Which Technologies Should Come First, Second, Third?

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Analytics solutions. The industrial Internet of Things. Robotics. Automation. Manufacturers looking for tech solutions that will help them control costs and gain a competitive edge have many great options. In fact, deciding what type of technology to invest in and why can seem overwhelming. Could you get a better ROI through automation and improved productivity, or through using analytics to identify inefficiencies and streamline processes? To glean the most from almost any new technology, make sure you have:

- A clear understanding of what's happening in your business
- A vision for what you want the technology to do and why
- The right process structure and skill sets along with team alignment.
- Before investing in any new technology, ask these questions:
- What are the key drivers of operational and financial performance for your business?
- Do you clearly understand performance levels, reasons for misses and have processes for correcting them?

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Many manufacturers regularly fall short of their strategic goals, and it's a good bet most of them also struggle with these questions. A lack of data usually isn't the issue. Most manufacturing environments usually include some combination of ERP, CRM, CMMS, EMS and financial reporting systems and spreadsheets.

The problem is the long time it takes to gather and analyze key performance indicators from the various sources. When that's the case, predictive technology is invaluable and probably your best next investment: It will help you better understand what's happening in your business and why to keep strategic goals on track, and it will position you to apply new technologies more effectively moving forward.

Many cloud-based predictive solutions are also more versatile and relatively inexpensive and easy to implement compared with, say, a behind-the-firewall solution. Moreover, a well-executed solution can delivery similar types of insights quicker due to a shorter implementation timeline.

Predictive solutions are helpful because they can help you improve understanding of most facets of your operations, from sales trends to reasons for downtime.

One manufacturer with which TBM is familiar was regularly losing a day's worth of production every few months, which added up to several hundred thousand dollars per year, to repair a key machine. The company did not have a CMMS and it was not keeping and pulling meaningful data in any way so it could run analytics to look for trends.

Research into historical data helped determine scheduling the replacement of pumps prior to failure would save a lot of money. Of course, it's best to implement a system to track, analyze and deliver performance data from specific machines to avoid these types of situations.

Forecasting demand is another good idea. Many variables like weather, regional preferences and product portfolios influence demand patterns. When forecasts are based on historical POS data, they do not always account for fluctuations in these different variables. Combining capabilities that let you capture data from disparate sources with a predictive modeling capability helps you improve the accuracy of forecasts.

Once you have a handle on what's driving performance and why, you can begin fixing issues before they linger long enough to derail strategic goals. You also get a better idea of what needs to happen to sustain fixes and make further improvements for future progress. And this knowledge is invaluable for deciding where new technology investments will have the most impact.

As you explore options, remember that data is only valuable if it's telling you something useful. Before you collect date, determining what you should measure and why. To get the best ROI, you need to be strategic.

Finally, remember that, along with choosing the right technology, you need solid processes and skilled people to get the biggest ROI from predictive technology.

Filed Under: Expert Opinions, Smart Manufacturing, Uncategorized

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