A Look Back: The Life Sciences Industry in 2023, and a View for 2024

The breakneck pace of digital transformation spurred by COVID-19 has continued to reshape the life sciences landscape in 2023. Rather than being defined by a single watershed moment, this year marked a turning point, as companies begun to move from a reactionary adoption to the deliberate integration of advanced technologies across the value chain.

Over the year, the focus for life science companies once again remained on advancing R&D and on process efficiency and improving data quality, to become more data-driven, all whilst fighting to keep heads above water amidst increasingly diverse regulatory requirements and the need to drive greater productivity with fewer resources.

The overnight digital transformation sparked by the pandemic, now at the height of foundational disruption and optimisation, has cleared the path for the life sciences leaders to reach the next level in 2024, where data and technology amplify human potential rather than displace it.

Let's reflect on the key events that defined this transitional year, and glance at the future digital strategies that will be leading the shift from surviving to thriving.

Flirting with Data and Digital Transformation

Throughout 2023, the life sciences industry has been heavily focused on leveraging advanced technologies like Artificial Intelligence, Machine Learning, and Automation to drive innovation and accelerate research and development. Even though digital technologies present considerable opportunities for life sciences companies, most have yet to fully embrace and integrate these innovations in an ongoing, committed way that capitalises on their transformative potential.

Several organisations have been applying these tools and technologies to challenges like R&D, drug discovery, personalised medicine, and enhancing clinical trials. However, the industry is grappling with low-quality, outdated, and incomplete data, that is hindering the progress towards newer systems that rely precisely on this data.

In response to a greater understanding of data's critical role in innovation and the need for a reduced time to market for new products, a wave of data-centricity in life science R&D processes opened up many new challenges for organisations; and particularly in regard to master data management, data governance, and data interoperability.

The challenges have manifested not only in understanding who owns what data, but how the data items link together, how to track and trace this data, and how to perform impact analysis on changes to that data.

Some life science companies have made good strides this year in tapping into data's potential to accelerate discoveries and outcomes; organisations are becoming more aligned with common definitions (defining Single Consistent Dose Strength in organisations that are IDMP ready, for example), and there has been an increase in the adoption of cloud-based systems and platforms to consolidate, analyse, and share data. But these organisations are battling with data gaps, cross-business data ownership, and a standard of data quality that is, in some cases, terrifyingly inconsistent. Is there the will – or the financial backing – to address this?

Part of the problem is that large pharma companies have a significant amount of legacy data, and the clean-up or rationalisation of that data is far more arduous, or perhaps impossible, and may not bring a large return on investment for older products. On the other hand, small to medium pharma companies stand a better chance of getting their data organised and aligned going forward.

Similarly, regulatory requirements and initiatives like SPOR, IDMP, FHIR, and ePI, may drive companies to make changes in their master data in ways that meet the scope of those initiatives and regulations, but this does not give them time to step back and look at the bigger picture, which could give rise to different and more efficient long-term solutions and master data design.

Pressures for Decreased Time-to-market

The pandemic has accelerated drug development timelines and heightened the expectations for a faster access to new therapies, and this urgency has certainly persisted post-pandemic. The intense competition and the high costs of drug development have motivated companies to try to recoup investments faster through quicker product launches. But startups and smaller biotech with leaner organisations and more agile processes are disrupting the market and setting new speed norms that large pharma is struggling to keep pace with.

However, patient safety remains paramount. While the pressures for speed have intensified, quality must be maintained. And striking this balance has been a key focus across the industry in 2023. One of the ways we've seen this come to fruition is through a greater focus on the collaboration between industry partners.

In their business partnerships and collaborations, many companies have moved from the art of the possible to kicking off those initiatives and making the investment. The increased squeeze of competition is making time-to-market an even bigger deal, and some of the 'great firewalls' of larger life sciences companies are beginning to modernise to allow more rapid collaboration with new partners (suppliers, manufacturers, CROs, CMOs, co-development partners, auditors).

While the level of collaboration seems to have increased, the traditional ways of doing so – through tools like SharePoint, Box, and email – are continuing to add to the pain of data and document duplication, lack of security, auditing, and versioning. In the coming years, life science organisations will need to begin the move to purpose-built, cloud-native collaboration solutions to connect partners in a unified ecosystem, breaking down silos, while increasing security and compliance, and reducing

Data Management and Connectivity will Continue to Dominate Digital Transformation Initiatives.

duplicative work. Ultimately, this will be essential to compressing development timelines and accelerating speed-to-market in today's competitive climate.

The Impact of Budget Constraints on Efficiency and Innovation

So, have the budget constraints in key areas of the business slowed the progress and innovation in 2023? Or, have they instead forced the decision-maker's hands into investing in more strategic and efficient fields?

Humanity's collective short-term memory means we're eternally and irrationally sceptical of the repeating patterns of both war and recession, especially following major global upheavals like the pandemic. But they're almost as sure as the sun rising. The smart money method would be investing in automation and efficient structures / processes to weather the continuing storm, and that's exactly what several organisations have been doing in 2023.

The most forward-looking companies have been pairing fiscal restraint with targeted investments to reshape operations for lasting efficiency. They have automated repetitive tasks to boost productivity beyond headcount, while cloud initiatives and digitisation have reduced IT infrastructure and security burdens.

There has certainly been some progress and advancements in innovation, yet our technical team has witnessed first-hand that the post-pandemic technological boom is being focused down to only strategic projects with the greatest ROI, which might not always be the most efficient long-term. This prioritisation risks neglecting the foundational enhancements that, while less glamorous, may be better at positioning organisations for the future. Investments like automations, data management and governance may not directly drive revenue in the short-term but are crucial to compete in the coming years.

As we enter 2024, life science companies will need to strike the right balance between fiscal prudence and continued investment in growth. The impacts will still linger as the economy recovers.

Looking forward to 2024

Having already tested the waters, for life sciences leaders 2024 will be the time to fully embrace digital transformation, not just dip their toes. The life science companies have by now laid the groundwork needed to thrive in 2024 and beyond, and momentum is building towards a foundation of high-quality data that enables and amplifies human-driven processes. In the coming year, efficiency and automation will take centre stage to maximise constrained resources, but balancing sensible financial management with strategic investments will remain key – long-term thinking must not be sacrificed for short-term savings.

Partnership ecosystems will continue their expansion, and high-quality and reusable data will be the essential thread setting apart the organisations capable to drive progress and innovation. The industry is poised to see rapid expansion in terms of data-driven automations. There is a general buzz in the air that structured data is the future, rather than document-driven workflows, which means a lot of exciting opportunities are on the horizon to revolutionise business processes every step of the way, from trials to safety monitoring.

However, existing data is currently 'trapped' in documents within most organisations,therefore, there is a pressing need for tools which can extract that trapped data and move it to a structured model. Once such a model is in place, there are many clear gains, from the ability to automate the generation of submissions to Health Authorities, to the huge increases in pattern-tracking for areas like Pharmacovigilance and Regulatory Intelligence.

For life sciences leaders, 2024 is the time to move beyond the cautious implementation of new processes and technologies, to confidently reshape operations for the new normal. Those companies that strategically harness data-driven, digital capabilities will be propelling the industry into a more innovative, resilient, and patient-centric future; ensuring that whilst serving patient health more effectively, they will as well be keeping their costs under control.

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