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Ensuring asset reliability isn't what it used to be. Today, it requires the convergence of process control with work management. This convergence resolves weaknesses in one methodology, while being additive for both.

For example, process-control solutions can't identify asset criticality, but reliability solutions can. Manufacturers can improve efficiency and productivity with standardized workflows based on best practices. Reliability solutions transform data into instantly accessible, context-appropriate information for those who need it.

In terms of enterprise software for manufacturing industries, asset-reliability tools are relatively new to the marketplace. ARC believes the real value of enterprise-level reliability software lies in its analytical capabilities. Consider the following three areas where these new solutions are hitting paydirt.

1. Managing operational risk

Managing risk is an essential component of a reliability program. Decision makers need to understand the uncertainties of costs versus risks in order to make informed decisions about the benefits of a given strategy and any impact it may have on safety. Identifying critical equipment; failure modes; failure effects on equipment, personnel and the environment; and critical spares on hand enables decision-makers to leverage the right risks, while maintaining the appropriate controls to ensure effective and efficient operations. Visualization capabilities in risk-management modeling tools provide information to users in the context of their responsibilities and level of authority. Displays of real-time information and historical trends at the management level enable actions based on facts to minimize the costs and losses associated with a business interruption.

2. Going mobile with reliability

Technicians frequently work remotely and/or outside the range of wireless networks. As a result, reliability solutions have migrated into handheld devices and tablets for the bidirectional

exchange of data. For example, SKF offers ruggedized handhelds to support operator-driven reliability (ODR). This enables operators to take a more proactive role in initiating corrective actions for degrading equipment. Meridium recently introduced its Tablet Application Framework, a platform that allows for the rapid development and deployment of mobile, tablet-based applications which integrate with Meridium's software. Mobile applications enable access to data at the point of the asset where it is most needed.

3. Taking reliability to the next level

Even today, reliability is often an afterthought (i.e., little reliability input is incorporated in the concept and design phase of an asset lifecycle). To take reliability to the next level, it must be built into the asset. Reliability expectations should be defined in the concept phase and used to drive reliability into the design phase of product development. Early testing can identify important failure modes that should be resolved in the final design. Unresolved failure modes, such as normal wear of items, should be identified in diagnostic guides in condition-monitoring and PAM solutions to drive appropriate maintenance strategies. A reliable-by-design approach provides a clear understanding of the risks before products are introduced and enables end users to better address issues later, if necessary.

Upgrade your toolbox

Historically, in the hierarchy of an enterprise, maintenance has been viewed as the ugly stepchild. It carries negative connotations—*that something is broken and will cost a lot to fix.* Th us, in challenging economic times, the maintenance organization is frequently the first to experience cuts. Enterprises have come to the collective realization that this attitude can be self-destructive. By adding powerful reliability-solution software to your asset-performance management (APM) toolbox, your operations will get a powerful assist in optimizing asset availability and utilization and mitigating exposure to risk.
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The opinions expressed in this Viewpoint section are those of the author, and don't necessarily reflect those of the staff and management of *Maintenance Technology* magazine.