

Sustainability through modernisation, field services and proactive maintenance

Nontu Mkhize, Etienne du Plessis and Meryl Eckersley from Schneider Electric outline the crucial role of field services, proactive maintenance and Schneider's EcoStruxure asset management solution in modernising industrial plant to help them to remain competitive and sustainable.



Left: Nontu Mkhize, Offer Marketing Manager for Power Services and Industry at Schneider Electric. Right: Schneider Electric South Africa Field Service Channel Manager, Etienne du Plessis.



Industry modernisation is crucial for maintaining competitiveness and addressing rapidly evolving market demands, specifically now as industries face increasing pressure to enhance efficiency and sustainability. With technological advancements such as automation, artificial intelligence (AI), and the Internet of Things (IoT), modernisation offers businesses the opportunity to improve efficiency, reduce costs and enhance product quality.

"Modern systems help companies stay ahead of competitors by allowing them to innovate, scale operations and quickly adapt to market changes. Modernisation also addresses increasing customer expectations for sustainability and smart technologies, offering businesses a clear competitive edge," says Nontu Mkhize, Offer Marketing Manager: Power Services and Industry for Anglophone Africa at Schneider Electric.

The role of field services

She notes that field services play a crucial role in driving modernisation by providing on-the-ground expertise and hands-on support for upgrading infrastructure, implementing new technologies and maintaining critical systems.

"Field service professionals ensure that industrial businesses can effectively integrate modern solutions into their operations, offering real-time troubleshooting, system optimisation, and training. This support ensures smooth transitions during modernisation and helps businesses achieve

operational excellence by leveraging the latest technologies and practices," says Mkhize.

She adds that engaging with field service providers offers several benefits, including access to specialised knowledge and hands-on expertise that ensures the successful implementation and optimisation of new technologies.

"Field services also helps businesses minimise downtime during upgrades by offering proactive maintenance, real-time troubleshooting and rapid system recovery. Additionally, field services can help businesses reduce the risks of costly errors and ensure that systems are properly installed and maintained," says Mkhize, adding that further benefits brought by field services include faster implementation, training and knowledge transfer.



EcoStruxure Asset Advisor is one of Schneider Electric's core solutions under its digital portfolio, connecting a host of services to assets.

Schneider Electric South Africa Field Service Channel Manager, Etienne du Plessis, explains that field services help businesses adapt by ensuring their technology and infrastructure are agile and capable of responding to dynamic market shifts. Through modernisation, companies can implement more flexible, scalable solutions that can quickly meet evolving consumer expectations.

"Field services also support ongoing maintenance, upgrades and optimisations, which ensures that businesses can remain responsive and competitive in a rapidly changing landscape. This adaptability enables organisations to seize new opportunities and stay ahead of market trends," he says.

Du Plessis points out that the integration of IoT and data analytics enhances operational efficiency by providing real-time insights into the performance of machinery, systems and operations. IoT devices capture data that, when analysed, allow businesses to identify inefficiencies, predict maintenance needs and optimise workflows.

"Field services enable seamless deployment of IoT solutions, ensuring that the collected data is effectively leveraged to improve decision-making and operational processes. The insights gained from IoT and analytics help businesses reduce operational costs, enhance productivity, and improve overall system performance," he says.

Over and above, modernising infrastructure directly supports sustainability efforts by enhancing energy efficiency, reducing waste and optimising resource usage. Du Plessis explains that advanced technologies such as smart grids, energy-efficient systems and predictive maintenance contrib-

ute to reducing the environmental impact of industrial operations.

"By embracing modernisation, businesses can lower their carbon footprint, comply with environmental regulations and contribute to global sustainability goals. Moreover, smarter systems allow for better energy management, which not only reduces operational costs but also helps organisations meet their sustainability targets," he says.

In the long term, adds du Plessis, companies can expect various strategic advantages to stem from successfully implementing modernisation, including increased competitiveness with businesses being able to differentiate themselves by adopting cutting-edge technologies and best practices.

"Modernisation supports sustained growth as efficient operations enable businesses to scale their activities, expand into new markets and improve customer satisfaction. It also drives long-term savings from improved energy efficiency, reduced maintenance costs and fewer operational disruptions," he says.

