



# DATA TRENDS 2025 HEALTHCARE AND LIFE SCIENCES

Insights on how AI is revolutionizing data use and how Snowflake is leading the AI era.





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# FROM CONCEPT TO REALITY: AI IN ACTION

If last year was a vortex of AI excitement and healthy hesitation, 2025 is poised to be a year of meaningful and thoughtful steps toward greater AI and gen AI implementation across the healthcare and life sciences ecosystem. In 2024, life sciences organizations [continued to lead](#) the healthcare industry in AI adoption, moving beyond using AI to accelerate vaccine development, for example, in the case of [COVID-19](#), to using AI to generate protein models by analyzing valuable and sensitive multimodal data (genomic, clinical and imagery data) — accelerating time to development of new therapeutics.

The healthcare industry also employed AI to address its most immediate needs, demonstrating its clear return on investment. For example, Snowflake customer [IntelyCare](#) adopted AI to [speed up and improve job matching](#) to help alleviate the ongoing [staffing challenges](#) such as understaffing and burnout. The result has been a 30% reduction in lost job posts, decreasing the number of posts lost [down to zero](#).



## AI catapulted data interoperability into the spotlight

The success of these leading organizations hinged on their ability to break down data silos and modernize their data foundation, paving the way for widespread data interoperability or seamless data sharing across systems and departments. However, most organizations today still struggle to unlock valuable data within their organization, much less share and collaborate on it. A whopping 81% of IT leaders recently acknowledged “data silos and systems fragility are holding their companies back.” Data interoperability has shifted from a nice-to-have to a necessity in our quickly evolving AI-driven ecosystem.

**“2024 was the year of AI conversations. This is the year of widespread AI implementation across the industry. The success of healthcare and life sciences organizations’ AI and gen AI execution will depend on how confident they are in their data foundation and the interoperability with source systems.”**

**—JESSE CUGLIOTTA,**

Global Industry GTM Lead,  
Healthcare & Life Sciences, Snowflake

As more organizations prioritize data interoperability, they will be able to deliver AI solutions more efficiently and effectively, realizing widespread and much-needed optimizations — from faster claims approval processes to accelerated drug discovery. This will allow them to save critically needed time and money.

“To harness the full potential of AI, healthcare and life sciences organizations will need to reinvent how they collaborate on data across their organization. Essential to their strategy will not only be interoperability but leveraging purpose-built services and solutions.” —Rod Tarrago, MD and CMIO, Health Data and AI, Academic Medical Centers at Amazon Web Services.

In this report, we’ll look at the key trends shaping the industry and explore the business-critical use cases the AI Data Cloud for Healthcare & Life Sciences addresses for the industry. We’ll also share the latest developments in the AI Data Cloud and our take on what’s in store for 2025.

## SEE HOW LEADING ORGANIZATIONS USE GEN AI ON SNOWFLAKE



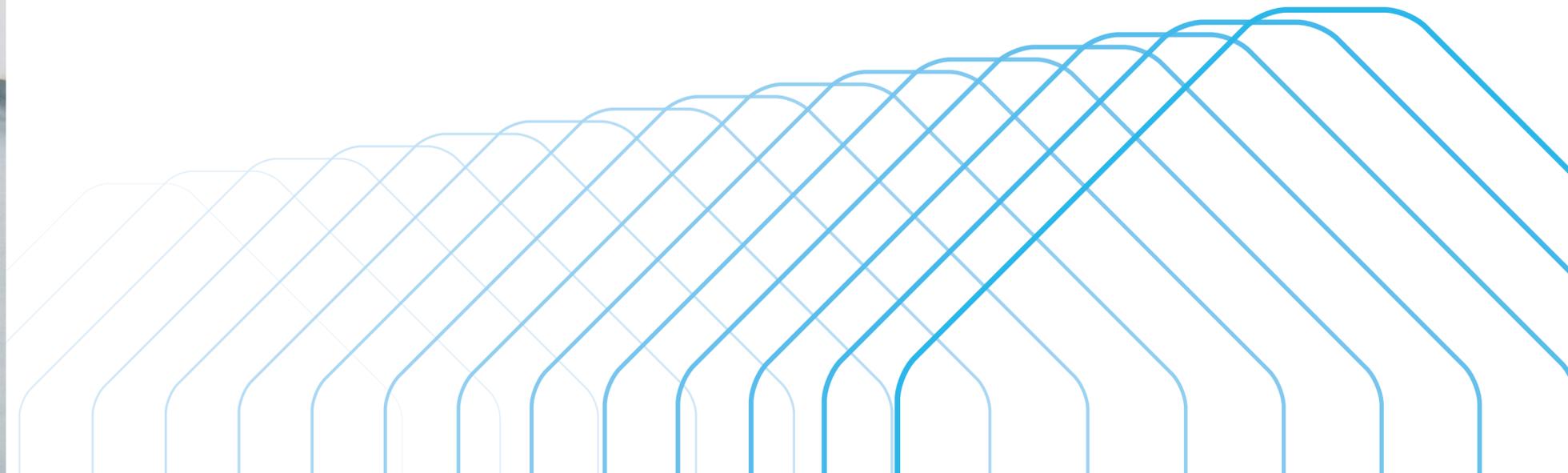
Learn how leaders like Bayer and others use gen AI to better serve customers, improve productivity and increase revenue.

