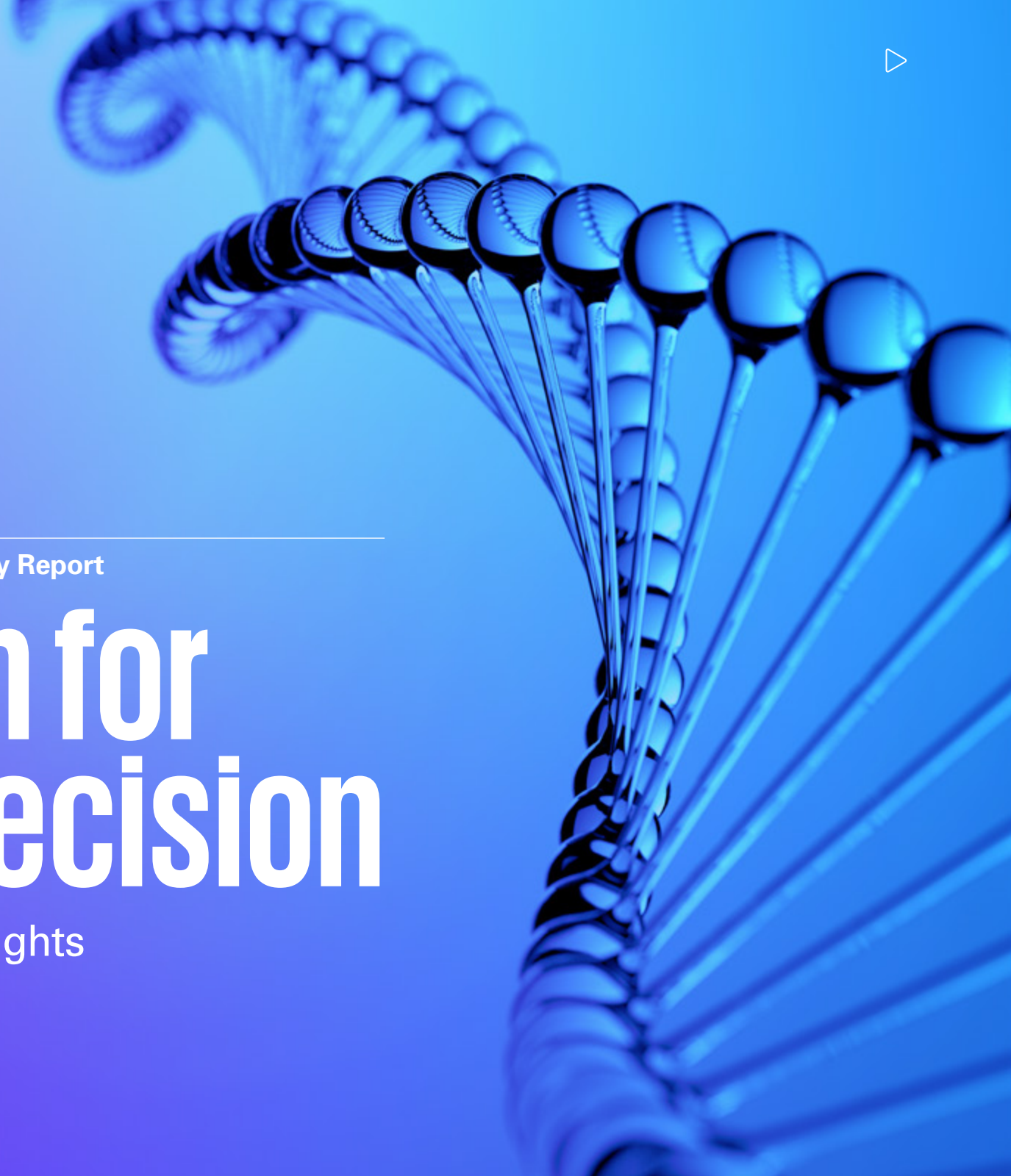
KPMG

2023 KPMG US Technology Survey Report

A search for more precision

Life sciences sector insights



Life sciences companies are sophisticated business organizations with high levels of scientific knowledge. But many are still striving to ensure that the technology supporting their back office measures up to the same high standards set in their research laboratories.

With so much at stake—with the world relying on their continued ability to find innovative ways to treat and cure devastating diseases—life sciences companies are reassessing how they can best use digital technologies to optimize their operations and deliver more precise and personalized care to the patients depending on them.

