

Unlocking value: The outlook from 100 life sciences leaders on their plans for AI

By Pratap Khedkar, Mahmood Majeed,
Arun Shastri and Asheesh Shukla



2024 ushers in a new era for generative AI, but most businesses are grappling with how to use it to create value.

Leading organizations are focused on the hard work of connection—connecting their data assets, platforms and technical capabilities to unlock the full potential of generative AI and drive the business outcomes they’re looking for.

At ZS, we’ve been diligently tracking these trends and engaging with over 100 life sciences decision-makers to understand their perspectives on the role of data, digital and AI in the coming year.

This report condenses our insights and expertise, offering a view for leaders as they move into 2024.

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Survey results:

Inside the mind of the life sciences technology leader

By Mahmood Majeed and Asheesh Shukla

The buzz surrounding machine learning, artificial intelligence (AI) and particularly generative AI is palpable, especially among leaders overseeing their firms' technology infrastructure and analytical strategies.

ZS recently polled 100 of these leaders in life sciences to uncover their current perspectives and outlook for 2024. Here's what you should know:

Data and technology leaders feel a new urgency to deliver value

Life sciences leaders see 2024 as shaping up to be a year where data, digital and AI investments take center stage across the industry and promise more value to the corporation.

Technology and analytics leaders are optimistic. A whopping 88% are in lockstep, acknowledging that generative AI has dialed up the urgency meter for squeezing every drop of value out of their company’s data reserves.

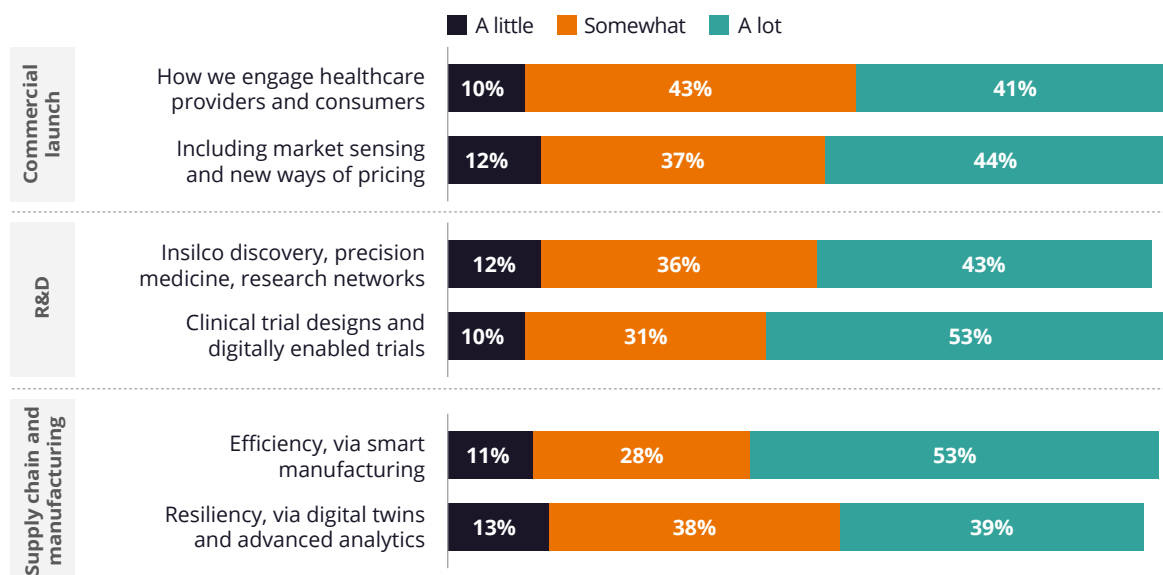
88% say that generative AI has dialed up the urgency meter for squeezing every drop of value out of their company’s data reserves.

They’re rallying the rest of the C-suite to prepare for substantial investments aimed at the core value centers of their businesses, from the front lines of commercial operations to the innovation hubs of R&D and the intricate web of manufacturing and supply chain logistics.

Their ambition will test the limits of their ability to show the connection between their work and the specific value metrics that the business seeks. In fact, 48% of them say linking to their business leaders’ expected outcomes is already quite difficult.

FIGURE 1:

2024 outlook set for significant investments in data, digital and AI



Source: ZS, November 2023.

Q: To what extent do you expect your company to invest in data, digital and AI innovation in the following areas over the next 12 months? Base: 100. Respondents who said “not at all” or “not sure” are not charted.

