

**strategy&**

---

# *Chemicals Trends 2018–19*

**&**

**A tipping point  
of profitability**



## Contacts

---

### Germany

**Matthias Bäuml**

*Partner, PwC Strategy& Germany*  
+49-30-88705-852  
matthias.bauml  
@strategyand.de.com

**Dr. Joachim Roter**

*Partner, PwC Strategy& Germany*  
+49-211-3890-250  
joachim.rotter  
@strategyand.de.pwc.com

**Iris Herrmann**

*Principal, PwC Strategy& Germany*  
+49-89-54525-695  
iris.herrmann  
@strategyand.de.pwc.com

### Japan

**Kenji Mitsui**

*Partner, PwC Japan*  
+81-3-6250-1200  
kenji.mitsui@pwc.com

**Kaoru Nakamura**

*Partner, PwC Japan*  
+81-3-6250-1200  
kaoru.nakamura  
@pwc.com

**Yorozu Tabata**

*Partner, PwC Japan*  
+81-3-6250-1200  
yorozu.tabata@pwc.com

### US

**Peter Bertone**

*Principal, PwC US*  
+1-703-682-5719  
peter.bertone@pwc.com

**Jayant Gotpagar**

*Principal, PwC US*  
+1-713-356-8711  
jayant.gotpagar  
@pwc.com

**Pamela Schlosser**

*Partner, PwC US*  
+1-419-254-2546  
pamela.schlosser  
@pwc.com

**Jeremy Bebiak**

*Director, PwC US*  
+1-713-356-8705  
jeremy.bebiak@pwc.com

---

# *About the authors*

**Jayant Gotpagar** is an advisor to executives in the chemicals industry for Strategy&, PwC's strategy consulting group. Based in Houston, he is a principal with PwC US.

**Matthias Bäuml** is an advisor to executives in resource and process industries for Strategy&. He is a partner with PwC Strategy& Germany and leads the firm's chemicals business as well as enterprise strategy work in Europe, the Middle East, and Africa.

**Andrew Horncastle** is an advisor to executives in the energy, chemicals, and utilities industries in the Middle East. Based in Dubai, he is a partner with PwC Strategy&.

**Iris Herrmann** is an advisor to executives in strategy development and implementation for Strategy&. Based in Munich, she is a principal at PwC Strategy& Germany.

---

# *Introduction*

For many years the global chemicals industry has been fighting declining margins, product commoditization, rapidly expanding competition in developing countries, and customers demanding more at lower prices. The story of how specialty chemicals and the fruits of innovation, which once commanded a premium, have slowly lost their luster over recent decades is well told; indeed, in many of Strategy&'s annual analyses in the past decade, we've bemoaned these troubling circumstances and the frustrations that the industry faces in figuring out a way to deal with them.

This year, though, we believe that something is different — and perhaps even see the first signs of a tipping point. Prodded by accelerating technology advances, which are shaping customer purchases and needs, some chemicals companies have begun to rethink their growth strategies, finally moving away from cost-cutting and retrenchment, toward more nimble, coherent, and aggressive business models. Timidity and contraction are giving way to new ways of navigating and benefitting from mergers and acquisitions, digital products and services, and even political forces affecting global trade. Although this trend is nascent, it is nonetheless significant and could place the chemicals industry on a path to improved performance in the short-term and offer better prospects for long-term growth.

---

# *Three strategic imperatives*

When one examines this shift in the chemicals industry landscape and how chemicals companies can best profit from it, three interconnected strategic imperatives stand out.

## ***Realize value from M&A***

For the past few years, mergers and acquisitions have been a hallmark of chemicals companies' growth strategies. Garnering the most publicity are megadeals in which tens of billions of dollars exchange hands among brand-name companies such as Linde–Praxair, Dow–DuPont, Syngenta–ChemChina, and Monsanto–Bayer. These major transactions — some of which have not yet closed — may represent the last of the big M&A opportunities in the chemicals industry. With these deals completed or well under way, companies have been compelled to undertake smaller acquisitions and divestments that target specific portfolio shortcomings and deliver tangible results in the short- and mid-term. We expect the next wave of M&A in the chemicals industry will involve midsized companies buying some of the non-core assets of the new megacompanies.

