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Peter Zornio, Chief Strategic Officer, Emerson Process Management Today, as process automation facilities face a shrinking skilled workforce, the need for plant asset reliability is more important than ever. Organizations can tackle this challenge and ensure efficient plant operations by implementing three steps that will lead to the improved collection and use of new and better data.

1. Create an integrated environment. Use data collected across all assets in a digital plant architecture (including mechanical and process equipment, instruments and valves) to improve asset health and production performance. By tying the production results to the assets themselves, decisions about how to best manage production can be improved and the decision process simplified.

The challenge posed by a diminishing pool of skilled labor is an important but not insurmountable one.

Even in existing facilities, technology upgrades can replace inefficient interfaces with more seamless operation, establish critical information relationships and automate work processes to free staff resources for use where they are most valuable. Integrating asset management information into computerized maintenance management systems makes it easier to prioritize maintenance, allowing for more efficient staff time use.

To reap the benefits of an integrated environment, organizations must change their daily work practices. Without a predictive maintenance approach, they'll end up working twice as hard for limited results.

2. Utilize the latest wireless infrastructure and technology. The emergence of an open standards-based field wireless infrastructure for monitoring plant assets allows for increased reliability despite staffing and resource reductions. This dramatic technology breakthrough gives organizations the ability to create early warning systems that provide predictive diagnostics from previously inaccessible areas giving a deeper, more comprehensive view of asset health. Assets that were once physically impossible or too expensive to reach with wired technology now can be tapped to pull in new, real-time data. Installation costs are as much as 90% lower than those of a wired network. A self-organizing wireless mesh technology is highly reliable and secure. That's a requirement for challenging plant environments.

3. Augment existing resources with expert services. Since plant staffs already have their hands full, organizations that implement the previous two steps should ensure their success by going one step further, drawing on the specialized experience and skills of a knowledgeable partner. Outside expertise can augment an organization's existing knowledge base and provide the additional "arms and legs" needed to take on these initiatives.

The right ally will have a full range of experience to collaborate with staff on wired and wireless digital systems infrastructure and the execution of integrated asset management and process control across the enterprise. Such an ally also can offer the best services and expertise to ensure work processes are properly adjusted to reap the full benefits of these efforts.

In the view of Emerson Process Management, the challenge posed by a diminishing pool of skilled labor is an important but not insurmountable one.

Process manufacturers can employ integration practices and new technology to better collect and use plant data. In doing so, they should seek help from the right partner, one with the broadest perspective and expertise, to lay the foundation for continued success in a changing environment.