

E-book

ERP for Chemical CxOs: Six Elements of Success in a Volatile Market

Why CFOs in Chemicals Need ERP Now

Sage

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THE CHEMICAL INDUSTRY: **ALL CHANGE!**

Chemical manufacturing across the world is facing disruption and restructuring.

Not only are geopolitical forces radically affecting feedstock supply chains and routes to market, but demand flows are also being fundamentally affected. To successfully manage change, transparency across the business is essential. Otherwise, there's little possibility of taking control, reacting to market changes swiftly and keeping ahead of competitors.

ERP systems sit at the heart of driving business impact. And while the world and its markets have always been evolving and changing, the pace and global scope constantly increase. A specific industry compliance framework at its core makes for a good ERP. However, agility, extensibility, and security can make the difference between strategic growth and simply surviving.

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The right ERP solution is more than a back-office tool.

It's a strategic asset that helps organisations manage complexity, boost performance, and protect operations in a digital world.

With a robust ERP, companies gain the agility and security to thrive amid market change and disruption. By considering each of these areas, organizations can better position themselves to adapt, compete, and thrive.

Do you have the insight you need?

Your ERP is as good as the data streams it receives – manufacturing, supply chain, logistics, finance, sales. Your teams need to view these through powerful, customized dashboards or detailed reports they can pull down on their own with drill-down and export options. Formulation errors may shut down plants or cause unacceptable hazards, so you need insight everywhere.

Is performance measured and managed?

Your ERP should monitor and optimize people, processes and technology to deliver competitive levels of productivity and efficiency. This is critically important to cope with peaks in demand without taking on more input costs.

Are you automating sufficiently?

The more you can automate through your ERP, the better – making the most of your people, improving accuracy and meeting safety and regulatory requirements without breaking the bank. Use automation to make sure the burden of reporting doesn't get on top of you.

Do you have co-ordinated control?

Most organizations have their complexities. But your ERP should be key to simplifying management and decision making while making them (cyber)secure – multiple sites, multiple ledgers, multiple sales channels and partners. Use it to avoid over-ordering and to pivot with supply-chain changes.

Can you test your strategies?

A dynamic company is always testing out new ideas – and your ERP should be a powerful tool for modelling and testing proposition, pricing, production and distribution strategies. Bottom line, it should help facilitate innovation and accelerate new product approvals.

Discover the six keys to high performance you should expect from a robust ERP that helps you keep your company ready for what's next.

Element #1

Agility in a changing market

There's no agility without control, and there's no control without transparency.

Leading chemical companies are digitalizing all aspects of their business so that they can then feed in those multiple data streams and use their ERP to gain the company-wide transparency they need to get ahead of the game.

Sustainable success means being able to respond fast to demand shocks, supply disruption, and cost volatility. So when a spike of orders occurs, your ERP helps you be as agile as possible to make the most of the demand while it is there. It allows you to deal with a glut without having to take on temporary staff or contract out. It allows you to focus on potential, not problems.



Production

Sensor data delivers insights on production performance. Finite and infinite capacity production scheduling capabilities allow optimization – including inter-site balancing. Inventory management / degradation and order prioritization can be finely tuned. All essential to react to volatile demand flows.



Finance

Automate the applications of your financial rules and parameters, and manage decision-making authorities and access through the ERP system. All this should be actionable across complex organizations with multiple entities, sites, channels, partners, currencies, ledgers, tax regimes.



Sales and marketing

How are your sales partners, channels-to-market and in-house sales representatives performing? Dashboards within your ERP need to pull it all together and allow you to interrogate multiple perspectives – channel, personnel, product group – and resolve under-performance.



Customer service

Given the current instability of markets and international trade challenges, customer relationships need to be intelligently managed to preserve and grow business. So powerful customer self-service tools in your ERP, as well as digital enablement of service agents to inform the customer – about order status, transport/Hazchem, sustainable feedstock, capacity/availability planning – have become increasingly important.

Element #2

AI advantages

Is your ERP leveraging AI to make your company and your people more nimble, agile, quicker and more effective in reacting to market challenges? Is it making your people smarter when seeking out business opportunities?

AI in your ERP can deliver several real advantages:

- Improving accuracy in formulation, production and safety.
- Speeding up problem resolution and implementing predictive alerts.
- Optimizing workflows and processes for margin enhancementAccelerating evidence and documentation for new product approvals.
- Automating manual tasks to improve productivity and compliance.
- Testing strategies and ideas in the virtual world.