"Also, successful modernisation positions businesses as leaders in innovation, attracting new customers and partners, while modernised systems and processes make businesses more agile, resilient to disruptions and adaptable to future challenges."

Embracing proactive maintenance

Technological advancements such as the IoT and AI have also revolutionised proactive maintenance. "Predictive maintenance tools offer real-time monitoring and diagnostics for timely interventions, reducing costs and ensuring efficient equipment operation. A significant driver in adopting the shift to proactive maintenance within an organisation is the benefit of optimising technology trends and staying ahead of the curve through advanced practices and operational efficiency," says Meryl Eckersley, Secure Power Channel Manager at Schneider Electric.

The main differentiator between proactive and traditional maintenance is the reduction of unscheduled downtime, which can lead to operational risks. By leveraging digital tools and solutions, organisations can leverage data analytics, real-time monitoring and predictive algorithms that identify and address risks through analytical trends, with the advanced monitoring being done onsite at asset level.

EcoStruxure Asset Advisor

Schneider Electric's EcoStruxure Asset Advisor, its vendor-agnostic IoT architecture, enables software experts to analyse valuable data insights to mitigate potential



Schneider Electric's field services, proactive maintenance and asset management offerings offer opportunities for industrial plant to use automation, artificial intelligence (AI), and the Internet of Things (IoT) to upgrade and modernise their operations, helping them to remain competitive and sustainable.

risks, enhance operational efficiency and reduce wear and tear, all of which leads to high operational costs within the asset lifecycle if not managed efficiently.

"AI-driven analytics adds value through the optimisation of maintenance practices, generating recommendations on how to improve alarm and incident tracking statistics. For example, EcoStruxure Asset Advisor evaluates live data from customers' environments and applies AI and advanced analytics to identify potential threats. It also facilitates automatic incident creation and sets priorities for the dispatch of on-site resources when required. This is one of the biggest advantages that proactive maintenance capabilities can bring to an organisation," Eckersley explains.

EcoStruxure Asset Advisor ranks among the leading predictive maintenance tools currently available in the market. It is used in data centre environments to enable secure power from Uninterruptible Power Supply (UPS) and cooling via predictive cloud-based analytics that provide 24/7 remote monitoring of IT critical infrastructure.

EcoStruxure Asset Advisor is one of Schneider Electric's core solutions under its digital portfolio, connecting a host of services to assets. This solution gives the customer peace of mind in knowing that their critical infrastructure is being overseen and monitored throughout Schneider Electric's various hubs. This solution also leverages predictive analytics to enhance security and mitigate risk and failure through real-time data.

Real-time monitoring can also significantly improve equipment efficiency. Organisations can reduce the failure curve by addressing the state of specific components throughout the asset lifecycle, thus reducing downtime and unforeseen operational costs.

Another clear benefit of predictive maintenance is that it enables organisations to

foster collaboration between maintenance teams, operators and management. Through technologies, such as mobility and cloud computing, teams can collaborate across various platforms and access information, which ultimately facilitates holistic efficient and timely intervention.

After-sales support also plays an integral role in the customer satisfaction journey throughout the asset life cycle through the various after-sales services. A customer's experience can be enhanced through various portfolios designed to address issues such as reducing downtime and minimising costs, as well as managing the cost of ownership.

When transitioning from reactive to proactive maintenance, however, organisations could face challenges specifically in the areas of security and protecting the applications from cyberattacks. Schneider Electric's EcoStruxure IoT platform has been developed with rigorous penetration testing and includes two-factor authentication encryption that also allows data to be transported through an outbound connection only via the IT gateway.

"While technology plays a vital role in the adaptation of proactive maintenance practices, the most important element remains the human touch. A well-trained workforce, exposed to continuous learning, is key to the successful implementation of new technologies that require effective strategies to help organisations navigate the digital landscape," Eckersley points out.

In concluding, Etienne du Plessis says that successfully modernising – with the assistance of field services, proactive maintenance and advanced AI-enabled IoT platforms such as Schneider Electric's EcoStruxure Asset Advisor – provides lasting benefits, including increased competitiveness, cost savings, sustainability and ultimately long-term growth.

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