Hot Topics Research Report

The blueprint for

Best Practices for Chemicals

Powering the SAP Chemicals Community

March 5–6, 2019
Houston, TX

Produced by

eventful CONFERENCES an ASUG company

In collaboration with SAP

Executive **Summary**

Introduction

With positive predictions for growth in nearly all sectors of the industry, chemical companies are optimistic and expect to boost capital spending in the coming year. Even as growth in developing markets is slowing due to production-based and technical maturity, companies are holding strong because of the significant gains in productivity and performance they've achieved through years of consolidation and optimization.

The Next Phase Is Digital

Digitization remains the name of the game as organizations continue to modernize their processes. The most pressing topics in the industry are around how to find returns on investment in new technologies. These include moving systems into the cloud, applying robust analytics and data strategies, integrating visualization tools throughout the entire organization, developing a clear strategy and road map for SAP S/4HANA, and creating a better customer experience through omnichannel digital tools.

Peer-Driven Topics

Eventful Conferences—part of Americas' SAP Users' Group (ASUG)—has spent the past three months conducting research with organizations and individuals that use SAP from a variety of industries across North America. To balance this customer research, we also spoke with stakeholders from partner companies and SAP to hear their perspectives. Through both roundtable discussions and one-on-one conversations, we asked these professionals in the chemical industry what challenges they face day-to-day and their thoughts on the most pressing issues the business is facing.

The results of this research, which are captured in this report, highlight the shared challenges and priorities within the chemical community related to its SAP technology strategies. These will inspire the agenda for the Best Practices for Chemicals conference in Houston on March 5–6, 2019. We'll address these hot topics through real-life customer case studies from leading chemical organizations, hands-on workshops, in-depth interactive sessions, and SAP expert presentations.

The Eventful Research Process

01 **3 months of face-to-face industry research**

02 **Research refined by handpicked advisory team**

03 **Most pressing issues chosen for Hot Topics Report**

04 **Agenda curated using Hot Topics as foundation**

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Digitally Transforming the **Chemical Enterprise**

Digital transformation isn't just an IT project—it's a business priority. To fully harness the potential of a digital journey requires different skills, changed mindsets, new tools, processes, and culture. But the benefits of a digital enterprise are many: enhanced decision-making through better insight and deep analytics, new growth opportunities from increasingly customer-centric processes, increased access to customers through omnichannel and niche offerings that only make business sense as digital services, and ultimately, a superior customer experience that will differentiate organizations from their competition.

Yet in our workplaces, we still carry forms and clipboards. We input data manually and then rely on others to create reports manually. Spreadsheets are everywhere. As a result, it's hard to meet the customer expectation that the new norm is digital and should drive any forward-thinking business.

Chemical companies are understandably concerned about moving into a digital future and how this will affect their current and future business processes. The companies we spoke with are looking to answer these questions:

- **How do we make the compelling business case for the return on investment of going digital? How do I make sure my company sees that return on investment?**
- **How do we explain the importance of making functional changes that don't lead directly to profit?**
- **What's the road map for SAP's digital solutions? How can I plan my digital strategy?**
- **What are the security implications of going digital? What safeguards do we need to consider putting in place, particularly for handling confidential information?**
- **How do we get our suppliers and customers on board? What happens if we're fully digital and they are not?**

Whether through pilot projects or long-term transformations, the chemical organizations we spoke with are on a fast track to digital transformation. At Best Practices for Chemicals, attendees will hear how companies are reducing costs and saving time through digital strategies and tools.

Top Issues

1	2	3	4
Moving to the cloud	Analytics and data strategies	Roadmap for SAP S/4HANA	Improving customer experience




> ...the chemical organizations we spoke with are on a **fast track** to digital transformation.

Analytics and **Reporting**

Participants in our roundtables and interviews stressed the need for data accuracy to drive standardized and transparent decision-making, underscoring the importance of sound data governance and discipline across the organization. All recognized this as a key competitive advantage—the capability for true, real-time analytics can enable significant possibilities by revealing areas needing improvement and opportunities for cost savings. Just as important as the capacity to generate deep analytics based on good data is the cultural capital necessary to convince key stakeholders to trust the results of these analyses. The best analytics and reporting are meaningless if the organization doesn't commit to acting on the results.