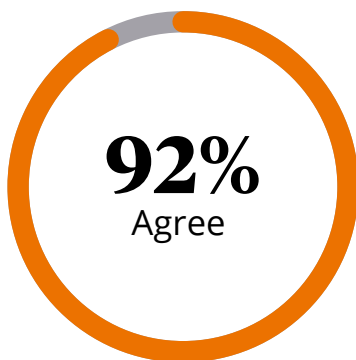
Success hinges on the connectedness of data assets, platforms and capabilities

Technology leaders consider data to be the cornerstone of the value puzzle for these investments. How they connect the organization's reusable data assets, platforms and capabilities will be particularly important in 2024.

These decisions determine how easily ideas scale for value and how functions across the enterprise can seamlessly access high-quality data to use (or build) data products. The goal is to enable continuous insights for various use cases, either for internal teams or new commercial-facing products and services.

Without a connected strategy, a cloud of doubt will loom above this moment of excitement with generative AI. Nearly all (92%) of respondents believe that their success with generative AI is tightly bound to the quality of their data strategy. Any program they put in place, particularly in high-stakes domains like healthcare, must ensure they first have the high-quality data they'll need.

A clear understanding of how generative AI complements existing AI systems is vital. With this clarity, leaders can use generative AI to make their existing AI-driven systems more contextual and explainable. Leaders are actively formulating their views, with 46% reporting that their companies have set up a vision for the coexistence of legacy AI and generative AI models.



Our company's data strategy will be the foundation of our success with generative AI.

A focus on cost points to a need for top-level support

Technology leaders overwhelmingly agree: Company investments in data, digital tech and AI should deliver better results without significantly increasing costs. Nine out of every 10 of them are firmly on board with this notion.

Yet, here's the catch: Getting there requires an unwavering commitment from the highest ranks of an organization to foster a mindset that drives business and technology collaboration, innovation and efficiency all at once.

Notably, 54% of respondents identify a need for more people across the organization with this digital mindset.

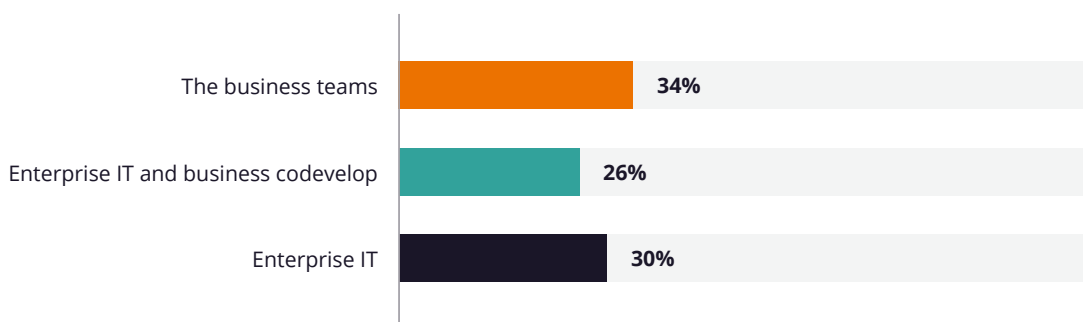
In another layer to the story, 34% of technology leaders report that their annual plans are often shaped by others in the business who may not necessarily have the same mindset.

When business teams set the agenda for what needs to be done, they often overlook a fundamental tenet of digitally native ways of working: incorporating diverse perspectives when designing solutions to be both valuable to the business and technically feasible.

Instead, when business and technology leaders codevelop the agenda, everyone moves beyond the traditional markers of IT success like budget, on-time delivery and adoption rates. Instead, they explore business questions together such as: How can our solution streamline processes? Improve the overall experience? Boost product sales?

FIGURE 2:

Who sets the data, digital and AI agenda?



Source: ZS, November 2023.

Q. When setting the agenda for new data, digital and AI initiatives, how often does your company do any of the following? Base: 100