When AI and ERP are combined, they create a powerful tool for the chemical industry. As one analyst notes,

“AI can predict demand for chemicals and products based on historical sales, allowing companies to make necessary inventory and forecasting decisions. AI can also improve the functioning of ERP systems. For instance, AI can automate routine tasks, and help employees to focus on more strategic tasks. This can lead to improved productivity coupled with substantial cost savings.”¹



Another key industry journal adds that, “AI offers a transformative solution by leveraging predictive analytics to anticipate potential hazards and preemptively mitigate risks.... [and] AI-driven analytics offer support by optimizing inventory management, transportation logistics, and demand forecasting.”²

According to a study from consultancy EY, AI is supporting supply chain management for demand planning and procurement, standardizing processes, optimizing last-mile delivery, as well as sustainability tracking.³

In truth there are many ways that AI is making a powerful difference to the effectiveness of ERP solutions in the industry. It is adding value in finance, technical documentation search, back-office automation, safety/hazard management, stock condition, compliance, demand-forecasting, production efficiency, smart logistics routing, almost every area.

1. <https://www.alliedmarketresearch.com/resource-center/amr-perspectives/materials-and-chemicals/ai-and-erp-remodeling-of-the-chemical-industry>

2. <https://www.businesschemistry.org/article/how-artificial-intelligence-can-be-used-in-the-chemical-industry/>

3. https://www.ey.com/en_uk/insights/supply-chain/supply-chain-sustainability-2022

Element #3

Optimizing operational efficiencies

According to trade bodies, chemical manufacturing capacity is under-utilized in key parts of the world, so there's an even sharper focus than ever before on operational efficiency. Your ERP should act as your gateway to efficiency.⁴

Chemical manufacturers therefore need to streamline operations, optimize asset utilization and maintain profitability at the same time as margins are being squeezed by input, energy and feedstock inflation.

Indeed, formulation accuracy, feedstock efficiency and sourcing, hazard and expiration deadline management, production forecasting, automated work orders: they are all better managed through an ERP that allows real-time transparency, adjustments and improvement to upscale efficiencies, safety, accuracy, compliance and profitability.

Reviewers often remark that the highest performing ERP systems are those specifically built for the sector, or at least the process industry environment. This means that much

out-of-the-box functionality is available for lot traceability, formulations, recipes, expiry dates for volatile compounds, auditing capabilities, and other options.⁵

In the speciality end of the chemicals sector, ERP functions for formula management, batching, potency tracking and quality control help speed products from the development environment to full production.

Chemical companies are best served by an ERP system that really understands the way products move within the process environment. Functionality to look out for includes deep product hierarchy capabilities, managing seasonality, subcontracting management, multi-production units, co-product and by-product management, line maintenance and more. Pre- and post-reaction substance weighting is an industry-specific example. All of these native capabilities are ultra-specific to chemical manufacturing.

Sitting on the cusp between production management and supply chain management comes quality assurance. Reviewers often single this out as a key requirement for process manufacturing, offering capabilities such as quality control, non-conformance management, and corrective and preventive action (CAPA). Given the often hazardous nature of chemical manufacturing, real-time visibility and control are critical to avoid

errors that can prove not only expensive but also dangerous to life and limb.⁶

Of course, there are a host of other capabilities to evaluate in an ERP system to support process production efficiency. Try to focus your evaluation around integrated manufacturing, inventory and finance capabilities, along with along with functions that streamline processes, automate manual tasks and optimize resource allocation for cost control.



4. <https://cefic.org/app/uploads/2025/05/Cefic-Chemical-Trends-Report-Q1-2025.pdf>

5. <https://www.erpfocus.com/best-process-manufacturing-erp-systems.html>

6. <https://www3.technologyevaluation.com/comparison-reports/encompix-16436-vs-sage-x3-16527>

Element #4

Making the most of your people

The chemical industry is facing a growing skills gap.

According to Accenture, “First, chemical companies will be swept by waves of retirement... second, there are shortages at the other end of the talent supply chain, as student enrolment declines in key disciplines for the chemical industry... between 2013-2022, engineering degrees awarded dropped 12% in the US and engineering enrolment dropped 37% in India. The decrease means chemical companies will face challenges recruiting the skills they need and replenishing the retiring workforce.”

All the more important, then, to make sure that your people are deployed as intelligently

as possible. That means using your ERP to automate as much manual work as possible – whether in finance, production management, R&D, sales or customer service.

Leveraging a highly capable ERP in this way also creates room to capture insights from employees not far from retirement age, and embed those insights into the system, enhancing the retention of corporate knowledge.