The shift is best illustrated by looking at deal statistics. In 2017, the size of deals in the chemicals industry fell by 66 percent from the year before and the average acquisition price tag was just US\$136 million, 53 percent below the three-year average of \$292 million. Yet despite these numbers, there were 909 chemicals deals in 2017, 6 percent more than in 2016.

Almost by definition, smaller deals need to be more strategic and focused, because the chances for substantive savings — generally from staff, overhead, R&D, and product development — are less pronounced. That means that companies must justify their M&A activities and, importantly, the premiums they pay through flawless integration management to ensure top- and bottom-line synergy, which includes paring product portfolios to serve only profitable markets for which the combined companies are best suited. If there are efficiencies to be gained (and operating costs to be saved from them), they will emerge

*We expect the next wave of M&A in the chemicals industry will involve midsized companies buying some of the non-core assets of the new megacompanies.*

from the reductions in the product line and shared resources earmarked for products that deliver the more consistent returns on investment.

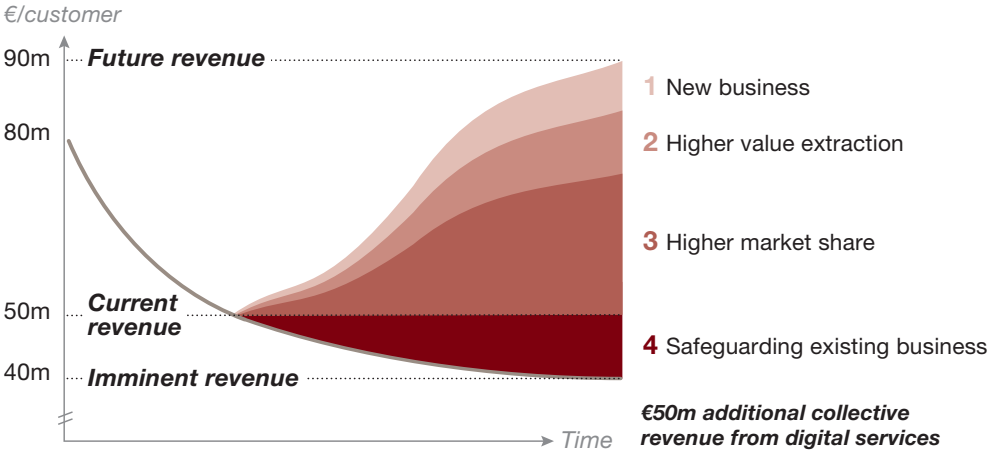
Moreover, by tailoring the operating model of the integrated company to reflect the characteristics of the new portfolio, chemicals companies should be able to avoid the distractions and costs innate in incoherent portfolios, and redirect their energies toward developing differentiated capabilities for organic growth in their best markets. Significant profit opportunities await chemicals companies that are able to lead in digitizing products and services, providing collaborative sales channels for customers, and generating R&D **breakthroughs in nanomaterials**, which can contribute to pollution reduction, disease treatment, computer sensors, wearable clothing, robotics, and new forms of packaging. Coming full circle, some of this new growth potential can be embraced via M&A, but only after a company is rightsized and set on a profitable course so that its acquisitions strategy can be aligned with (and accretive to) the business model.

### ***Solve the digital dilemma***

Although a wide range of digital advances — including the Internet of Things (IoT), cloud computing, big data, and wide-area networks — are transforming virtually every industry, chemicals companies have by and large stayed on the sidelines. The industry has primarily viewed digital tools as a way to boost internal productivity, but hasn't looked outward to offer customers innovative products and services. But as with other traditional sectors, events occurring in the chemicals industry — including customer demands for cutting-edge products and nimble startups responding more quickly to customer requests — have compelled companies to reconsider their place in the digital revolution. Consequently, as chemicals companies realign their businesses to enhance profitability and better serve the market, the digital prospects in their current product lines, and in products and services they hope to develop through expanded R&D engines, are taking increased primacy. In other words, digital development is becoming a business-strategy topic, not just an IT function — it's now the purview of the CEO, COO, and business unit leaders, not just the CIO.