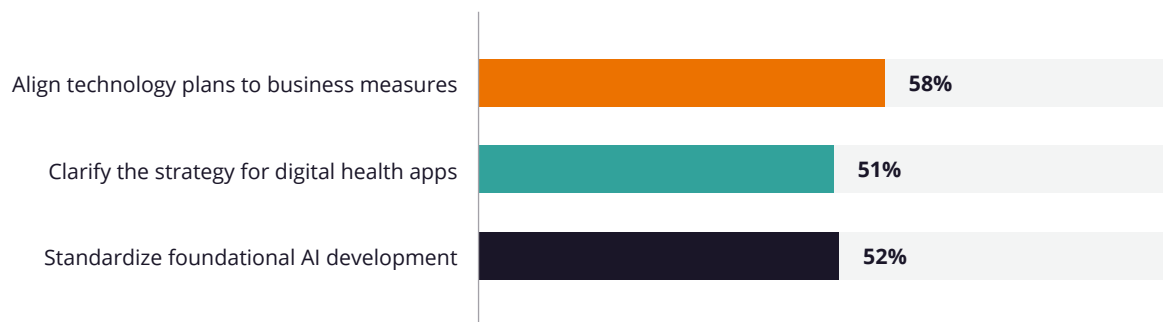
What’s ahead: Priorities for the technology and data strategy

Technology leaders report several actions they plan in the next 12 months to build durable capabilities.

Most plan to show how their work aligns to business measures. Half intend to clarify the company-level strategy for data products that require new business models, such as digital health apps. Half also plan to standardize how teams develop foundational AI models across the organization.

FIGURE 3:

Areas of focus to build technology capabilities



Source: ZS, November 2023.

Q: Which of the following options best describes any action your company plans to take to scale the business value of your data, digital and AI initiatives in the next 12 months? Base: 100

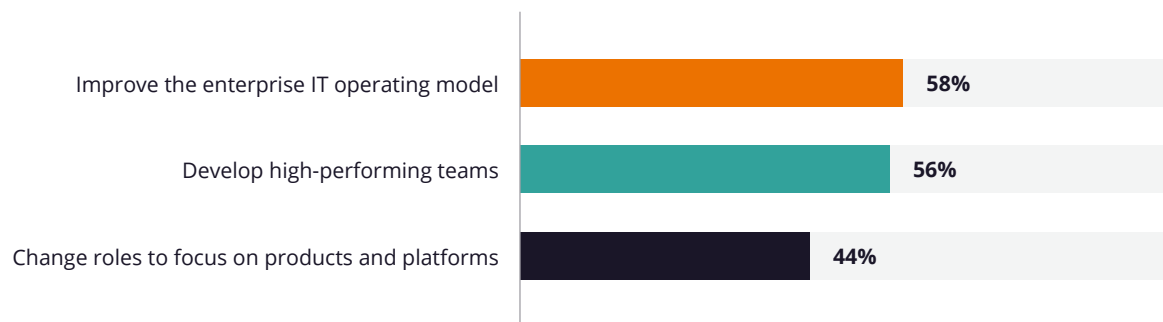
What’s ahead: Priorities for people and skills

Technology leaders also report several actions they plan in the next 12 months to influence the people agenda. Most expect to invest in digital upskilling of the entire workforce (51%) and how their organizations attract and retain digital talent (57%).

Yet they also plan to improve how teams under them work. They plan to step back, evaluate the IT operating model and identify what high-performing teams should look like. Four in ten respondents plan to focus on changing technology roles in the organization toward delivering data products that serve particular use cases for the business.

FIGURE 4:

Areas of focus to build people capabilities



Source: ZS, November 2023.

Q: Which of the following options best describes any action your company plans to take to scale the business value of your data, digital and AI initiatives in the next 12 months? Base: 100

Takeaways for CDIOs and business leaders

- 1. Step up engagement across the C-suite to keep the people and technology priorities in sync.** Their commitment is critical to ensuring the company's people capabilities match or exceed what the technology is already capable of doing and that people stay focused on the few priority business outcomes they need to achieve.
- 2. Hype quality data.** Success with AI, including generative AI, won't happen without a shift in most organizations. Today's focus on **model-centric AI**, where teams find, build or train models, will need to make room for a more **data-centric AI** approach, where teams use data strategy to tackle why accuracy in the lab is not predictive of how a model performs in the chaos of a real-world environment. The switch here is to focus on using domain-based knowledge to improve data quality systematically, while the models stay fixed.
- 3. Rethink your view of high-performing teams.** Consider what high performance looks like in a digitally native model where teams focus on data-centric AI. What elements are missing from your teams now, and how could you set more people up for success?

Methodology

The Harris Poll conducted an online survey on behalf of ZS from August 24 to September 8, 2023. The survey targeted 100 technology executives at U.S.-based pharmaceutical, biotechnology and life sciences companies who are decision-makers for their companies' technology infrastructure, analytics and technology strategy. One-third are executive-level titles (CDIO, CIO, CTO) and the rest are senior-level decision-makers. Percentages may not add up to 100% due to rounding or the acceptance of multiple responses.



