor operational performance. This white paper identifies five key pillars for achieving effective digital transformation in renewables project delivery and asset management.

1. Accessing and Capturing Data Digitally. Anywhere, Anytime
2. A Complete Digital Audit Trail
3. Real-time Reporting on KPIs
4. Connecting Digital Data Platforms
5. Supporting Adoption and Continuous Improvement

Addressing common concerns such as resistance to change, compatibility with existing systems, and cost considerations is crucial for smooth digital transformation. By enhancing data accuracy, operational efficiency, and compliance, eviFile empowers project teams to deliver better project outcomes and achieve sustained success in their digital transformation journey.



THE CHALLENGES POSED BY POOR DATA MANAGEMENT

Information management is a major challenge for the delivery of renewables projects at all stages. The cost of manual, paper-based or non-existent information management is often higher than realised, including:

- Project investment decisions and start of construction delayed due to disconnected, manually based permitting processes.
- Cost overruns in construction and delayed entry to operation, resulting from poor interface and quality management.
- Suboptimal operation of assets due to lack of clear insights.
- Inadequate and expensive compliance reporting.

These issues affect the full value chain, including asset owners and their suppliers, and across all stages of asset data from development through to construction and operation. The issues often stem from siloed data, human error, multiple versions of the truth and information not being shared in a timely manner. The absence of a reliable audit trail and direct supervision often leads to mistakes, which can lead to a cycle of delays and increasing costs, all of which could have been avoided with accurate initial execution and data.

Accuracy in data collection is paramount for the success of renewable energy projects. Digital tools empower teams to capture and share precise, real-time data that reflects the actual state of the project. This level of detail and accuracy is crucial for making informed decisions, from adjusting project timelines to allocating resources more effectively.

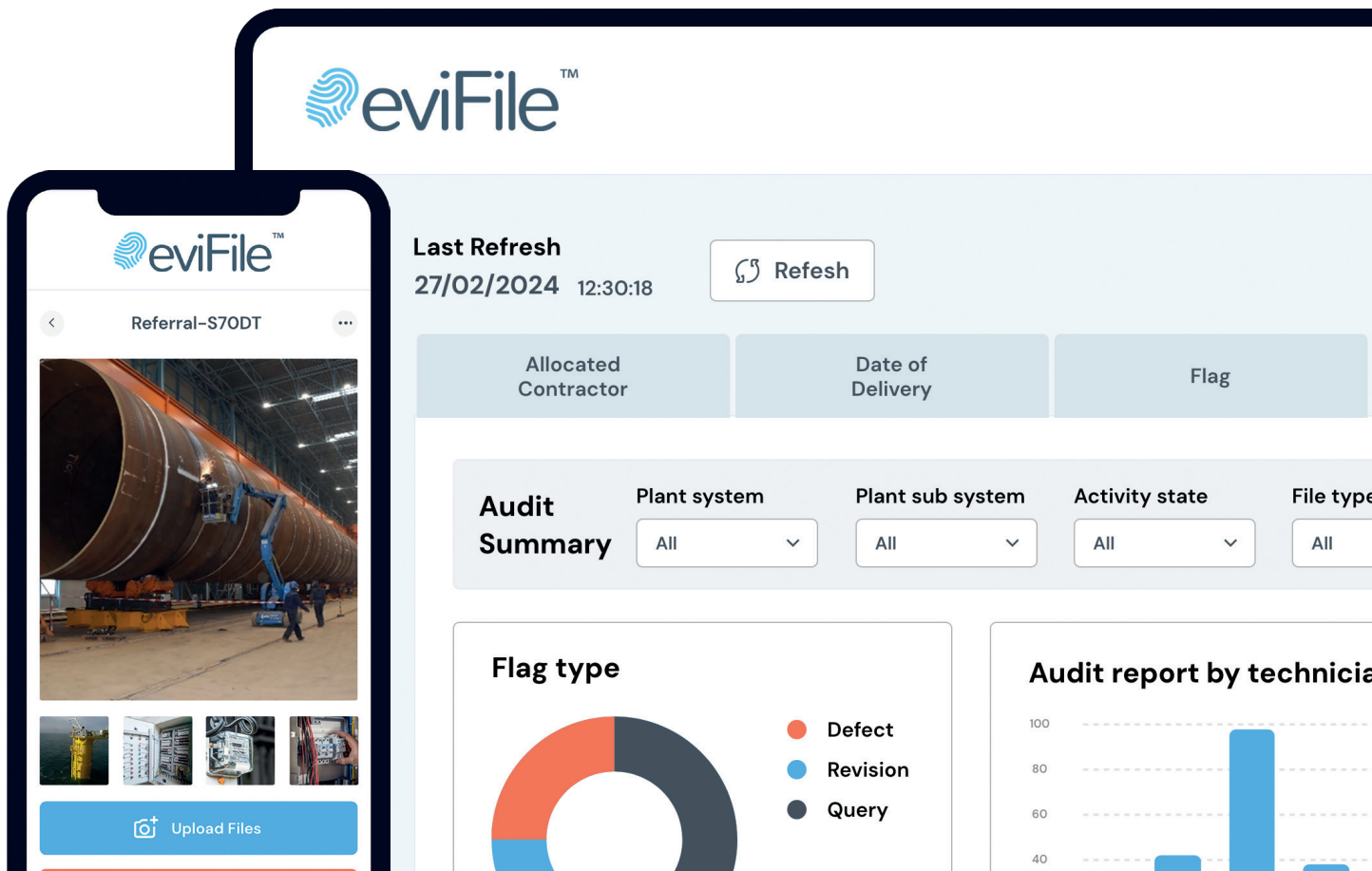
WHY GO DIGITAL?