Every part of a chemical company can reap the rewards of automation and decision support offered by a well-selected ERP system.



All employees value a very tight safety regime. Your ERP is a powerful tool not only to implement safety protocols, but also to show how well they are working.

The effectiveness of **production staff** is enhanced through customized dashboards that allow full, real-time transparency.

Throughput and engagement of your **finance people** is improved by functionality to work across multiple ledgers, entities, structures, currencies, tax regimes, authorization levels, internal/external pricing and credit rules.

Your **customer service** employees can leverage AI to find answers to customer queries quickly and accurately, resolving issues and adding value for customers.

Finally, your **sales representatives** can spend their time getting deals over the line in the knowledge that quote/proposal generation and renewal/re-order reminders have been effectively automated. Management is also more productive with instant insights into rep allocation as well as sales performance by partner, channel, geography and product.

The more your ERP frees staff from manual, low-value tasks and allows them to apply their skills, the more they will deliver and the longer they'll stay.

Element #5

Building Resiliency into your supply chain

Chemical supply chains are often complex and almost always long. This is perhaps the greatest point of vulnerability for the chemical industry as it faces changing demand flows, tariffs, regulation, geopolitical disruption of trade routes, energy price fluctuations and raw material supply.

The extent to which the industry is restructuring its supply chains is evident in remarks from the Society of Chemical Manufacturers who note, “For critical products it may be necessary to establish secondary

suppliers or at least increase the quantity of safety stocks where available⁷.”

In the face of these challenges, a high-powered ERP system is an essential tool for supply chain management.

Key capabilities to specify for your ERP include real-time supply chain visibility, manufacturing resource planning (MRP), supplier monitoring and management, and logistics/route optimization.

Feedstock, for instance, is most commonly managed ‘just-in-time’ by the ERP – so it never runs out, nor is over-stocked with the risk of substance potency expiry. Traceability upstream and downstream down to detailed level of batch or shipment serial number is possible with digital connectivity. This is critical for the often-hazardous materials typical of the industry.

Cost optimization can be made more transparent, allowing the allocation of different volumes to competing carriers based on performance and price. That helps mitigate supply chain risk, including inter-site or inter-company transfer, all with automated document generation and tracking.

Supplier Assessment: As with carriers, supplier performance can also be monitored and measured through digital data. We know that geopolitics is affecting supply chains, tariff regimes, sustainability tracking. Working closer with your top suppliers and collaborating over forecasts and planning, not only improves your relationships, it also helps you both be more competitive and reliable.