Q&A:

The C-suite view on the power of generative AI

By Pratap Khedkar and Arun Shastri

A theme in this year's outlook is tech leaders' desires to align their company's digital, data and AI plans to a few priority business outcomes their executive teams expect. In fact, nearly half say that it's already a challenge to do this (48%).

In this conversation, ZS's global AI leader, Arun Shastri, gets perspective from ZS's CEO, Pratap Khedkar as he leads ZS.

AS: You've used a very straightforward set of questions to help C-suite leaders think about their own company's use of AI and their expectations for the right outcomes. Would you share this?

PK: If you think about it, company leaders have the same management problem with AI that we've always had, which is death by a thousand use cases. Usually, everyone wants to collect use cases from various parts of the company, which is a start, but if you want to show meaningful value, you can't stop there. You need a systematic way to evaluate these ideas for their worth and a few priority business outcomes you need to achieve. When we think about this, we think about two dimensions: value and feasibility.

Basically, we ask: Is this idea going to matter on any type of scale? And then, will it work? The second question can be technical, but more often it relates to people and their ability to adapt and change.

With the explosion of generative AI, those questions aren't different, but the bar for what's valuable and what's feasible is. With generative AI, you can do much more with unstructured data, for example, but if everyone can do the same thing, you must ask, is it going to be that valuable? And because generative AI changes the bar for these questions significantly, you need to consider a third question, which is around the potential risks related to its widespread adoption.

AS: How should organizations approach adoption of generative AI in 2024 so that the expectations are clear for everyone?

PK: You can't expect everybody in the organization to figure out tradeoffs around innovation and risk, so there are some phases of change that need centralized attention.

So, in the first phase you'll need to commit to the few key use cases that are valuable enough to commit to transforming. So, my point is, don't try to do too many things.

Do a few things well because leaders must think about how their use of generative AI ties to their organization's purpose and they'll need to provide proof of evidence to everyone around them that they should commit to change.

– Pratap Khedkar

The purpose of an equipping phase is to give people the right tools and freedom to get started. People need clear guidelines for their roles, ideas on how to get started and new ways to share experiences and learn from each other.

Once people see some value, they typically want more. And that's when you set the expectations for accelerating. That's when you unleash more creativity and energy. And then hopefully, at that point, not only are most people using new AI models for many things, but those who are going to come up with new ideas are really empowered to do it.

AS: And how should we be measuring success here, when inevitably there will be disappointments?

PK: In many organizations, the CEO is interested in adoption and asks the next level of management to have clear objectives in their plans for adoption and outcome measures. For example, they're asked to show how they've used generative AI in one or two use cases. The question is, so what? For example, you may have evidence that staff using generative AI can cut the duration of a task from three days to 45 minutes. But if you're talking about something that's part of an eight-month process and one step got from three days to 45 minutes, the organization really isn't going to see a difference.

Someone has to be thinking about the value question upfront as part of vetting these goals: Is this idea going to matter on any type of scale? Or is it just ok that people are trying something new?

– Pratap Khedkar

Unless the idea ladders to some important functional objective in the company, then all you really know is that somebody somewhere saved some time.

So, I think just having the discipline to think through KPIs that link back to questions of value and feasibility is important. We encourage leaders to keep asking, what is the impact for the organization, what's the ultimate goal behind this? And of course, the more advanced discussions on this are about tracking leading indicators, not just lagging ones.

AS: What do you say to those who feel we're at the peak of inflated expectations for generative AI?

I think all technology goes through this. It's easy to overestimate the impact for the short term but underestimate the impact for the long term. And I think generative AI is no different. Yes, the hype is strong now, and I think we'll see some false starts, some disappointments over the next 18 months. I'm fully expecting that, but that is no reason to pause or stop or slow down. I would say we absolutely need to push on this. This is going to be big.



Take action:

Assessing the progress of generative AI adoption in your organization

By Arun Shastri

Generative AI initiatives aim to transform how organizations operate, innovate and compete. How do you track your organization's progress toward this aim?



Awareness

What is the level of awareness within the organization on the opportunities and challenges of applying AI to augment and automate capabilities? Is the organization informed and educated about the latest developments and best practices in generative AI?

Some indicators of awareness include:

- A clear definition and a shared understanding of what generative AI means and what it entails
- A dedicated team that monitors and researches generative AI trends and innovations
- A proactive and responsible approach to address the ethical, social and legal implications of generative AI



Mandate

Is there a clear mandate from senior leadership to identify and pursue generative AI projects?