In an era where the renewable energy sector is witnessing rapid growth and challenges at the same time, the importance of digital transformation has never been more critical. Transitioning to digital practices is no longer a luxury - it's a necessity to stay competitive. Nowhere is this more apparent than in the collection and management of project data. The shift towards digitising data collection is not just about keeping up with technological advancements; it's about fundamentally enhancing the efficiency, accuracy, and reliability of project delivery and management.

Digital workflows and audit trails enable better management of projects and continuous improvement of all activities. Digital transformation across the full asset life cycle unlocks greater value for project owners and delivery partners by breaking data silos and providing a golden thread of asset life data.

This paper outlines the 5 key pillars for digital transformation for optimised renewables project delivery and asset management.

To effectively implement a digital transformation across all assets, projects, and workflows, asset owners and engineers must consider the 5 Pillars of Digital Transformation:



1. ACCESSING AND CAPTURING DATA DIGITALLY. ANYWHERE, ANYTIME

In the renewable energy sector, projects are often in remote areas and delivered by geographically dispersed teams, making data access and capture from any location crucial for successful management. Ensuring data availability on both mobile and desktop devices, even in areas without reliable network coverage, is essential for leveraging the full benefits of digital workflows and reporting. A live data environment with robust governance supports this need, providing real-time insights and maintaining operational efficiency.

Mobile and desktop access to data offer significant benefits, including flexibility and convenience, as project teams can seamlessly share information between office, field sites, and remote locations without losing critical information. Furthermore, real-time data entry ensures that information is immediately available for analysis and decision-making, reducing lag between data collection and action. This capability enhances responsiveness and proactive management.

Offline working capabilities are vital for operations in remote locations with sporadic or non-existent internet connectivity. Features such as offline data capture ensure that information is accurately recorded and synced with the central system once connectivity is restored, maintaining data integrity and continuity of operations. Field workers can efficiently collect data directly at the source, including photos and videos, and report issues like defects or safety hazards immediately, enabling faster resolution and minimising project timeline impacts.

EXAMPLE USE CASE

WIND FARM MAINTENANCE

Consider an inspection and maintenance campaign on a remote wind farm. Technicians on-site can use mobile devices to inspect wind turbines and capture data on their condition, performance, and any maintenance activities performed. Even in areas without internet connectivity, they can record this data offline. Once they return to an area with network coverage, the data syncs automatically with the central system.

Managers in an operations centre can then access this data in real-time, review the maintenance activities, and identify any issues that need to be addressed, all in real-time so that issues can be resolved without remobilisation. This seamless data capture and synchronisation process ensures that the entire team has access to up-to-date information, facilitating better decision-making and more efficient project management.