Analytics and reporting were also identified as areas needing improvement within the chemical industry. Reports are only as good as the data imported into them. Laborious, manual collection processes increase the likelihood of errors and slow down decision-making. Typical reports on the business have yet to apply the full capabilities of advanced analytics. And training and education are needed before chemical companies can benefit from the insights drawn from real-time analytics.

The chemical professionals we spoke with are asking questions about the possibilities of analytics for their own company:

- **How do we take our analytics from average to transformative? How can we go from reactive to predictive using our reporting tools?**
- **How can we best integrate data from external, non-SAP sources?**
- **What are some ways that we can avoid bad inputs to the system? What are ways to reduce manual inputs?**
- **How do we automate and reduce manual processes? What tools or systems are best to use?**
- **What are the best practices for maintaining the security and integrity of my analytics?**
- **What are some ways to best communicate the importance of analytics and business decisions to our employees and users? How can we drive user adoption?**

Companies are pouring resources into analytics and reporting, including tools like SAP BusinessObjects, SAP HANA Cloud Platform, Power BI, and more. Whether they work on a team with a dozen data scientists or take a decentralized approach to analytics, attendees at Best Practices for Chemicals will learn how to get more value from analytics, save time and money, and encourage their company culture to embrace advanced analytics.

> **real-time analytics** can enable significant possibilities by revealing areas needing improvement...