Some indicators of an organizational mandate include:

- A well-defined and well-articulated generative AI vision and strategy that aligns with the organization's overall goals and values
- A senior leadership team that champions and sponsors generative AI initiatives and sets the tone and expectations for the organization
- A dedicated budget and a resource allocation plan that supports generative AI projects and ensures their sustainability
- Transparent governance and a decision-making framework that guides and oversees generative AI initiatives and ensures their alignment and accountability



Use cases

Has there been progress in identifying the use cases being considered or implemented across different functions and domains?

Some indicators of good progress on use cases include:

- A systematic and collaborative process to identify and prioritize generative AI use cases aligned with strategic objectives and customer needs

- A diverse and balanced portfolio of generative AI use cases that cover different functions and domains, such as marketing, sales, operations, finance and human resources
- A clear and consistent methodology to define and scope generative AI use cases, including the problem statement, the solution approach, the data requirements and success metrics
- A robust and agile process to implement and test generative AI use cases, including data collection, model development, validation and deployment



Capabilities

Core capabilities include skills, tools and processes enabling the organization to design, build and deploy generative AI solutions, assets which can be widely leveraged and partnerships that enhance the organization's readiness.

Some indicators of capabilities include:

- A sufficient and qualified talent pool that possesses the necessary generative AI skills and expertise
- A reliable and scalable infrastructure that provides the necessary generative AI tools and resources
- A mature and rational approach to making build versus buy decisions for generative AI solutions based on factors related to cost, quality, speed and differentiation
- A strong and diverse network of generative AI partners and collaborators that complement and supplement internal capabilities, such as vendors, consultants and LLM providers



Adoption

Adoption is the degree to which the organization uses and benefits from generative AI solutions in its daily operations and activities.

Some indicators of adoption include:

- A clear and compelling value proposition and a business case for generative AI solutions that demonstrate their benefits and advantages over existing alternatives
- Transition and integration processes for generative AI solutions that ensure their compatibility and interoperability with existing systems and workflows

- A customized training and support program to ensure usability and accessibility for end users and stakeholders
- A constructive feedback and improvement loop for generative AI solutions that ensure their quality and reliability for end users and stakeholders



Impact

Impact is the degree to which an organization achieves its desired outcomes and goals with generative AI solutions. Impact is also the extent to which the organization creates positive change and value with generative AI solutions.

Some indicators of impact are:

- A significant and consistent improvement in key performance indicators and metrics with generative AI solutions, such as productivity, quality, efficiency, profitability and customer satisfaction
- Visionary and futuristic aspirations for generative AI solutions relating to new products, markets, business models and customer experiences

Generative AI initiatives are not one-off projects. They are long-term and continuous journeys that require a holistic and systematic assessment of both progress and challenges.

About the authors



Pratap Khedkar is a recognized healthcare industry expert and the CEO of ZS. He has advised numerous leading companies in the pharmaceutical and healthcare industries on a wide range of sales and marketing issues, including market access and managed care, using AI for multichannel marketing, marketing mix, sales force strategy and incentive compensation. More recently, his work has focused on developing effective strategies and analytics for changing customers in the new healthcare ecosystem.



Mahmood Majeed helps organizations drive increased growth, improve collaboration, innovate new business models and deliver value from investments in data, digital transformation and AI. He is a managing principal and leader of ZS's global digital and technology services area, where he leads the strategy formulation and execution, growth, go-to-market teams and partnerships. He's also responsible for ZS's technology innovation investment to develop, disrupt and deploy cutting-edge technology solutions and services that are well adopted by the industry.



Arun Shastri is a global leader in ZS's AI practice and has led classical and generative AI implementations throughout his career. His vision guides the development of AI-powered products that deliver value to B2B and B2C clients across industries. He has helped companies build lasting competitive advantages at some of the world's leading businesses, operating in the high-tech, healthcare, pharmaceuticals, financial services and travel and transportation spaces.



Asheesh Shukla manages the real-world data and patient insight practice at ZS with a focus on patient-led transformation and evangelizing the use of patient analytics across the healthcare value chain. He also leads ZS's technology advisory services for pharma CIOs. Asheesh delivers changes in productivity and effectiveness while growing his clients' capabilities via newer technologies. This includes capability-building initiatives, including digital-only brand launches, automation and AI-enabled process change, organizational design initiatives and data management strategies.

Contact us

We're here to help you prepare for what's next with AI. [Get in touch](#) to see how we can help.



About ZS

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