2. COMPLETE DIGITAL AUDIT TRAIL

A complete digital audit trail is essential for effective project management in the renewables sector. Capturing data digitally from the outset ensures data integrity, operational efficiency, and regulatory compliance. This “once and done” approach creates a single source of truth, where all information is time stamped and geotagged, providing an immutable record that enhances the reliability and authenticity of the data. This centralised repository eliminates discrepancies and reduces the risk of tampering or accidental loss.

Digital data capture significantly reduces administrative burdens by streamlining processes and eliminating the need for paper-based records and white-collar workers paid for data processing. Automated workflows route data for review and approval, reducing time and effort spent on administrative tasks and documentation management. Advanced search functionalities in digital systems facilitate efficient data retrieval, which is particularly beneficial during audits or regulatory inspections. This efficiency ensures that accurate information is readily available, giving reliable insights and enabling good decisions.

Minimising the risk of errors is another critical advantage of a digital audit trail. Digital tools enforce accurate data entry through validation checks and standardised formats, reducing incomplete or incorrect entries. Automation of repetitive tasks minimises human error and flags inconsistencies for prompt correction. Consistent data formats support accurate and reliable reporting, essential for informed decision-making. Furthermore, a comprehensive digital audit trail enhances accountability and transparency, supports regulatory compliance, and facilitates advanced analytics, including predictive maintenance and performance benchmarking.

EXAMPLE USE CASE

ONSHORE WIND FARM DEVELOPMENT SURVEYS

In an onshore wind farm development survey, a large amount of site data has to be gathered by different disciplines such as engineering feasibility, ecology, land rights and grid connections. This process can be difficult to control, with various disciplines working on different platforms and lack of visibility on the

Implementing a complete digital audit trail for capture of this data and processing of workstream gives a project team far better control over the project delivery. The project owner has all data collected by subcontractors captured in a single data environment and clear visibility on data gaps, such as seasonal surveys, required to reach key project milestones.

3. REAL-TIME REPORTING ON KEY METRICS AND AUTOMATED REPORTING

Real-time reporting is a cornerstone of effective project management because it provides immediate insights into project progress and enables informed decision-making. Real-time reporting capabilities ensure that critical project metrics, such as percentage completion, incidents, defects, and quality metrics, are always visible. This enhances transparency across the project lifecycle, allowing project managers to track progress, allocate resources efficiently, and make timely adjustments to keep projects on track.

Reporting and sharing data in real-time create a unified “single source of truth” that connects project management with stakeholders, fostering better communication and collaboration. Stakeholders can monitor project metrics, provide timely feedback, and stay engaged through regular updates and transparent reporting. This level of accountability ensures that all team members are aware of their responsibilities and can be held accountable for their performance, reducing misunderstandings and miscommunications.

Automated reporting further enhances project management by significantly reducing the time and effort required to compile and distribute reports. Automation ensures that reports are generated accurately and delivered on schedule, freeing up valuable time that project teams typically spend on administrative tasks to focus on other tasks. Automation also facilitates faster handover processes by compiling comprehensive documentation in real-time, reducing bottlenecks, and ensuring a seamless transition to asset owners. Additionally, advanced analytical insights, such as trend analysis of inspections and SCADA data help managers anticipate issues and drive continuous improvement.

EXAMPLE USE CASE

ONSHORE TRANSMISSION CABLES

eviFile’s mobile data collection and automated reporting are deployed for the construction of onshore cable routes. The platform that eviFile provides is used for quality control and as-built reporting of the construction and commissioning work. The digital reporting system has removed the need for paper records and standardised the quality reporting process.

Project managers can monitor installation progress, track defects, and ensure quality standards are met in real-time. The automated reporting system also facilitated a faster handover process, with all necessary documentation compiled and ready for review by the asset owners. This streamlined approach not only improved project efficiency but also enhanced stakeholder satisfaction.

4. CONNECTING DATA PLATFORMS

Connecting digital platforms is a key step in the digital transformation of any organisation once the field processes have been digitalised. To maximise the benefit of digitalising field processes, the data collected often needs to be shared with other data platforms to avoid manual transfer.