This is a critical shift for chemicals companies, a way to stem what feels like congenital profit declines in once-promising product areas that are commoditizing quickly. In our analysis of a hypothetical chemicals company whose revenue from existing products is falling sharply — more than 50 percent — a digitization strategy would not only make up for lost revenue but also drive more than 10 percent sales growth (*see exhibit, next page*).

*Exhibit 1*  
**Business impact of introducing digital services in a chemicals company**



Source: PwC Strategy & analysis

Many companies have avoided digitization — even while giving it lip service — because it seems too complex to implement. Some companies are not sure where to start or which products best suit a digitization strategy. If you are a chemicals executive struggling with this quandary, you can simplify the process by dividing it into these categories:

**Core products with enhanced value in the digital world.** This is the simplest element of a new technological strategy. It involves adding digital layers to a traditional offering to generate standalone revenues or engineering a new product that can be used to improve a technological advance. A good example of the former: Menlo Park, Calif.–based Kespry is selling drone services as add-ons to minerals-development projects. The drones are intended to continuously collect data about aggregates and other mined materials on-site for automated inventory management and production reports sent directly to networked systems at the home office. The other approach (the new product strategy meant to make a digital device more versatile) is aptly illustrated by Corning’s popular Gorilla Glass. This breakthrough — a thin, light, and shatter-resistant glass — is prevalent on smartphones, tablets, and wearables to prevent damage to screens.

**Customer experience.** A potential tool for striking up new and closer relationships with customers, this element encompasses enhancing customer experiences with digital interfaces and touch points. Akzo Nobel’s Visualizer app illustrates this well. Users who take a photo of a room or a piece of furniture with the app receive suggestions for complementary paint colors and other design ideas. With this app, Akzo stands to gain additional sales from customer engagement, reinforce customer loyalty, and collect data about shifting customer preferences and trends that can be the basis for new products and marketing campaigns. Although improving customer experience is perfect for business-to-consumer relationships, it is not too farfetched for a chemicals company to gain advantage by using this in a business-to-business setting — perhaps by providing customized renderings of how certain materials will react in combination with new forms of synthetic or natural chemicals.

**Services as a new revenue stream.** In combination with a physical product, this element provides an end-to-end solution to a broader customer need. Good examples are the supply chain transparency networks with dashboards and analytics that monitor remote field operations, logistics, inventory, and project scheduling for optimized efficiency launched by Shell Chemicals, Schlumberger, DuPont, and others. Or similarly, Cargill has set up an animal nutrition analytics system that links farm data from smart apps with cloud-based networks to assess crop quality. With this offering, Cargill has expanded its revenue opportunities into quality-assurance services and analytics.



**Partnerships that drive customer utilization.** Working with suppliers and partners, new applications can be embedded in a product ecosystem. A recent example is InsideTracker, a joint venture of BASF and software developer Segterra. The online service tracks health and fitness markers through wearable clothing and smartphones to recommend personalized lifestyle plans for optimizing health. In this venture, BASF is, among other things, providing personalized nutrition and dietary recommendations, determined by blood biomarker results.

### ***Confront the challenge of “deglobalization”***

Call it economic nationalism or trade protectionism, it amounts to the same thing: Around the world, political movements are forcing at least some retrenchment in open borders, trade, and shared ventures. For the chemicals industry, this development is particularly problematic because much of the sector’s R&D activities are centralized near headquarters but the results of this research are distributed through global networks for developing new products and services relevant to local markets. In addition, partnerships with regional companies have helped chemicals firms take on heated competition from startups and entrepreneurs in developing countries. Simply put, the free flow of money, information, and skilled workers has been a critical element of chemicals companies’ growth strategies.

