

Specialty Chemicals Focus

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Small specialties firms lag behind in digital transformation

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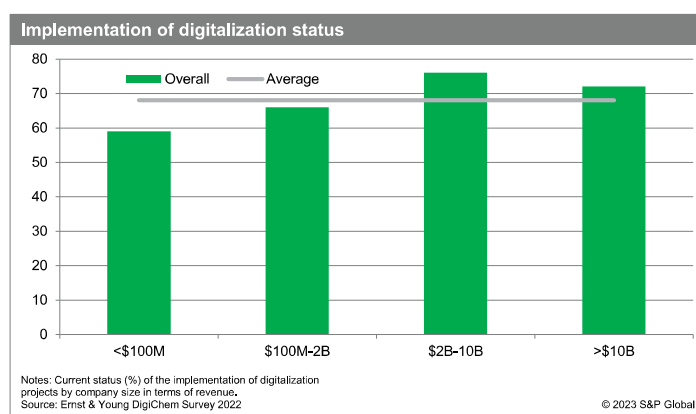
Many global specialty chemical companies have embraced digitalization through working together with technology firms, developing their own digital tools and acquiring data analytics startups. However, there is a big difference between the major specialties players and the smaller specialty chemical companies in terms of the stage they have reached in their digital transformation, according to the Digital pulse of the chemical industry 2023 report, published recently by Nokia.

“Some of the specialty companies are just starting to digitalize their data and move away from excel, whereas the big chemical companies are already using digital twins and simulations,” the report says.

Most specialty and small-to-medium sized chemical companies have already started their digital transformation process, but wish they had started the process years ago—in most cases, five years ago, the report says. They delayed their digitalization process because at the time they did not have the resources, whether capital budget or people, and are now working to “get to where they want to be quickly,” it adds.

“The main difference is that most specialty chemical companies are in a much earlier phase of digitization than the big, global manufacturers. They need to integrate digital tools and technologies that fit within their business structure and model,” Stephan Litjens, vice president/enterprise campus edge solutions at Nokia, tells CW.

Much of the digitalization process in small specialty firms is in the pilot phase, but they are already seeing positive early results, Litjens says. “They are experiencing more consistency and reliability, as well as more productivity gains, less downtime and scheduled downtime at more efficient times. Digitalization has also made it easier for them by making certain calculations automated, which has resulted in less handwork and less room for human errors. It has removed a lot of the variations in production.”



Many small specialty chemical companies are using a steering committee to set the digitalization agenda, the Nokia report says. “Digitalization [is] often treated as either a strategic initiative which would span over several years with the help of an outside company or setup, as a program with a specific project to solve a specific problem,” it says.

Andreas Eschbach, founder and CEO of Germany-based software vendor Eschbach, tells CW that automation in production of specialty chemicals is usually lower than in high-volume commodity plants because specialties firms manufacture their products mainly in batches due to higher product variation. As a result, there is more human labor involved, meaning that they could benefit from standardizing these processes.

Key performance indicators (KPIs) from digitalization are currently not a high priority for small specialty chemical companies, the report says. However, Nokia says that stakeholders of these companies are concerned about getting the right processes in place. Once these processes are in place, KPIs would follow, it says.

The benefits of 5G, private WiFi, and Industrial Edge, an open platform to manage and run software on machines, are still new concepts to specialty and small-to-medium sized chemical companies, the report says.