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Digital Transformation In Chemical Manufacturing



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Cut through the hype and choose the right technology to maximize return on capital while improving profitability.

By Matt Newton, Senior Portfolio Marketing Manager, AVEVA

□ Digital transformation isn't a patch or a bolt-on solution. It's a path that manufacturers can take to improve profitability and provide better customer experiences. And the good news is you don't have to jump in with both feet and roll out a digital transformation strategy across the entire enterprise.

For example, if you have critical assets that absolutely can't go down, that's where predictive asset analytics can help you identify equipment that might be trending toward a problem. This intel can be seen days, weeks, even months before it happens. If you're worried about training and getting operators into their seats more quickly, an augmented-reality or a virtual-reality solution can literally cut your training time in half. Starting with one type of technology or one digital transformation pillar is manageable. You can always build out your applications over time depending on what your specific business needs and objectives are.

In the chemical market, manufacturers are faced with a lot of increasing pressures across a variety of dimensions of their business. They're dealing with heightened regulatory compliance requirements. They're trying to improve knowledge creation and capture and retain as much industry know-how as possible before senior employees retire. All while maintaining operational excellence.

Using digital technology, manufacturers can create a complete digital twin of their processes and their assets. A digital twin gives chemical manufacturers a unified view of the entire supply chain all the way from feedstock through to production to market forecast. They can dial-in things like production schedules to be more agile in responding to shifting customer demand. They can select optimal feedstocks based on real-time economic data. They can optimize maintenance and spare part inventory and even fold multiple logistics

facilities into a single envelope to reduce costs.

Industry really is no stranger to change. Indeed, from steam to electricity to computing and digital technologies in our industrial applications, change has occurred since the beginning.

QUESTIONS TO ASK

1. Exactly what role does digital technology play in improving market competitiveness?
2. How do you make certain you're making the right technological investments?
3. What new opportunities do these digital toolsets offer?
4. How will digital technologies help you drive new value across asset and operations lifecycles?
5. Can digital technology really help to foster a zero-accident culture?
6. How does digital technology contribute to increased margins while streamlining innovation?
7. What about cyber security and data privacy?

WHERE TO START

The biggest hurdle is getting operators and information technology folks working together. They speak different protocols, different languages, they've got different initiatives. How do you get these two folks to work together? Usually it just takes someone at the top with a grand vision.

In terms of a physical starting point, mobile technology typically has the quickest ROI. The reason for that is you're getting data right into the operator's hand. You're digitally transforming your workflows and data collection process and that opens up new perspectives and identifies new opportunities, and unfortunately, new problems that hadn't been exposed before. But you can't fix a problem until you're aware of it.

CYBERSECURITY

Before you do any kind of project related to technology, the first thing you should do is involve a certified Information Systems Security Professional. In addition to making sure that you're using the right Wi-Fi security, they take a step back and they look at things like risk mitigation, understanding criticality of assets, what systems are most important and then deploying the right type of security solution.

Digital transformation is disrupting all sectors of the chemical industry. The key is identifying new opportunities to improve supply-chain agility and enhance collaboration across all business units of the enterprise. This approach empowers people, improves process efficiency and increases reliability of production assets. **▣**

To learn more about how digital transformation can improve your operations, watch the on-demand webinar, which uses case studies to point out challenges and opportunities.

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