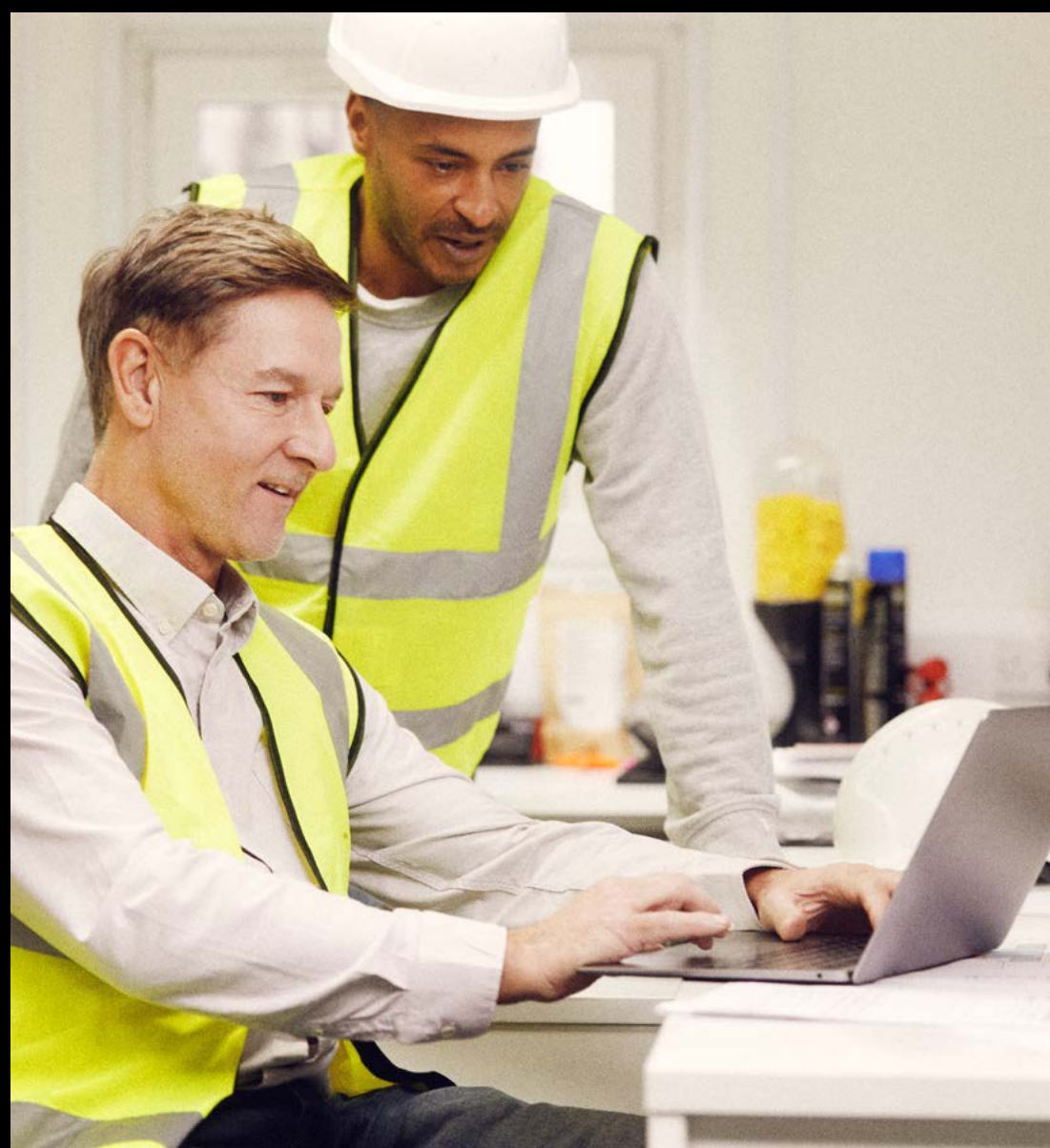
7. <https://www.socma.org/articles/managing-the-global-supply-chain-avoiding-disruption/>



Element #6

Regulatory relief

Regulatory standards and requirements are only getting tighter.



The chemical industry has its own particularly demanding set of standards, including REACH⁸, CLP⁹, COSHH¹⁰, and Biocides Regulations, as well as strict safety rules in the form of OSHA requirements.

In parallel, sustainability mandates are becoming increasingly widespread. In Europe, the corporate sustainability reporting rules are mandatory. The same is true for more sizable listed firms in China. And other parts of the world are expected to follow suit¹¹. In the US, the emphasis is more on energy efficiency and cost-savings. Even so, a good carbon footprint record can often be an attraction for potential and existing employees.

Regulatory compliance is an area where a powerful ERP system can really deliver efficiency and improve accuracy compared with manual reporting. Examples include:



Automated traceability.

Your ERP is central to traceability management and compliance. Real-time transparency can be achieved, including in-transit tracking and regulatory documentation – improved control, efficiency, optimization analysis and compliance, all from your ERP.



Document automation.

Removing manual processes – including a large proportion of data entry – not only speeds things up, it also improves accuracy. And automated document generation is a huge cost-efficiency bonus. A good example is the generation of GHS¹² Safety Data Sheets through automated processes embedded into your ERP.