Given these industry practices, nationalist proclivities threaten the traditional approaches to markets. In response, chemicals players must begin to implement more flexible supply chains that are able to deliver parts and feedstock regionally and globally. In addition, they must play an active role in enhancing the skill sets of local suppliers in developing countries so the suppliers can meet the required high standards for order fulfillment.

Choices will have to be made about the markets in which to participate. Smart companies will find that new geographic footprints may offer unexpected opportunities, especially as developing countries begin to take control of industrial growth within their borders, singling out certain sectors and companies for most-favored status. For instance, Saudi Arabia’s well-known economic growth program, called Vision 2030, includes among its many goals expanding the revitalization of the country’s chemicals sector. Emphasized in this effort are downstream applications such as water management, which covers desalination, filtering, and water treatment. With an abundance of petrochemical feedstock and significant financing streams available through the industrial investment agency Dussur, Saudi Arabia could be a lucrative market for chemicals companies that have the capabilities to provide added value in a local, decentralized framework.

*The free flow of money, information, and skilled workers has been a critical element of chemicals companies’ growth strategies.*

In considering opportunities like these, chemicals companies will likely need to beef up regional R&D centers because they will be pivotal in future chemicals design and development. Putting resources aside to invest in these facilities is essential, as is a strategy for staffing these more autonomous R&D centers, especially if global movement of labor is impeded.

And internal digitization will probably become more significant. Chemicals companies with far-flung networks of, by necessity, more independent outposts must consider the state of their digital collaboration tools. Maintaining global communications among facilities, remote collaboration among geographically dispersed employees, and operational cooperation from one factory and market to the next are technological challenges that cannot be ignored. The efficacy of these internal networks will ultimately, in a more protectionist world, determine top-line costs and bottom-line profits.

Clearly, the chemicals industry has its work cut out for it. And even though we believe there is a slow but steady movement toward the kind of change that addresses the most crucial obstacles to success, not all signs are positive: [PwC's 21st Annual CEO Survey](#) found that 75 percent of chemicals companies' executives still viewed cost-cutting as their primary activity for driving profitability, and only 9 percent said that they want to strengthen digital and technological capabilities in order to capitalize on new opportunities.

In other words, the vast majority of executives responding to our CEO survey are adopting strategies that will make it harder to compete in the long run. Their lagging posture can perhaps be chalked up to the complexity of the issues facing their industry, and the fact that some executives have yet to be directly affected by the transformation occurring in the industry.

---

# *Conclusion*

Whether it involves M&A value and integration, digitization, or deglobalization, the best way to tackle the impact of fundamental disruptions is to first identify how they will affect your company and then develop a set of tactics to take advantage of the opportunities. These issues are increasingly front and center in the chemicals industry and will determine the contours of the sector's growth and dynamics in the coming 12 months and beyond. Hiding from them will only reinforce the slow growth environment that has become all too familiar to too many chemicals companies.

Strategy& is a global team of practical strategists committed to helping you seize essential advantage.

We do that by working alongside you to solve your toughest problems and helping you capture your greatest opportunities.

These are complex and high-stakes undertakings — often game-changing transformations. We bring 100 years of strategy consulting experience and the unrivaled industry and functional capabilities of the PwC network to the task. Whether you're

charting your corporate strategy, transforming a function or business unit, or building critical capabilities, we'll help you create the value you're looking for with speed, confidence, and impact.

We're a network of firms in 158 countries with more than 236,000 people who are committed to delivering quality in assurance, advisory and tax services. Tell us what matters to you and find out more by visiting us at [strategyand.pwc.com](http://strategyand.pwc.com).

[www.strategyand.pwc.com](http://www.strategyand.pwc.com)

© 2018 PwC. All rights reserved. PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity. Please see [www.pwc.com/structure](http://www.pwc.com/structure) for further details. Mentions of Strategy& refer to the global team of practical strategists that is integrated within the PwC network of firms. For more about Strategy&, see [www.strategyand.pwc.com](http://www.strategyand.pwc.com). No reproduction is permitted in whole or part without written permission of PwC. Disclaimer: This content is for general purposes only, and should not be used as a substitute for consultation with professional advisors.