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Enterprise Asset Management in the Renewable Energy Sector

How organisations can improve their Enterprise Asset Management, and prepare for increased demand

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After the 2015 Paris Agreement and the Cop26 summit in autumn 2021, governments across the world are facing pressure to increase their reliance on renewable energy.

The UK government recently offered £265m in subsidies for offshore renewable energy developers. This is extremely promising news as the government aims to support a record number of projects in the sector.

With the renewable energy sector moving increasingly into the spotlight, what can organisations in the industry do to improve their Enterprise Asset Management, and prepare for increased demand in the years to come?

The importance of digitalisation

A recent, independent survey in the wind sector has found that 94% of key stakeholders think there is a gap between the way in which the offshore wind industry currently operates, and how it should be operating in order to extract the full value from data and digital technologies.

This is why some companies have put such focus on digital transformation. For example, Peacock Engineering's customer SSE has made excellent steps forward in the past year by adopting digital technologies.

Digitalising through the Maximo Application Suite (MAS) allows renewable energy businesses to meet future needs – including remote monitoring with IOT technology, and predictive maintenance using AI.

How Maximo can help renewable energy companies to increase asset availability and reliability

As investment increases in the international renewable energy market, and major players in this space compete, it has become even more vital to:

- Increase asset availability and reliability
- Improve safety
- Improve efficiency and reaction time
- Cut costs

Offshore energy companies face significant costs if, for example, extreme weather damages their turbines. So it is imperative that their Enterprise Asset Management system ensures assets are available as often as possible, and that engineers can react to problems instantly. This is particularly important since many renewable energy companies have dozens of different asset types, throughout different stages in their lifecycle, spread over a wide geographical location (perhaps globally).

Furthermore, to optimise cost control, it is best to have all these worldwide assets managed by a single, configurable system. This allows renewable energy businesses to have oversight of all their assets and infrastructure centrally, helping effective decision making. Using the data stored enables the company to assess life-cycle costs and make better investment decisions.

How Maximo Application Suite can help

A centralised asset management system also gives all renewable energy engineers access to real-time performance data, which drives down the operating costs of each asset.

Specifically, Maximo Manage can help validate that the right Health and Safety documentation is in place to ensure worker safety while working in often extremely challenging conditions. Job plans in Maximo can help to ensure worker's competencies are understood and planned accordingly.

Maximo Application Suite is used as a single source of truth for maintenance activities, so all inspection schedules are adhered to and no expiry dates for work are missed. Proactive condition-based maintenance work can be scheduled during the working week, instead of reacting to a failure outside of work hours. This means costly callout costs are reduced and reliability is increased.

The importance of mobile working for renewable energy companies

The asset management challenges for renewable energy generators are different from traditional thermal or carbon energy generators. Assets are typically more distributed, more numerous and outage availability may be weather dependant. Hazards (such as lone working, working at height, ATEX and isolation) and the complexity of maintenance are comparable.

These challenges make mobile working essential; the ability to enforce business process, collect the right type of data and give the right information to engineers and technicians at the point of work are more challenging when working in remote and disconnected sites and locations. The availability of inventory items and routes become more important, as does the location of technicians, due to the impact on schedules and efficiency.

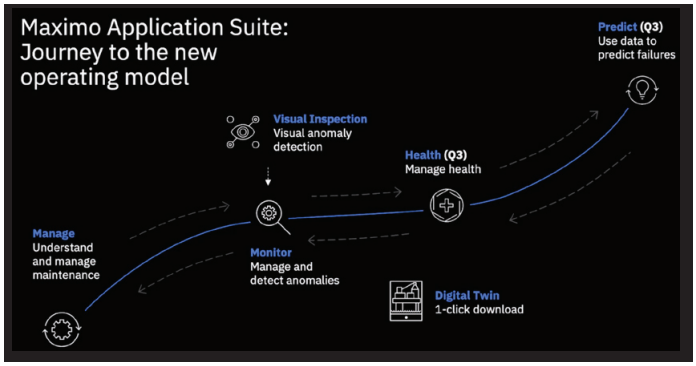
Using Fingertip, we have surfaced the right information (manuals, photographs and work history and inventory information), enabled auditing and authorisations interlocked to work process, and provided guided work processes for sophisticated maintenance activities – all supported for offline work with automated syncing.

How Maximo Application Suite can help renewable energy companies

Going forward, the powerful AI capabilities of Visual Inspection (available with Maximo Application Suite) could be combined with drone camera technology to carry blade inspections for offshore wind turbines, which avoids the dangerous and difficult job of manual visual inspections.

The increasing use of Internet of Things sensors on renewable assets will help move forward the journey to predictive maintenance (Maximo Predict) with remote monitoring (Maximo Monitor) and assessment of their performance (Maximo Health) meaning smarter maintenance and increased asset reliability.

To find out more about Maximo Application Suite can benefit your offshore energy organisation, please contact us now for more information or a demo of Maximo Visual Inspection, Predict, Monitor or Health.



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About Peacock Engineering

Peacock Engineering Ltd was established to deliver a diverse range of Asset and Service Management solutions to asset intensive industries.

Our consulting team is made up of long standing IBM Maximo professionals, each with an average of 12 years' experience in the product and who, together, have amassed over 400 man-years of Maximo systems implementation experience.

From this knowledge and practical application, a proven and trusted process-driven methodology has emerged. With the methodology in place, the ongoing challenge is to improve delivery efficiency and provide affordable solutions, using a mix of services and systems provisioning models, to meet a broad range of industry verticals.