Playing catch-up

Like their counterparts in other industries, a majority of life sciences executives believe their organization will be able to achieve its business and organizational ambitions using its existing technology. That's a key finding from the 2023 KPMG US Technology Survey, which polled 400 US-based executive-level technology leaders across eight industry sectors.[1] That favorable outlook is offset, however, by other findings showing the life sciences sector lagging on several technology-related fronts.

Life sciences executives are, for example, less likely than most to say their organization is proactive in progressing against its strategy and continually evolving in four key technology-related areas: artificial intelligence (AI)/ automation, cybersecurity, data and analytics, and emerging technologies. (See Figure 1) Those persistent shortcomings suggest life sciences companies still have plenty of work to do to get their technology where they want it to be.

Figure 1

Lagging in four key technology-related areas

How would you describe your organization's position in each of the following areas?
(Percentages giving the most positive answer, "We are productive in progressing against our strategy and are continually evolving.")

	ALL SECTORS	LIFE SCIENCES	DIFFERENCE
AI and automation	10%	6%	– 4 pts
Cybersecurity	16%	9%	– 7 pts
Data and analytics	14%	9%	– 5 pts
Emerging technology	10%	2%	– 8 pts
Public cloud and XaaS technologies	16%	17%	+ 1 pt

Source: KPMG 2023 US Technology Survey, KPMG LLP (US), 2023

1 In May and June 2023, KPMG surveyed 400 US-based, executive-level technology leaders across eight industry sectors to find out how their organizations are looking forward to the next stage of the digital transformation journey, where they expect emerging technologies to drive new value, and how they will move forward with pace and confidence. This report highlights the most significant differences in the survey findings for the life sciences sector relative to all sectors represented in the survey.

"Continued progress in all these areas is critical for life sciences organizations," says Steve Sapletal, principal, Advisory and Life Sciences leader, KPMG in the US. "Data is foundational to precision medicine. Cybersecurity is imperative because without it, patients and others won't trust companies with their data. And emerging technologies, like generative AI, are important as they will play an increasing role in efficiently extracting insights from data. There's just no way for life sciences companies to fully leverage technology to drive innovation if they're not staying current on data management and data analytics."

To be sure, life sciences companies are plowing money into their digital transformation agendas, including data and analytics projects. But outcomes have been mixed. Among all companies in all sectors that have seen an increase in profitability or performance from their investments in data and analytics, for example, life sciences companies are notably more likely to have experienced improvements in innovation (55 percent versus 31 percent) and employee satisfaction levels (64 percent versus 45 percent). But they are much less likely to have seen enhanced customer engagement (27 percent versus 42 percent), improved efficiency and cost cutting (18 percent versus 33 percent), or strengthened business resilience (14 percent versus 30 percent).

That's not all. While 68 percent of life sciences executives say their companies have a high level of competence around data governance, that contrasts with the 79 percent of all executives saying the same. Similarly, only 45 percent of life sciences executives report a high level of competence around monetizing data, versus 66 percent of all survey respondents. (See Figure 2)

Figure 2

Room to improve on data and analytics

How effective is your approach to data and analytics in the following areas?

(Combined percentages answering "embedded" [fully integrated into daily operations and often generating returns], "influential" [a fundamental part of business strategy with well-defined processes mostly adhered to across the business], or "cohesive" [a structured yet agile approach with guidelines available].)

	ALL SECTORS	LIFE SCIENCES	DIFFERENCE
Data accessibility	74%	85%	+11 pts
Data governance	79%	68%	–11 pts
Data investments	72%	64%	–8 pts
Locate meaningful inserts	59%	54%	–5 pts
Data silos	67%	75%	+8 pts
Data science	72%	64%	–8 pts

Source: KPMG 2023 US Technology Survey, KPMG LLP (US), 2023

"Many life sciences companies are doing good things with data, but laggards can't afford to lag for long," Sapletal says. "If they don't figure out data management, they're not going to figure out how to best apply generative AI. They're not going to figure out how to secure their data. And they're not going to figure out how to monetize their data, which many are eager to do."

Life sciences executives get the message. In the survey, they are more likely than those from any other sector to see the ability to identify valuable data insights in vast data sets as an essential attribute for organizations to thrive in a digital economy (51 percent versus 36 percent). They also place a premium on "high stamina in maintaining change momentum" (47 percent versus 35 percent).