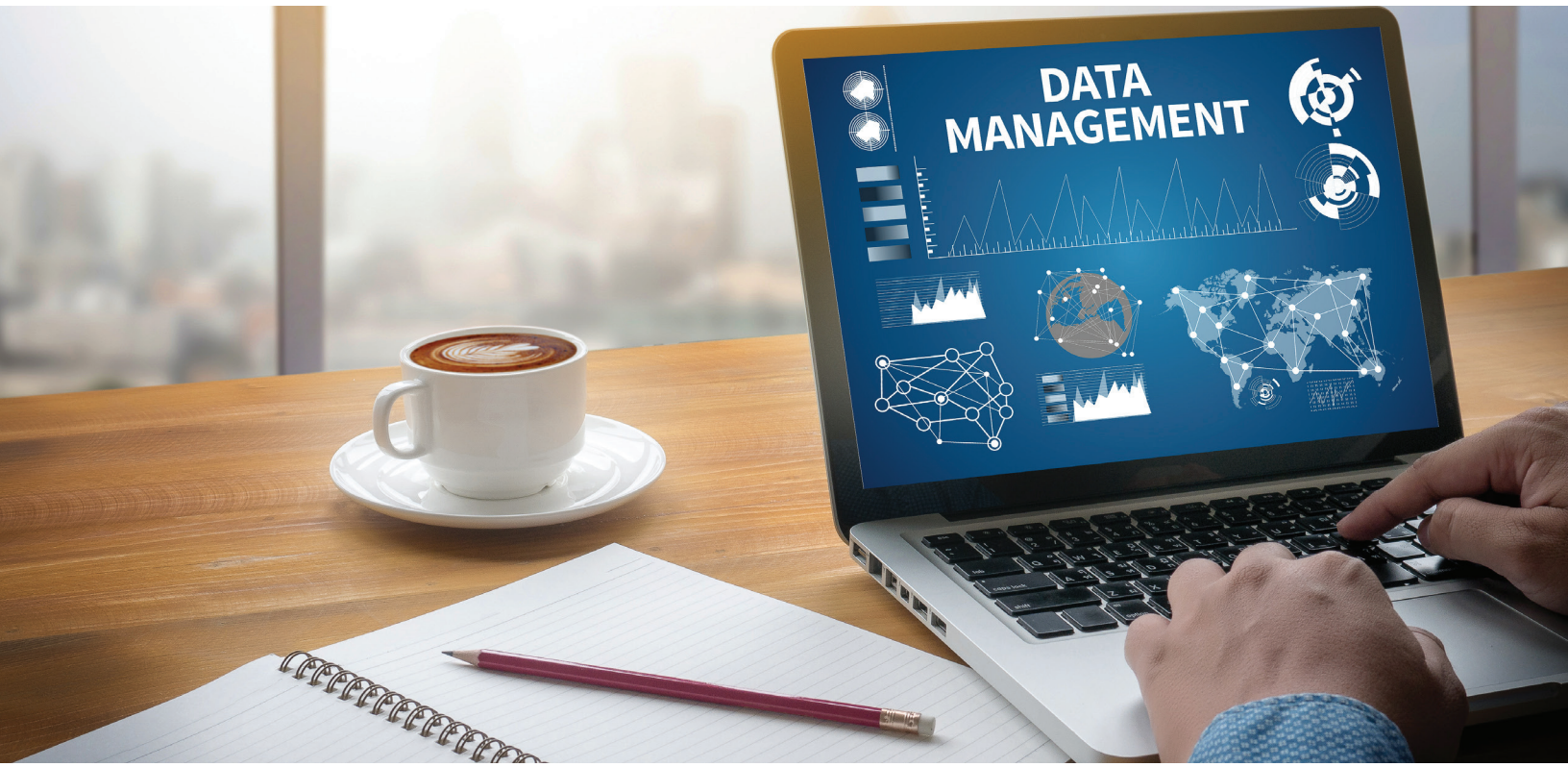
Master Data **Governance**

If analytics and reporting is the common thread in our conversations, master data governance is the fiber that makes up that common thread. Analytics are only as good as their inputs, and errors in master data have the potential to spread mistakes throughout an entire company. Good data, for many of the companies we spoke with, is often an afterthought, with revenue-based activities such as sales and production taking precedence.

It's also not clear who owns master data governance. While individual employees typically input data, ownership of the data outputs, data cleansing, and overall management of the process sit somewhere between IT and various departments. Because of this ambiguity and the oft-times daunting tasks associated with master data governance, many companies find it difficult to justify the time and costs required to make significant changes to their data management processes. While many of our chemical industry representatives acknowledge that master data governance requires internal support, many want to know how technology can help. And without help from technology, it's likely these enhancements won't or can't happen. These professionals want to know:

- **What are some best practices for master data governance, and who should own these processes?**
- **How do we justify the time and costs associated with master data governance projects?**
- **How can we use our technology to better detect errors before they make their way into time-sensitive reports?**
- **What are some best practices for combing or splitting master data for multiple organizations when merging or divesting?**
- **How do non-SAP systems affect my master data?**

Most of the sessions at Best Practices for Chemicals will touch on strategies for managing data effectively. Master data management and governance are critical to nearly every SAP project. Attendees can get tips that will save their companies headaches in the long run by planning for data governance, especially at the start of any integration or transformation project.



Business Process **Optimization**

For a number of the chemical companies we spoke with, business processes often dictate the type of technology their company uses. This often leads to workarounds specifically coded to meet a business process need, instead of the business process being adjusted to work with new technology. This results in multiple customizations that generally need to be reworked during new implementations, upgrades, or migrations, making them especially daunting. And the problem is cyclical. Each time companies rework their customizations for the latest upgrade, the coding becomes so specialized that the next iteration is even more challenging.

This challenge is leading companies to consider implementing "standard SAP," cutting down on or eliminating all customizations and making their business processes work with the technology (rather than the other way around). This could lower costs by reducing the number of instances that need to run. This approach also reduces integration and alignment challenges and will make company growth through mergers or acquisitions far easier and faster.

But moving to "standard SAP" isn't as easy as it may seem—many processes and knowledge bases are tribal, with no real maps that clearly demonstrate what changes to make. Decisions made decades ago are likely not documented, and those who made them have left, taking their organizational knowledge with them. Chemical professionals are asking questions about how they should optimize or simplify their business processes:

- **How do we know if it's best to configure or customize for our business?**
- **How do we get buy-in on process changes, particularly from the staff members who are less open to change? How do we help drive adoption of these changes?**
- **How do we audit our systems to identify what we already have in place that can help us move away from customization?**
- **What is the road map for non-customized systems? How do we make sure our investment in simplification meets our needs for the long term?**

Companies are pouring resources into analytics and reporting, including tools such as SAP BusinessObjects, SAP HANA Cloud Platform, Power BI, and more. Whether they work on a team with a dozen data scientists or take a decentralized approach to analytics, attendees at Best Practices for Chemicals will learn how to get more value from analytics, save time and money, and encourage their company culture to embrace advanced analytics.

