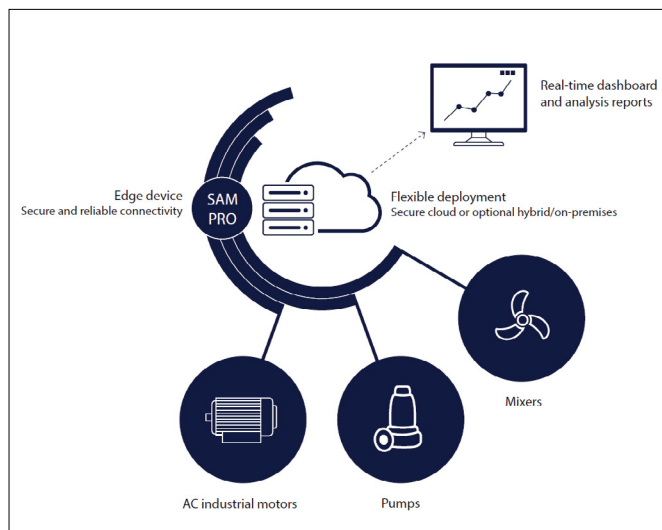


Affordable preventative maintenance for water infrastructure

Xylem SAM PRO is a cloud-based preventive and strategic reliability-centred maintenance system that can be retrofitted to any equipment to generate data analytics on customised dashboards, informed by digital twin technologies.



Left: Xylem SAM PRO can monitor any piece of mechanical or electrical equipment to provide utilities with comprehensive monitoring, diagnostic and prediction insights. **Right:** Water utilities can enjoy the best modern maintenance insights and planning using Xylem SAM PRO.

Preventative maintenance saves water utilities considerable time and money. However, adding such technologies to water sites can be daunting, which is why Xylem developed SAM PRO: an elegant, affordable, scalable, and efficiently deployable preventative maintenance platform that incorporates digital twin technologies.

The maintenance paradox

Maintenance is a crucial part of any site's productivity. Yet, the challenge is knowing when to apply maintenance. Until the early 1960s, the overwhelming belief among engineers was that component failure related to age. They wagered that as long as a component is within its useful life, it will perform reliably.

Minds began to change when numerous studies after World War 2 showed this logic to be a fallacy. Most equipment failures didn't relate to age but to faults in new equipment or disruptions caused by maintenance. Maintenance can be the leading culprit behind equipment failures.

There is even a name for it, the Waddington Effect, which states that maintenance can increase breakdowns because it disrupts a satisfactory condition.

But maintenance is necessary. In response, maintenance engineers developed Reliability-Centred Maintenance (RCM), which links maintenance planning with productivity requirements. It is very effective: RCM is

why most aircraft keep flying; nuclear power stations don't melt down; and steel smelters deliver sustained performance.

RCM can apply to any complex site, including water utilities. As long as one can collect the correct data and create reliable analytics, an RCM strategy is attainable. Digital technology is simplifying access to this level of predictive maintenance and making it more affordable.

Specifically, Xylem's SAM PRO service enables intelligent and affordable strategic maintenance schedules for water infrastructure without breaking budgets or upsetting operations.

SAM PRO: smart maintenance for water sites

Xylem SAM PRO (Smart Asset Management Performance & Reliability Optimisation) is a decision-intelligence tool designed to improve asset reliability and lifespans, reduce unplanned maintenance, and decrease costs.

SAM PRO utilises a secure, cloud-based platform that seamlessly deploys to monitor different mechanical and electrical systems, delivering 360° Performance insights for preventive and proactive maintenance. It helps site managers develop productivity-focused maintenance strategies that reduce related issues and knock-on effects, and enhance asset management.

Xylem SAM PRO can monitor any piece of mechanical or electrical equipment, providing

utilities with comprehensive monitoring, diagnostic and prediction insights. The collected data populates real-time dashboards, alerts, and analysis reports that utility managers can design and tweak.

The system can detect and diagnose operational anomalies quickly, triggering proactive maintenance or asset replacement alerts.

SAM PRO delivers these results through digital twin technologies: digital copies of physical equipment that the software uses to test hypothetical and developing issues before they impact real-world equipment.

Traditionally, such capabilities were costly and complex. Xylem has closed that gap through modern cloud infrastructure, digital software and extensive experience in water utility maintenance. The result is a cost-effective, secure and scalable water utility maintenance service that can plug into any site, regardless of age or complexity.

Water utilities can enjoy the best modern maintenance insights and planning using Xylem SAM PRO. They can precisely correlate technical machine conditions with process conditions. The results are fewer breakdowns, lower costs, and reduced maintenance disruptions to site productivity.

Bring the power of reliability-centred maintenance and digital twin technologies to your water infrastructure. Xylem SAM PRO is a powerful software service that will fit your needs and budget.

www.xylem.com/en-za/