Digital Asset Management Strategies
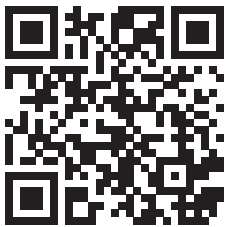Advances in maximizing performance and increasing reliability for electric utilities

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# INTRODUCTION

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INTRODUCTION

Every industry in the world, utilities included, wishes to keep their downtime and unplanned maintenance activities as low as possible. In this endeavor, most companies in the power sector have been following time-based preventative servicing as a standard industry practice. However, over the years altering business objectives according to customer expectations, the reinforcement of regulations mandating more reliability in power supply, have forced organizations to reassess their strategy.

A study by ARC Advisory Group has shown that only 18 percent of assets follow the age-related pattern of failure, while the remaining 82 percent fail randomly. Preventative maintenance performed on more than four-fifths of belongings has proved to be a waste of resources. Under-maintaining, as most of the effort goes for naught, is not an option as it will likely lead to more frequent and sometimes longer interruptions and cause financial loss to the firm arising from non-provision of service and increased expenses during unplanned repairs.

On the other hand, maintaining the status quo wastes worker hours and consumes unnecessary spare parts, which is an avoidable expense that would linger on the balance sheet. Research by Oniqua Enterprise Analytics, found that almost a third (30%) of maintenance activities are carried out too frequently, resulting in a waste of valuable resources.

According to ARC Advisory Group's Enterprise Asset Management and Field Service Management market study, an average company can reduce its preventative upkeep expenses by as much as 50 percent. This can be achieved by observing the health and performance of the equipment. Condition-based maintenance (CBM) entails repair or replacement decisions in accordance with the functioning or status of the gear rather than with factors like age, which in itself is not a good indicator of failure.[1]

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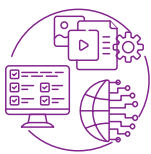
Asset performance management (APM) is a solution that facilitates predictive maintenance based on real-time conditions. It is an approach to managing resources that prioritizes business objectives in addition to traditional asset reliability and availability goals. This system eases the transformation of utility into a digital-first entity by combining traditional asset management practices with new digital technologies for advances in reliability, execution, and business performance.[2]

Technical advancements over the last decade have made predictive maintenance, a step above condition-based in Schneider's maintenance maturity pyramid, using APM a real possibility. Technologies such as the internet of things, artificial intelligence, cloud, and digital twins have made the once-unimaginable tasks of capturing the real-time status of thousands of equipment, communicating them to the server, storing a humongous amount of data and analyzing them instantaneously to gain the maximum of insights possible.

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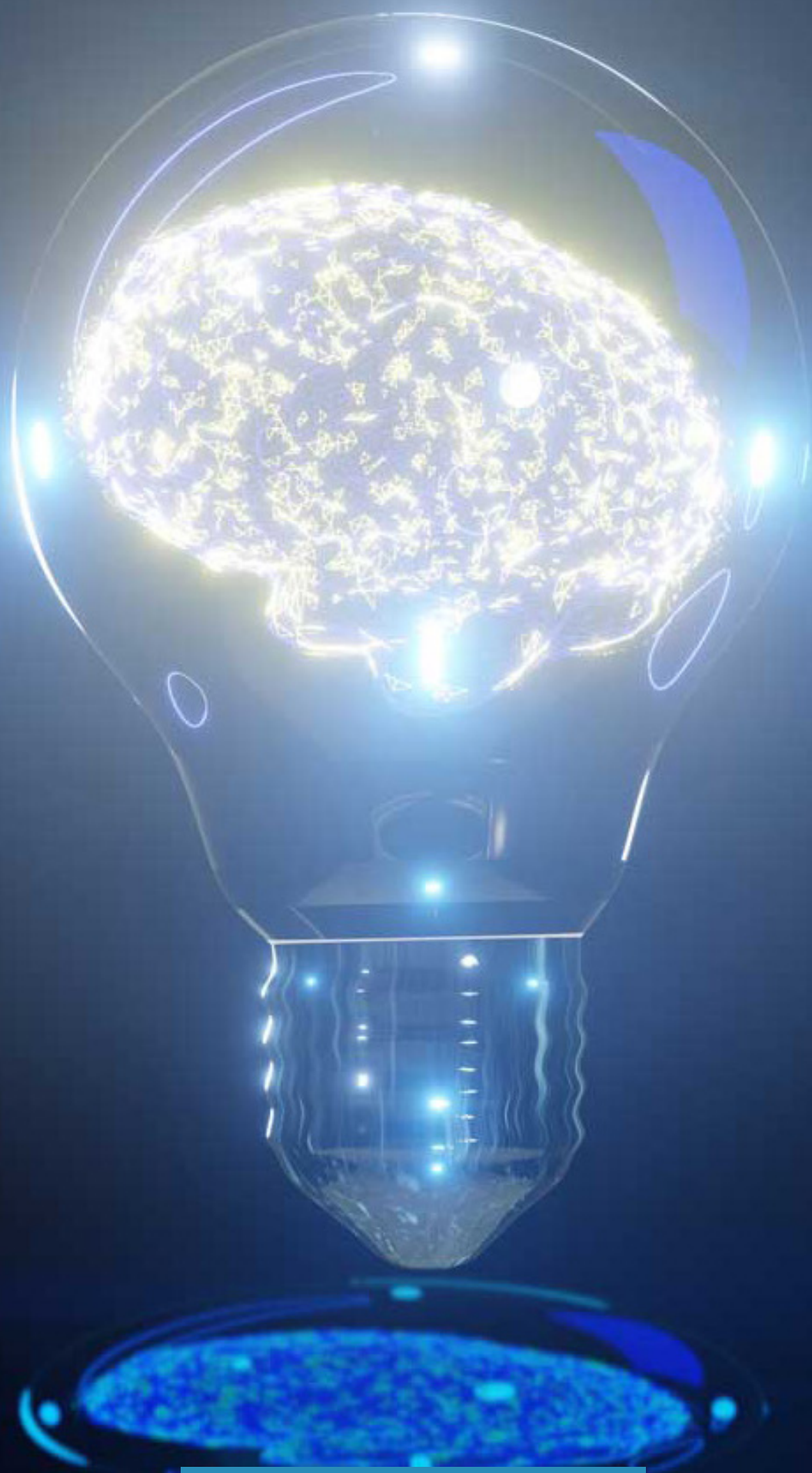
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