> Companies are pouring resources into analytics and reporting, including tools such as **SAP BusinessObjects, SAP HANA Cloud Platform, Power BI**, and more.

Mergers, **Acquisitions**, and Divestitures

Within the chemical industry, mergers, acquisitions, and divestitures (MAD) make up the largest portion of portfolio and product changes. Outside of agrochemicals, breakthrough new chemical products have been virtually nonexistent. With research and development no longer leading to blockbuster chemical innovations, the industry now relies on mergers, acquisitions, and joint ventures to fuel future growth through shared synergies and inherited technologies.

To gain a true competitive advantage, companies must handle mergers, acquisitions, and divestitures quickly and without creating significant disruption. Expectations for cost savings, synergies, and growth take precedence over other projects as departments continuously shift their ongoing priorities downward to accommodate the new businesses. This is not easy. As a result, these are high-stress transitions that are full of uncertainty and raise these questions, according to our interviewees:

- **What can finance tools provide to help make decisions during mergers, acquisitions, and divestitures?**
- **How can we plan and allocate resources to make mergers, acquisitions, and divestitures go smoothly? How can I ensure that both businesses run without major disruptions or losses?**
- **What are some best practices for integrating the systems of two companies? How can we plan and map the technology needs for this integration?**
- **What can we do to make future transactions easier on my company?**
- **How can SAP help me meet the regulatory requirements of a merger, acquisition, or divestiture?**

At Best Practices for Chemicals, attendees will hear from organizations that have successfully navigated the MAD process and found opportunities to improve their processes as well as drive more value from their technology stack. Within the chemical industry, the number of companies that have been constantly undergoing multiple acquisitions and spin-offs provides ample opportunity to learn about best practices for these complex business integrations.

> To gain a **true competitive advantage**, companies must handle mergers, acquisitions, and divestitures quickly and without creating significant disruption.

Managing **Multiple Interfaces** and Integrating Disparate Systems

The chemical companies we spoke with have purchased a variety of products to address different business needs, or they have inherited a scenario where aspects of the business run on different instances of SAP and non-SAP systems. Many must manage different interfaces, some of which are localized to meet regulatory requirements or market needs.

As chemical companies look to simplify or consolidate, the cost of integrations in terms of time and money adds to the extant complexities. While all integrations are inherently unique, the chemical professionals we spoke with found commonality in the challenges related to maintaining them. They are looking for answers to these common questions:

- **How do we make a business case when IT changes don't tie directly to a profit? How can we connect these efficiencies to a return on investment or a business-value benchmark?**
- **Are there systems or processes that make integration across various instances easier?**
- **How do we maintain compatibility between all systems? And how do we continue to track this as versions change their functionality and technologies change overall?**
- **How can I best understand or map the future of my technology investments across all instances?**

Migration to **SAP S/4HANA**

For the past several years, the most common conversation around SAP S/4HANA for chemical organizations was understanding what value this new version of SAP's software would bring them. Now, as companies come to understand the value of SAP S/4HANA, they want to see examples of how it will change their business. They want to know who is running this version and what benefits those companies have found.

Any major IT project will involve change management. But changing something this fundamental to the business—or the organization's core business suite—means companies need to prepare every individual who interacts with this system. Equally important is how to keep productivity and performance levels high during the change. As 2025 draws closer (the date when SAP will stop supporting its older ERP systems), more organizations are considering the transition to SAP S/4HANA. The chemical companies we spoke with want to understand how to plan for this change with the least disruption and are asking:

- **What is the long-term road map for SAP S/4HANA? How do I know what my future investments should be? In other words, how sustainable is this investment?**
- **How do we know if or when we're ready for SAP S/4HANA?**
- **Can SAP Best Practices or SAP Model Company help us through this transition? How do we best leverage these?**
- **How do we manage the customizations or workarounds I already have in place during the transition?**
- **How can I maintain my dashboards and analytics until the whole system is ready?**

At Best Practices for Chemicals, attendees will hear directly from SAP about their vision for SAP S/4HANA as well as from customers who are on the path to a full implementation. This will be the place to see firsthand what chemical companies are doing with SAP S/4HANA.