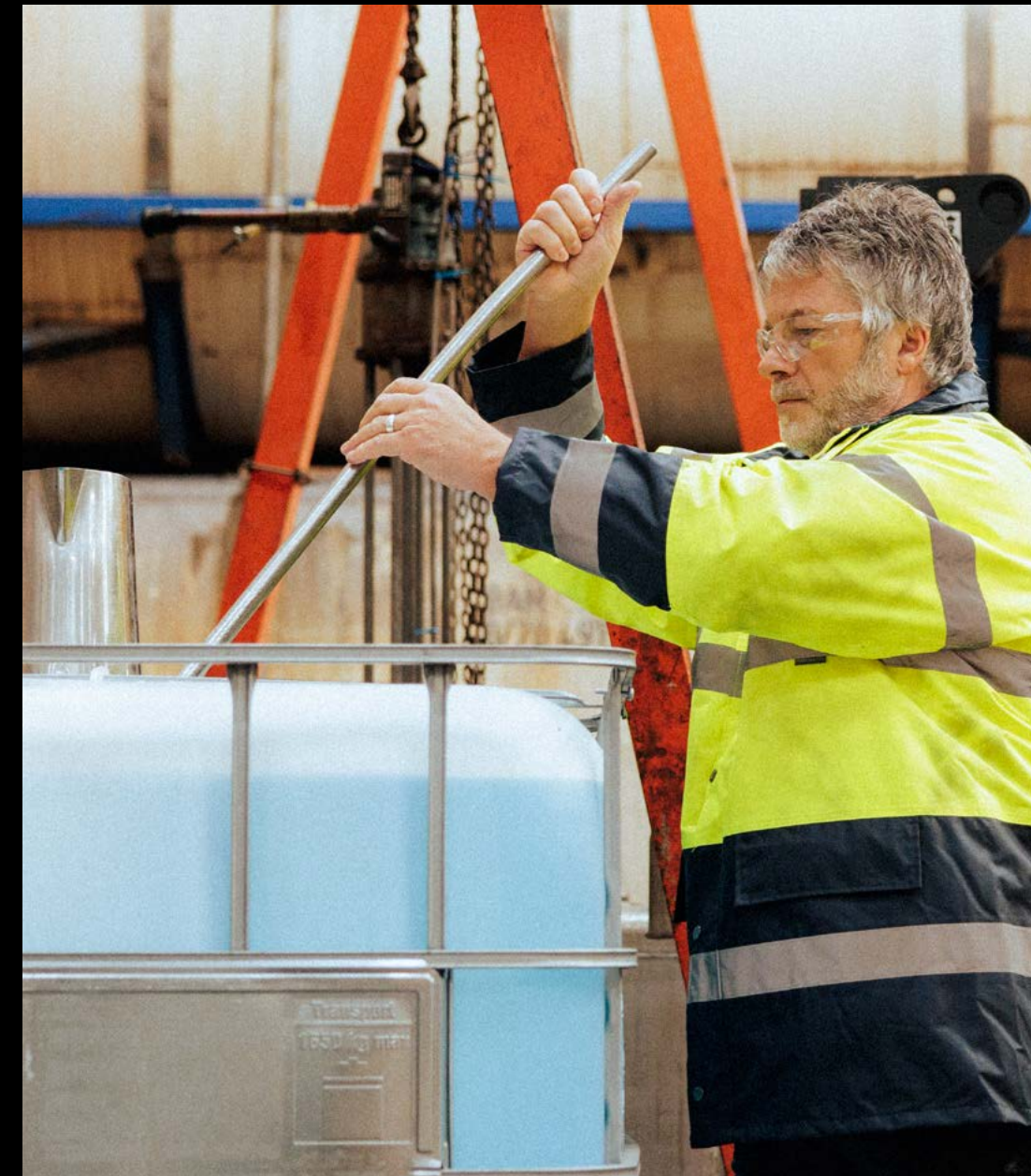
Audit/reporting automation.

Digital data streams allow your ERP to be set up to provide detailed and clean audit trails and regulatory reports automatically. In highly regulated environments like chemical manufacturing, the burden of reporting is increasing exponentially, so automated reporting is critical to avoid being overwhelmed by administration and cost.

8. *Registration, Evaluation, Authorisation, and Restriction of Chemicals*
9. *Classification, Labelling and Packaging*
10. *Control of Substances Hazardous to Health*

11. <https://normative.io/insight/csr-d-explained/>
12. *Globally Harmonised System of Classification and Labelling*

The multi-currency capabilities of Sage X3 help Blagden Speciality Chemicals to precisely handle multi-currency trading...



Blagden now has extensive reporting capabilities, including the capability to enquire, report and drill down into any detail.

Blagden can now tightly manage inventory, providing them with flexibility and visibility across the business... From the outset Blagden expected the system to control document management and the ability to email outbound documents including invoices, statements, Certificates of Conformity, etc. along with electronic archiving¹³.



13. <https://inixon.com/customer-success/blagden-specialty-chemicals/>

Focus on the six key elements for ERP success

Although every chemical company's requirements will be slightly different, these six key elements of success are shared by everyone in the industry.

With the industry facing such a volatile landscape over the next few years, it's vital that your ERP is working as hard as possible to implement your strategies and initiatives.

Remember to look for an ERP solution that offers plenty of process industry capabilities ready to go.

Make sure that AI in your ERP is making your people as productive as possible.

Demand high levels of automation, including the growing burden of regulatory reporting.

And ensure your ERP can really integrate operations, finance, sales and customer service to give you real transparency, the ability to test strategies virtually, and the agility to stay ahead of the field in an increasingly challenging marketplace.





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