Looking forward, life sciences executives most commonly say the technologies that will be most important to achieving their organization's ambitions over the next three years are the same ones identified by a majority of executives across all sectors: AI/machine learning (including generative AI), robotics/automation, and virtual reality/augmented reality (VR/AR) (including the metaverse). When it comes to using those technologies, though, many are simply looking to keep pace with their most advanced competitors—60 percent say their organization is prioritizing robotics/automation in part because the leaders in their market have already adopted it (versus 44 percent of all executives). Similar patterns hold for edge computing (including Internet of Things) (67 percent versus 45 percent), VR/AR (including the metaverse) (61 percent versus 50 percent), and anything-as-a-service (XaaS) technologies including public cloud/multicloud) (60 percent versus 50 percent).

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> Principal, Advisory and Life Sciences Leader, KPMG in the US

Charting a path to more tailored care

As we wrote last year in our comments about the 2022 KPMG US Technology Survey, life sciences companies are increasingly focused on the opportunities presented to them by precision medicine, an approach to providing care that considers the characteristics of individual patients—their genetics, environment, and lifestyle—and then seeks to target patients with treatments tailored to their unique needs and makeup.

Accordingly, life sciences executives this year report that their organizations are keenly focused on using technology to better know and serve their customers, with input from customers helping to drive their tech agendas.

Life sciences executives are far more likely than others, for example (52 percent versus 36 percent), to say their company is prioritizing AI/machine learning, including generative AI, as a result of customer feedback. Similarly, 43 percent say customer feedback is helping to drive their work with Web3—a version of the web that incorporates blockchain technology and tokenization—versus 31 percent of all executives. In fact, executives in the life sciences sector are more likely than others to say customer and user expectations around new features and personalization are key drivers of their organization's digital transformation strategy.

Challenges are both technical and cultural

While their ambitions may be on target, life sciences organizations face a host of challenges to extracting more value from their investments in technology, including substantial amounts of tech debt built up over the past few decades.

More so than executives in most sectors, life sciences executives identify "constraints from legacy technology" as a challenge to their organization's digital transformation efforts (51 percent say this, versus 39 percent of all executives). The only challenge in this sector that is more common, cited by 53 percent, is having a technology function that lacks the governance and coordination to effectively support transformation initiatives.

At KPMG, we believe problems with digital transformation in the life sciences sector are attributable not only to legacy debt but also to legacy approaches to transformation, especially at long-established companies. In the past, it wasn't uncommon to plan for new technology implementations that would play out over a period of three to five years. That's become less workable in an environment like the one we're in now, when new technologies can become mainstream almost overnight. (Witness generative AI's remarkable adoption within a matter of months after leaping onto the public stage in late 2022. In its latest Global Survey Report on the state of AI, McKinsey & Co. found that "less than a year after many of these (generative AI) tools debuted, one-third of our survey respondents say their organizations are using gen AI regularly in at least one business function.")

Challenges are both technical and cultural continued

"You can't have a five-year roadmap anymore," says Sapletal. "Companies need to figure out where they are on the technology maturity scale, identify the critical points they need to address, and then move to the next level in a very short period of time."

Beyond technical debt and shortcomings around governance, life sciences executives say managing the vast amounts of data now available to their organizations is proving a challenge, too. Specifically, 51 percent say an increase in data volume and complexity is having a negative impact on their organization's ability to innovate (versus 40 percent of all executives surveyed) and 45 percent say the same about the complexity of multicloud environments and XaaS technologies (versus 35 percent of all executives).

Given their uncertainty in these areas, it perhaps is not surprising that life sciences executives also are more skeptical than most of some emerging technologies. Only 38 percent say their leaders are confident in the resilience of applications built by low-/no-code software development platforms, for example, versus 60 percent of all executives surveyed.