Cloud Strategy

During our research, participants discussed the cloud not just in terms of a deployment mechanism but as a transformative business opportunity. The cloud allows companies to free up capital and gain agility. Yet many we spoke with question the implications of the loss of control that can happen after moving to the cloud. For example, in-house IT shifts its focus from server management to vendor management, and versioning starts taking place on different schedules. There's no doubt that companies need to prepare for these shifts.

But the cloud seems to be an inevitable destination. Cloud conversations have shifted from explorations to action. Nearly every organization we spoke with is running at least some workloads on cloud servers. Their questions have now moved to what type of cloud infrastructure is most beneficial for their business: public, private, or hybrid? In addition to the major players in cloud hosting—Microsoft, Amazon, and Google—chemical companies are watching SAP's public cloud plans with interest. Will SAP's offering be compelling enough to calm the current discomfort about multitenant cloud environments? Chemical companies are wondering:

- **How do we choose a cloud option that's best for us?**
- **What best practices exist for dealing with vendors?**
- **What cybersecurity issues do we need to be aware of?**
- **How will the move to the cloud affect our IT department? What talent and skill sets will I need to consider adding to the team?**
- **What are the cost-neutral or cost-saving aspects of the cloud? How do I identify the hard dollar savings and the intangible benefits?**

Becoming **Mobile**

Mobile devices have changed our work lives so much that we expect to be able to do formerly in-the-office activities at any time, on the go. Executives want to approve reports and expenditures on the spot, wherever they are. Plant floor workers are expected to take pictures and log reports in places where mobile devices had been banned. Field workers now expect access to detailed histories and work orders wherever they go.

On top of these changes, customers now assume that companies can and should provide fully digital, mobile interfaces. The advantages to going mobile are clear on the surface: mobile apps can help maintain data accuracy, improve communications in the field, reduce data time lags, and optimize time in the field. While mobility has become mainstream in the consumer consciousness, it brings significant considerations for companies trying to harness the opportunity, including the conflicting needs of data democracy versus data privacy.

Those at chemical companies want to know:

- **How do non-SAP platforms interface with SAP's mobility solutions?**
- **What are the security implications for mobility? How do I maintain single sign-ons while considering these security implications?**
- **How can we make our systems more accessible and more secure?**
- **How do wearables and other mobile devices fit into our mobility strategy?**

Attendees at Best Practices for Chemicals will hear success stories from companies that have implemented effective mobile tools and strategies. From the plant floor to the board room, it's clear that mobility makes faster and more productive work possible.

Supply Chain and **Logistics**

A more visible, mobile, and real-time world has increased the speed required to do business and raised the expectations of those relying on supply chain and logistics professionals. It's common for customers to expect to track shipments and understand logistics in real time. Meanwhile, geopolitical pressures and changing regulations require real-time decision-making supported by faster, more expensive systems. Global trade volatility is also leading to uncertainty in shipping quantities and costs, introducing significant complexity around planning and scheduling.

Visibility is critical to decision-making, cost analysis, and customer service. Our chemical company participants all agreed that supply chain and logistics improvements could come in the form of better data and greater transparency through technology. The ability to simulate inventory scenarios, capacity, network sourcing options, toll manufacturing options, and start-up or shut-down operations is now a competitive differentiator within a global sales and operations planning process. SAP's foray into SAP S/4HANA Logistics is interesting to customers, but they want a clear idea of what they will gain from going that route rather than sticking with their existing SAP solutions.

