

UP IN THE CLOUD

Will the chemical industry be one of the first adopters or fast followers in transitioning to the Cloud? Read on to learn the latest Cloud technology trends in the global chemical industry.



Table of contents

01	.....	Abstract
01	.....	Disrupting Technology – Why Cloud?
02	.....	Resistance is Futile
02	.....	Moving to the Cloud – A Phased Approach for Chemical Companies
03	.....	Benefits of Cloud Adoption
03	.....	Conclusion
04	.....	About the Author
04	.....	About Wipro

Abstract

Chemical companies across the world are going through a genesis. Three factors are forcing decision makers to re-examine their IT strategies—Cloud technology, data proliferation and mobile adoption. Data proliferation, also known as Big Data, is providing companies the ability to better understand and analyze their data, while mobility is providing increased flexibility and simplification. But Cloud is having the largest impact as it is a technology shift similar to that of client servers and the introduction of the PC. Cloud as a platform will revolutionize how Information Technology is deployed.

The chemical industry is at an early stage in the adoption cycle. Considering current market dynamics, Cloud adoption is inevitable and the pace of adoption should increase over the coming years. The transition will occur in a well-planned and phased manner.

Disrupting Technology – Why Cloud?

Chemical companies have been conducting business with on-premise enterprise ERP and associated systems for the past decade with reasonable success and stability. Migration to the Cloud is a disrupting event, especially for the IT and business functions. So, why do it?

At a macro level, business trends, cost pressures, globalization and new technology capabilities are fueling the shift to the Cloud. At a micro level, there are several reasons why a chemical company is compelled to migrate to the Cloud:

- i) **IT is under pressure to reduce costs for basic services:** Moving applications to the Cloud is an opportunity to reduce license fees and IT operational costs. Modifying software licenses from a perpetual basis to a pay-as-you-go model could help reduce costs and working capital requirements, further helping an organization transition to an OPEX model rather than a CAPEX model. Deployment, upgrade, maintenance labor and costs should become lower as Cloud applications mature.
- ii) **Business wants new applications to be deployed faster in a more user-friendly manner:** Given the speed of change required to maintain a competitive advantage, company leaders are looking at deploying new technologies quickly and cost effectively. Traditional

application deployment cycles are measured in months or years and consume a significant number of resources. Cloud-based solutions provide the ability to significantly reduce the set up and development time, saving precious time and money, and are not limited by resource constraints. Future applications should be as simple as installing an app on your mobile phone or accessing a URL.

- iii) **Capitalizing on underdeveloped markets:** As global chemical markets focus on Asia, the Middle East and Latin America, in an effort to capture emerging markets, they are exploring newer ways to deploy software. Amidst infrastructure, resource constraints and security risks, a Cloud-based environment makes it easier for chemical companies to explore and maneuver in new markets. A Cloud platform provides a lower cost and a lower risk platform that can be extended over time.
- iv) **Taking the M&A route:** Often, the expansion into new markets is substantiated through mergers and acquisitions, joint ventures or limited international operations. Leveraging the capabilities of a Cloud-based solution, including Cloud-based ERP, enables these expansions to be accomplished in a swift, safe and secure manner.

Resistance is Futile

While the chemical industry may be slow when it comes to Cloud adoption, the transition is inevitable. Companies are taking a systematic approach of minimizing the impact of change on their business units. Many progressive companies have invested in Cloud applications but few have ventured into putting their ERP or operating systems on the Cloud. Why?

Concerns

Security risk and application maturity are the two leading factors that are slowing the adoption of Cloud-based ERP and other mission-critical applications. The industry is wary of data breaches and security leaks and is not comfortable moving key data and systems outside their firewall.

The second issue is the lack of functionality of Cloud applications as compared to their current systems.

As more companies embrace Cloud ERP, applications and risk strategies will mature along with businesses and change management models that will help reduce their concerns and improve adoption.

Hosted ERP – In the longer term, ERP systems will be hosted in data centers that specialize in hosting and data management. These outsourced operations can aggregate customers to reduce costs and improve performance. Additionally, chemical companies will adopt a strategy where they will move non-operational systems to a hybrid Cloud environment.

Moving to the Cloud – A Phased Approach for Chemical Companies

The evolution to the Cloud is expected to take several years. Most companies will follow a crawl, walk, and run approach.

Crawl – Getting ready for the transition to Cloud. The initial stages of preparing to move systems, especially ERP, to the Cloud, involve getting Master Data cleaned up, reviewing and documenting business processes and getting interfaces working. It could also include business process mapping.

Walk – As companies complete their Cloud strategy and move into the execution phase, they will move non-core systems such as email, HR, analytics and sales support to the Cloud. Over the next few years,

the major ERP players will add more applications to the Web via public portals.

Additionally, companies are experimenting with outsourcing their IT infrastructure. While outsourcing infrastructure is not actually moving applications to the Cloud, it is a small part of a longer term strategy to reduce costs and improve support for business units.

Run – Core applications such as ERP will eventually become standard Cloud applications. While adoption has been low among large companies, Cloud-based ERPs have been successful for companies in the small to mid-market segments.

This is how a typically well-planned phased Cloud deployment will look like for a chemical company:

Initial Phase – the basics

- **Data** – cleaning data and establishing a data governance program that provides standardization but also allows the flexibility required for local and jurisdictional issues
- **Business processes** – must be updated, mapped and agreed upon by all operational and IT teams
- **Interfaces** – broken business process and hanging interface issues will be compounded when deployed on the Cloud. Investment must be made in fixing the interfaces

Intermediate Phase – getting ready

- **Hosting** – as a prelude to moving to the Cloud it is beneficial to establish a relationship with a hosting provider and build a relationship
- **Public** – move all non-core applications to a Public Cloud (email, CRM, procurement, HR, etc.)

- **Security** - determine and establish security systems and risk mitigation strategies for moving to the Cloud

Deployment Phase – let's get going

- **Start small** – move a small division, plant, acquisition or international location's systems to the Cloud to gain experience, a success and a template for further rollouts
- **Service provider** – continue to move applications, support, testing and help desk function to your service provider
- **Interfaces** – build secure interfaces between private and public Clouds. Enable a risk mitigation program to ensure security of data and applications
- **Operations** – after gaining experience moving business applications, it will be time to move manufacturing and operations applications to the Cloud. Note that it may be a while before the Cloud applications mature to this level

Benefits of Cloud Adoption

Cloud adoption by chemical companies is yielding significant results that are being noticed by management teams. Overall, infrastructure cost improvements in the range of 10% to 20% are normal. Cloud based applications can cut software deployment cycles by months and lower

associated implementation fees. By transitioning to an OPEX model, working capital reductions of 5% are not uncommon. Overall, there is significant upside benefit to transiting to the Cloud.

Conclusion

Many CFOs and CMOs are dedicating budgets and getting involved in creating Cloud Strategies. By leveraging the Cloud, chemical companies are taking full advantage of the lower costs and resource requirements, enabling their IT departments to add value to their businesses. Most of all,

Cloud platforms will change the way technology is being developed and deployed. Stay tuned! It is a new frontier out there and we are boldly going where no chemical company has gone before.

About the Author

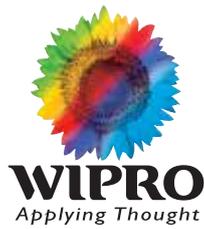
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Tim Niziol serves as the Global Head of Chemicals at Wipro Technology. He is a 30-year chemical and energy industry veteran splitting his experience between operating companies and software and service providers.

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