Many organisations use a variety of digital enterprise platforms for scheduling, data management, and cost control. These systems are embedded, fit-for-purpose and procured at a significant investment, making it impractical and costly to replace them entirely. The challenge, however, is that these existing tools often operate in silos, leading to fragmented data and inefficiencies in project management.

Introducing new systems that do not integrate seamlessly with these established platforms can exacerbate these issues, creating additional layers of complexity and resistance from users accustomed to the existing workflows.

This challenge can be addressed by tools that offer seamless integration with existing enterprise systems through an API (Application Programming Interface). This integration capability ensures that digital data collection and management tools, like eviFile, complement rather than compete with current tools, effectively filling the gaps in data capture and management. By enabling data flow between disparate systems, a unified data environment is created where information is consistently updated and accessible across all platforms. This integrated approach not only preserves the value of existing investments in IT infrastructure but also enhances their functionality, providing a more comprehensive and cohesive project management solution.

There are numerous benefits to such the connected data platforms approach that eviFile allows, including:

- It eliminates the need for double data entry, reducing the risk of errors and saving time for project teams.
- It ensures that all stakeholders have access to the same accurate and up-to-date information, fostering better communication and collaboration.
- By bridging data silos, project managers are better able to provide more efficient data analysis and reporting, which facilitates more informed decision-making.

The ability to connect data platforms seamlessly positions eviFile as a critical enabler of digital transformation in the renewable energy sector, driving efficiency, accuracy, and project success.

EXAMPLE USE CASE

Large asset owners, such as utilities and integrated energy companies, often use various platforms for different functions—one for scheduling, another for cost management, and asset management. Commonly used systems include Maximo, Primavera P6, SAP and the Microsoft Stack tools.

eviFile can integrate with all these systems, allowing seamless data flow between them. This integration ensures that all relevant data is captured and available in one place, providing a comprehensive view of the project's status and performance.

For example, a company using eviFile for an asset condition survey and non-destructive testing campaign can use the integrations to connect with their other data platforms. eviFile's integrations allow the field data to be uploaded into an asset database in Maximo and update of the project schedule in Primavera P6, this giving more value than just digital field data collection.

5. SUPPORTING ADOPTION AND CONTINUOUS IMPROVEMENT

Systems are only as good as the level of user engagement they achieve, making a successful adoption phase crucial for the effectiveness of any digital platform. Early user buy-in is essential for ensuring the smooth integration of new digital tools. This involves not only introducing the platform but also engaging users in a way that highlights the immediate benefits to their daily tasks. By involving users from the beginning and actively seeking their feedback, we can address concerns and tailor the implementation process to better meet their needs. This participatory approach helps overcome initial resistance and fosters a sense of ownership among users, leading to higher levels of acceptance and utilisation.

A key aspect of successful adoption is shifting the mindset from “If it’s not broken, don’t fix it” to understanding the potential for improved efficiency and performance through digital transformation. Digital tools should empower users to perform their roles more effectively by streamlining processes and eliminating unnecessary friction. By demonstrating how the platform simplifies tasks, reduces errors, and enhances productivity, users can see the tangible benefits of transitioning to a digital workflow. This not only aids in adoption but also promotes sustained engagement with the platform.

Regular workshops and a dedicated support team ensured that all users were comfortable with the new system and could leverage its full potential. As a result, user adoption was high, and the project saw significant improvements in data accuracy and operational efficiency.





AtkinsRéalis

To ensure continuous improvement and sustained success, implementation of digital tools requires comprehensive support throughout the onboarding process and beyond. During the implementation of eviFile at AtkinsRéalis following successful project set up the team focused on thorough training sessions and creating user feedback loops to ensure continual process improvement and engagement from the stakeholder.

Our robust onboarding process included personalised training sessions, detailed user guides, and interactive tutorials to ensure that all users were comfortable and proficient with the platform. Furthermore, our commitment to 24/7 support means that help is always available, whether it's for troubleshooting issues or answering questions about the platform's features.

In this case, by maintaining an open line of communication and continuously gathering user feedback, we were able to make iterative improvements to the platform, ensuring it evolves in line with user needs and industry developments. This ongoing support and enhancement strategy not only maximises the initial investment in eviFile, but ensures users are able to understand the system's full potential, which leads to long-term user satisfaction and project success.