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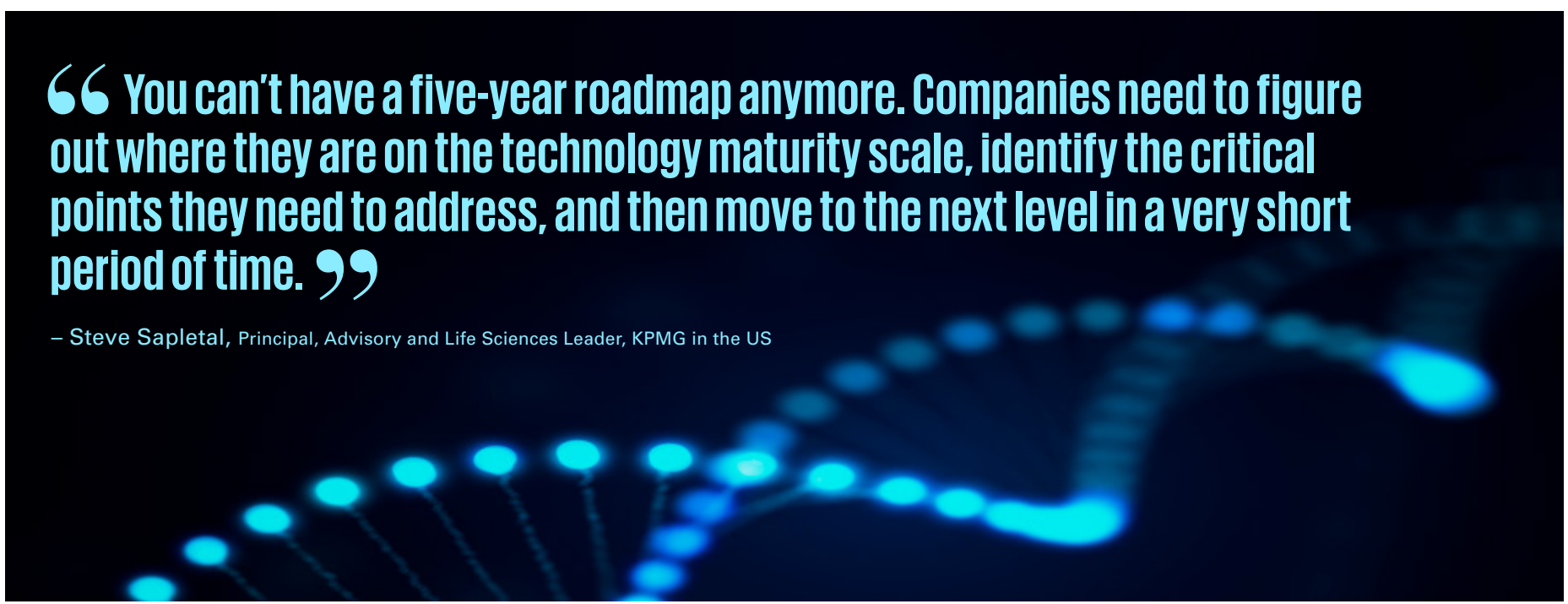

What to do next

To get a better handle on where their technology agenda should be focused, life sciences companies are taking a fresh look at themselves. They're assessing whether they're in the right businesses and markets and trying to figure out where they have opportunities to streamline their operations and portfolios. They're looking for opportunities to gain efficiencies, and they're thinking about how they can start to monetize, in part through precision medicine, more of the investments they've made in technology. They're also trying to figure out how to manage through the margin compression they've experienced since supply chains were disrupted by the COVID-19 pandemic and preparing for further compression now that Medicare is set to begin negotiating prices for some prescription drugs.

As part of this effort, we believe life sciences companies may want to conduct a bottom-up benchmarking analysis of current spending on technology systems and data management, as well as capabilities in those areas. By using benchmarking data to compare where they stand relative to their peers, life sciences companies can identify potential cost-saving opportunities and then apply those savings to addressing capabilities gaps.

In efforts to monetize past investments in data or technology, life sciences companies can further help themselves by adopting a "fail-fast" mentality. The goal here is to quickly pivot from, or if necessary abandon, projects that aren't working and show little prospect of being salvageable. Companies can enable a fail-fast mindset by promoting small-scale experiments or proofs of concept, conducting pilot studies, running virtual clinical trials, and taking an iterative approach to product development or analysis based on continuous monitoring and evaluation. All these steps can help reduce the risk of investing heavily in a flawed product or service, saving time and other resources.

How KPMG can help

KPMG has a long track record of helping life sciences organizations find and implement practical solutions to their most complex challenges. We have the technical skills, industry-aligned resources, and alliances they need to assess the current state of their technology and then design and implement a successful digital transformation agenda. Our preconfigured cloud solutions help to accelerate this work. On the medical science front, we have deep insight into where the industry is going in emerging areas such as predictive medicine and cell and gene therapy. Taken together, these capabilities allow us to confidently and quickly help guide life sciences organizations through enterprise-critical projects, from strategy and use case development to vendor selection, pilot implementation, and pilot scaling.

Click here to learn how KPMG can help your organization reap the full promise of a tech-enabled transformation.

Download the full report and discover how KPMG can help you with digital transformation go to: **visit.kpmg.com/techsurvey2023**

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