

Digitization set to accelerate

Movement spearheaded by larger industry players

by **Jing Chen**

Led by a small group of visionary companies, 2017 saw digitization efforts continue to take hold in the chemical industry. Experts predict that a digital overhaul will accelerate in the upcoming year.

Research and development is one promising area. BASF in October said that the supercomputer it built in partnership with Hewlett Packard (HP; Palo Alto, California) has started operations and is running at its Ludwigshafen headquarters. The system will make it possible to answer complex questions and reduce the time required to obtain results from several months to days across all research areas. But BASF is not done—the company said in December that it is investing €5 million (\$5.9 million) in Ahrma Holding (Deventer, Netherlands) to jointly approach the growing market for smart logistic solutions. Meanwhile, Evonik—which announced the establishment of a digital subsidiary called Evonik Digital in February—said in July that it has partnered with IBM to adopt technologies such as cloud-based computing, blockchain, and the internet of things. The firm will also work with the University of Duisburg-Essen to develop the people and skills needed for digital transformation. The company is also investing about €100 million toward the development and testing of digital technologies and the development of digital skills by 2020. Dow is collaborating with quantum computing software firm IQB Information Technologies (IQBit) to develop quantum computing tools for the chemicals and materials science technology spaces. Similarly, Solvay is hoping to gain traction on next-generation computing by investing \$2 million in virtual testing software MultiMechanics.

Christophe Cabarry, founder and CEO at chemical database firm SpecialChem (Paris), says partnerships between chemical companies and technology companies should continue to increase. “We could also see a lot of chemical companies acquiring more products in the tech space.”

The announcements from the larger players seemed to help jump-start digital transformations in companies that were lagging just a

few months ago. Cabarry told CW that he has seen an influx of Japanese companies investing in the companies’ digitization efforts—a stark difference from just a couple of months ago. “From an organizational standpoint, Japanese [chemical] companies are very traditional. To see Japanese companies investing in this transformation means that the trend is accelerating.” The accelerating rate at which the industry has taken steps toward digitization could mean changes in the organizational structure of chemical companies. Cabarry explains that digitization will not only affect the digital channels and processes of a company, but also mean personnel changes. Digitizing a company means that there will be more channels of communication between the company and its potential or existing customers, which can be a full-time commitment—and a team or someone has to manage those customer relationships. “Before, inquiries came through a phone call; now they can come through e-mail, app, after a webinar ... and a slew of other channels. [Companies] have to train their salesforce on how to receive and handle those inquiries,” he says.

European chemical makers are maturing digitally faster than their North American and Asian counterparts, and Cabarry thinks that trend will continue in 2018 despite the overall growth in digitization. Germany, in particular, has taken the lead in tackling digitization in the industry. The country’s chemical industry employers association BAVC (Wiesbaden) announced in early January that it had set up a committee that will focus on determining the overall political direction for chemical companies in relation to digitization, while working with social partners to reach a common understanding. A recent survey from German chemical association VCI found that 71% of participants use digital technologies or consider themselves digital innovators, a big jump from just 29% two years ago.

“German companies are taking [digitization] very seriously, and it will accelerate in the second half of 2018,” Cabarry says. “[German companies] are thinking less about how to tackle digitization, but acting on it more. It’s a real confirmation.”



CABARRY: Industry will acquire more products in the tech space.

As digitization in the industry matures, experts predict that there could be an emergence of a “Chemazon,” a chemical-industry e-commerce platform equivalent to Amazon that disrupts the distribution industry by vying for the space between chemical suppliers and customers. Wolfgang Falter, chemicals and specialty materials sector leader at Deloitte Global, said at the European Association of Chemical Distributors (FECC) meeting in July that he expects chemical producers to ultimately shift 15–25% of their sales to e-commerce, and that distributors can tackle the challenge by working with their suppliers to establish a new relationship. Cabarry agrees that e-commerce will be the next big trend in the digitization space. “More and more companies are investing in e-commerce projects because they see that as a way to streamline their supply chain and their order-taking. Some of them also see e-commerce as a way to get rid of distribution altogether.”

In the regulatory realm, the European Union (EU)’s General Data Protection Regulation (GDPR) will go into effect on 25 May 2018. The GDPR, which was approved by the EU Parliament on 14 April 2016, was designed to protect the privacy of EU citizens by limiting what and how much information companies can share. The regulation will not only affect companies in the EU, but globally—meaning that if a user in Europe is navigating the site of an American company, the American company is bound to this regulation. “Companies will need to adapt and invest, but it can be seen as a positive thing for users or customers,” Cabarry says. ■