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Sustainability is the hottest of topics these days. The concept is now applied to virtually every aspect of our lives. We have sustainable agriculture, cities, design, living, packaging, transportation, even sustainable tourism. With the term being so widely used that it's descending to buzzword status, those doing business in the era of sustainability risk losing sight of the very real benefits associated with sustainable solutions.

When considering which solutions are right for a company looking to improve operational efficiency and decrease its negative impact on the environment, always start with the four pillars of sustainability: energy efficiency, water, waste and building infrastructure. They represent areas where organizations can reap the benefits of sustainable business practices, either through investment in new technology or optimization of existing technology.

In the United States, current economic conditions make it nearly impossible for most manufacturers to create capacity through new investments. Government regulations aimed at protecting the environment show no signs of loosening—*and are likely to get stricter*. For companies not yet on the bandwagon, now is the time to take a long, hard look at the four pillars of sustainability for ways to streamline processes. For companies already aware of the upside of sustainability, revisiting the four pillars can help achieve even greater benefits and savings.

The largest pillar, with the most potential for reducing negative environmental impact and increasing profits, is energy efficiency. From an environmental perspective, energy expenditures are most visible in the form of an operation's carbon footprint. From an economic standpoint, energy is one of the largest operational costs in industry. With energy costs projected to continue spiraling upward, and federal regulators taking increasingly aggressive stances on harmful emissions and waste, energy efficiency is critical to the long-term viability of any industrial enterprise.

Not everyone within an organization has a broad enough view to evaluate the company's operational goals against the four pillars of sustainable solutions and make the right decisions. It

falls to CEOs, CFOs, sustainability officers and plant managers to ensure that their sustainable efforts drive improvements—*and to not just pass the buck to another area*. They can do this by looking at the whole process and asking these questions:

- Where can I implement change? What is viable?
- Should I invest in new technology or seek change through optimization?
- What will be gained? Will I be able to create extra capacity?
- How much will this effort cost? Is it a good investment?

Energy efficiency has numerous benefits. Solutions are available now that can yield up to 7% gains in productivity while creating a sustained reduction in energy consumption per unit produced of up to 40%. Still, energy efficiency is not an end unto itself: It's just one block under the umbrella of sustainable solutions. Going too far in one direction and neglecting the bigger picture can diminish the effectiveness of implementing sustainable solutions.

Correctly implemented, energy-efficiency efforts increase compliance and save money by helping businesses stay ahead of mandates. They can increase capacity through optimization of processes, as well as increase plant reliability and availability. It is the C-suite's responsibility, along with senior management, to make sure things are done right. When they are, companies will be leaner, more productive, more reliable and more profitable. **MT**

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.

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