The chemical companies we spoke with have questions related to four key areas of the supply chain:

Production Planning

- **How can analytics and predictive data help us get to market faster? How can it improve our inventory and production planning?**
- **How can we understand demand and forecasting better? What can we do to better manage materials inputs, manufacturing inputs, and control ordering to be sure we have enough of what we need?**
- **What can SAP's Integrated Business Planning solution offer that I couldn't get in older iterations like SAP Advanced Planning and Optimization?**

Inventory Management

- **How can SAP tools help us with hazardous raw materials management?**
- **What can we do to better screen market demand and shifts, and then reflect that in our inventory management decisions?**
- **How can SAP help us with sales forecasting? And how can it help us tie that information back to inventory and raw material requirements?**

Transportation Management

- **What are some best practices for third-party logistics, especially relating to transportation management, shipping, and distribution?**
- **How can track and trace technologies help our business?**
- **How can we best manage global trade compliance?**

Distribution

- **How can we use technology to understand distribution costs in real time?**
- **What SAP technologies are best for managing third-party distributors? How do I create buy-in, encouraging my distributors to use this technology?**
- **How can I better measure the upstream and downstream effects on distribution and end-customer service?**

Manufacturing

At the core of many chemical companies is the manufacturing of products for distribution to other companies or direct to consumers. Efficient manufacturing presents an immediate opportunity for improving profits. Using technology to achieve this efficiency was an overwhelming theme throughout our research. The key aspects of manufacturing—production planning, maintenance and reliability, and environment, health, and safety—all came up in our conversations about how technology could lend chemical companies a helping hand. Here are some of the questions our participants raised:

Enterprise Asset Management (EAM)

- **How can we balance production needs with capital allocations and maintenance needs?**
- **What data should we focus on for predictive maintenance purposes? What infrastructure changes should we prioritize to start using this technology?**
- **How can we take advantage of information technology and operational technology (IT/OT) convergence and the Internet of Things to minimize shutdowns and turnarounds? How can we use IT/OT convergence to achieve other business objectives, such as decreasing plant costs?**
- **Is the SAP Leonardo Asset Intelligence Network worth investing in if my business partners aren't invested?**
- **Can we use SAP to measure and verify environment, health, and safety compliance in my facilities?**
- **How can we use technology to better assess risk and prevent the adverse effects of safety or environmental issues?**
- **How can mobility and digital transformation improve my EHS record? Should I be considering wearables?**

> Efficient manufacturing presents an immediate opportunity for **improving profits**.

Procurement

While the companies we spoke with have different processes and tools for procurement, all had similar concerns about understanding the long-term implications of today's procurement decisions. They want to avoid overstocking parts and raw materials, encourage cost efficiencies and collaboration, and offer the greatest visibility into data and decision-making tools. Their questions revolve around technology, asking:

- **How do we build a business case for more-sophisticated procurement tools?**
- **What are best practices for supplier relationship management?**
- **What does the SAP Ariba Network offer me that I don't already have in Supplier Relationship Management and Materials Management?**
- **How can my procurement processes help improve my accounts receivable or accounts payable processes? How can I use SAP to marry the processes in ways that make the most sense?**

> How do we build a business case for **more-sophisticated** procurement tools?

Regulatory **Issues**

While many chemical companies recognize that it's good to learn from other industries, there are aspects of the chemical industry that require specific conversations. Regulatory concerns are a top example. When dealing with specific regulations like those for exportation or materials handling, the chemical industry can't afford to be noncompliant. These companies are also looking to use automation, analytics, and other emerging technologies to make their reporting and compliance requirements more efficient. The chemical companies we spoke with are looking to answer questions such as:

- **How can we standardize data inputs and reporting to make compliance reporting easier and more automated?**
- **How can we keep track of information by our various entities—for example, by country, by global standards, and by state?**
- **How can we quickly respond to and integrate a new or updated regulation into our data and analytics processes?**

Join Us in **Spring 2019**

The challenges and questions raised here will form the blueprint for the **2019 Best Practices for Chemicals conference**, where thought leaders and industry experts will share their insights and experiences to help you get the most out of your SAP technology investments. Join Eventful Conferences, ASUG, and SAP in Houston on March 5–6, 2019, to connect with your peers and make a difference in the chemical community.

Visit the **Best Practices for Chemicals** website regularly for more information as we announce speakers, keynotes, training sessions, and more. Contact Eventful Conferences at 914.509.5354 for more information.

Share Your Knowledge

Stories have the power to motivate others to innovate, solve problems, and to inspire professional development, both technically and personally. At **Best Practices for Chemicals**, speakers have the opportunity to make a difference in their own community. As industry thought leaders, speakers can positively impact business decisions and the way that solutions are created by others using a similar approach to business intelligence and analytics.

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