ADDRESSING COMMON CONCERNS

RESISTANCE TO CHANGE

Many businesses operate under the belief that their current systems are adequate or fear the disruption that change may bring. This mindset can be particularly entrenched in industries where traditional methods have been used for decades. However, these businesses may not fully appreciate the hidden costs of maintaining outdated systems, such as inefficiency, data errors, and the inability to scale effectively.

To overcome resistance to change, it is essential to highlight the tangible benefits of digital transformation. For instance, digital tools can significantly enhance operational efficiency by automating repetitive tasks, reducing manual data entry errors, and providing real-time visibility into project progress. This not only streamlines workflows but also allows for more accurate forecasting and better resource allocation.

Moreover, the competitive landscape is rapidly evolving, and businesses that fail to adopt new technologies risk falling behind. By showcasing case studies and success stories, you can get early buy-in for digitalisation within a business. By using digital tools, many project teams have achieved faster project completion times, reduced costs, and improved overall project quality. The fear of missing out on these advantages can be a powerful motivator for change.

Additionally, addressing the specific concerns of stakeholders is crucial. Provide clear evidence of the return on investment (ROI) from digital transformation initiatives and offer a phased implementation plan to minimise disruption. By engaging with employees and involving them in the transition process, businesses can foster a culture of innovation and continuous improvement.



Previously our engineers spent valuable hours of their shifts making telephone calls, sending and receiving text messages, updating paper reports and complex spreadsheets. With eviFile, we have seen a huge reduction in time taken up by repetitive tasks – allowing engineers to focus on making important decisions.

Mick Corner

Field Operations Director at Alstom

EXISTING SYSTEMS

Many companies in the renewables sector have adopted systems originally designed for other industries, such as logistics or oil and gas. These platforms often lack the specialised functionalities required for renewable energy projects, leading to inefficiencies and suboptimal performance. For example, a logistics software might handle scheduling and dispatch but may not be equipped to manage the complex data requirements and compliance standards specific to renewable energy projects.

eviFile addresses this gap by offering a solution purpose-built for the renewables sector. It is designed to handle the unique challenges and regulatory requirements of renewable energy projects, ensuring that data management processes are not only efficient but also compliant with industry standards. By providing features tailored to the needs of renewable projects, such as real-time reporting, comprehensive audit trails, and seamless integration with other data platforms, eviFile ensures that all aspects of the project lifecycle are covered.

Furthermore, eviFile's flexibility allows it to integrate with existing systems through APIs, ensuring that organisations can maintain their current workflows while enhancing them with additional capabilities. This approach minimises disruption and allows for a more gradual transition, making it easier for companies to adopt the new system without overhauling their entire IT infrastructure.



eviFile has streamlined and simplified our processes, providing real-time data and the insight to make actionable decisions, reduce risk and deliver a higher quality project

Peter Webb

Director of Electrification Delivery,
Balfour Beatty

CORPORATE-LEVEL SOFTWARE SELECTION

In many organisations, software selection is made at the corporate level, often leading to a one-size-fits-all solution that may not meet the specific needs of individual projects or departments. This can result in gaps in functionality and inefficiencies at the operational level. For instance, a company-wide ERP system might excel at financial management but fall short in providing the detailed project management capabilities required for renewable energy projects.

eviFile offers a solution to this challenge by providing a platform that complements and enhances existing corporate systems. Its ability to integrate seamlessly with other enterprise platforms means that project teams can benefit from specialised tools without disrupting the broader corporate IT ecosystem. This complementary approach ensures that all project data is captured and managed effectively, filling in the gaps left by generic corporate systems.

By focusing on integration rather than replacement, eviFile allows organisations to leverage their existing investments in IT infrastructure while enhancing their capabilities. This approach not only addresses the specific needs of renewable energy projects but also ensures that data flows smoothly between different systems, providing a comprehensive view of project performance.



Due to the instant improvements to productivity and accountability the project won an award for successful delivery of quality innovation. We're currently working to digitise all other field processes and disciplines such as site diaries, power and distribution, and materials management.

Ed Arnold

Head of Project Controls at VolkerWessels

COST CONCERNS

Cost is often a significant barrier to adopting new technologies, with many organisations fearing that digital transformation will add to their expenses rather than reducing them. However, eviFile should be viewed as an investment that delivers substantial cost savings and efficiencies. By automating manual processes, reducing errors, and improving data accuracy, eviFile helps organisations save money on administrative tasks and rework.

Compared to competitors, eviFile offers a cost-effective solution that provides the same or better functionality at a lower price point. This is particularly relevant in the offshore wind sector, where some digital platforms can be very expensive when compared to their functionality, flexibility and connectivity. eviFile's quick deployment capabilities further enhance its cost-effectiveness, allowing organisations to start realising benefits sooner.

Moreover, the efficiency gains from using eviFile translate into direct cost savings. For example, real-time data capture and reporting reduce the time spent on manual data entry and verification, allowing project teams to focus on higher-value tasks. The ability to quickly identify and address issues also minimises costly delays and rework, contributing to overall project cost reduction.



On previous outages, it could take maybe six or seven months for that documentation to be compiled. With this system, now we know exactly where we're at right at the end for handover. All of that data is already compiled. It has saved us so much pain that it has really, truly paid for itself.

Dave Ansell

Outage Manager,
DRAX

MANDATED REPORTING SYSTEMS

Asset owners often feel constrained by the reporting systems mandated by Tier 1 delivery contractors, believing they have little control over the data management process. However, it is crucial to recognise that asset owners are the ultimate users of this data and have a vested interest in ensuring its accuracy and integrity. Taking an active role in mandating data standards can significantly improve project outcomes.

eviFile empowers asset owners to enforce data standards and ensure that all delivery partners adhere to them. By providing a platform that facilitates accurate data capture, comprehensive audit trails, and real-time reporting, eviFile enables asset owners to maintain control over the data management process. This ensures compliance with regulatory requirements and gives asset owners better control of their projects.

In addition, eviFile's integration capabilities mean that it can work alongside existing mandated systems, complementing them rather than replacing them. This allows asset owners to implement eviFile without disrupting their relationships with Tier 1 contractors or requiring a complete overhaul of current systems. By demonstrating the added value of eviFile in improving data quality and project efficiency, asset owners can advocate for its adoption as a standard practice.



We're very driven to improve the visibility of the health of our projects and believe eviFile is the tool to do it. Introducing this technology has brought benefits across the whole project supply chain, for contractors, field operatives, project managers, stakeholders and regulators.

William Eyre

Head of Construction Services,
United Utilities

CONCLUSION

Wider digital transformation in the renewables sector is a key enabler to scaling-up, becoming more efficient, and delivering better project outcomes for supply chain and asset owners. eviFile is designed with user-centric principles, focusing on ease of use and functionality that directly addresses common pain points in project management by providing accurate data and insights, in real-time, to greatly improve productivity in the renewables sector and improve project outcomes for all stakeholders.

eviFile has helped partners in energy and infrastructure like Drax, VolkerFitzpatrick, and Siemens with their digital transformations by migrating their project management workflows from traditional paper processes and spreadsheets to our web-based data management and reporting platform, saving them time on administrative tasks, improving the accuracy of the data they collect on-site, and enabling them to progressively assure ongoing projects.

CONTACT US

Contact us today to learn how you can use eviFile to supercharge your projects' efficiency and safety to mitigate risk and ensure compliance.

Visit www.evifile.com/renewables



WHO ARE EVIFILE, WHAT DO WE DO AND WHY ARE IN THE ENERGY INDUSTRY?

eviFile stands for “evidence file” and we are a software as a service company (SaaS) that provides data solutions for inspections, compliance and reporting. Our business has grown through deployment in the infrastructure sector and we are expanding our offering the energy sector.

At eviFile, we see the same challenges in various industries, with businesses needing to deliver projects faster, at reduced cost and without compromising on safety and quality. Our solutions are built to help business meet these challenges and stay competitive in an evolving industry.

We offer plug-and-play solutions for the following:

- › Inspections and compliance
- › Surveys
- › Construction and commissioning
- › Asset condition monitoring and NDT

Our solutions are scalable, suitable for small with a few users seeking an affordable solution, to large asset owners and service providers who require large enterprise solutions. We work with our customers to deploy solutions rapidly so that their businesses keep moving and we provide the support and customisation so that every solution we deliver matches the job.