[Download now.](#)



# TOP 3 DATA TRENDS FOR HEALTHCARE AND LIFE SCIENCES IN 2025

Healthcare and life sciences organizations aren't just increasingly embracing AI, they're also using more types of data and prioritizing data sharing across their organization. Below, we explore three trends that show how data modernization is having a profound impact across the industry, influencing everything from accelerating drug development to speeding claims processes.





## **TREND 1:** **AI “BABY STEPS” TO CONFIDENT STRIDE BY UNLOCKING UNSTRUCTURED DATA**

Leading healthcare and life sciences organizations took the leap into gen AI last year, infusing their organizations with data-driven insights, crucial efficiencies and competitive advantages. Essential to their success was unlocking sensitive structured data, such as spreadsheets or databases, making it available for secure AI applications. In 2025, the next wave of data insights will be driven by valuable unstructured data and AI, which will transform the landscape in innumerable ways and advance AI technologies such as deep learning and multimodal AI.

### **Life sciences continues to lead**

Already ahead of the healthcare industry in AI adoption, life sciences organizations will break down even more data silos to expand their AI use cases to leverage unstructured data (genomic, clinical trial and experimental data), enabling the use of multimodal AI or a type of AI that can understand and process different types of data at the same time. Key use cases for multimodal gen AI using unstructured data in the industry will be accelerating drug discovery and development and advancing precision medicine.

### **Healthcare organizations tackle pressing challenges**

Building on their AI wins in 2024, such as [increasing ER patient capacity](#), more healthcare organizations will carefully start to break down data silos of sensitive unstructured data. Unstructured data like emails, invoices and EHRs will be integrated into existing and new data workflows, allowing organizations to perform advanced AI use cases. Important advanced AI use cases the industry will prioritize in 2025 will be automating prior authorizations and smart scheduling to predict appointment demand and optimize hospital resources.

## **CUSTOMER SUCCESS STORY: ER DOCTORS TREAT 15% MORE PATIENTS WITH AI-AUTOMATED NOTETAKING**

Alberta is Canada’s third-most-populous province, with 4.5 million residents and more than 100 hospitals and 11,000 practicing physicians. Alberta Health Services’ ER gets more than 5,000 visits daily, and the volume was putting a strain on their doctors. The integrated health system turned to [Snowflake Cortex AI](#) to develop and run an app that records patient interactions, transcribes them, and summarizes them — directly in their Snowflake account. The app is currently in the proof-of-concept phase and is being used by a handful of emergency department physicians. So far, the reported results are a 10–15% increase in the number of patients physicians can see per hour.

[Learn more.](#)



## **TREND 2:** **DATA INTEROPERABILITY THAT ‘JUST WORKS’**

AI has forever changed the industry’s perspective on interoperability. In a matter of months, it has transformed interoperability from a nice-to-have to a necessity as industry leaders began to implement their first AI solutions. Why? Fresh, high-quality data (both structured and unstructured) is a must for successful AI. Using data that is out of date or stuck in a data silo when trying to implement it is a costly, losing battle.

**In a matter of months, it has transformed interoperability from a nice-to-have to a necessity as industry leaders began to implement their first AI solutions.**

But not all data interoperability is created equal. True interoperability is the ability to easily and securely share data between systems and departments. Achieving this requires a modern AI data cloud platform that seamlessly brings data together across the organization securely and governed in compliance with industry regulations and principles such as HIPAA, TEFCa and FAIR. Such platforms allow organizations to confidently achieve interoperability that “just works” without complicated workarounds and processes.

In 2025, data interoperability in the industry will power AI and essential use cases, such as patient 360, optimizing workflows, delivering value-based care and improving supply chain management. With data unlocked and able to move freely and securely within the organization, more companies will be able to achieve these important outcomes more effectively, delivering better results for patients and the business.



## TREND 3: ALL EYES ON DATA AND AI PRIVACY AND SECURITY

Last year was a breakthrough and record-breaking year for the industry. The arrival of AI brought exciting, novel AI use cases and policy changes while the healthcare industry experienced record-high data breaches and cyberattacks.

The latter was marked by the largest data breach in U.S. history, brought on by a cyberattack of UnitedHealth's tech unit, Change Healthcare, [exposing 100 million individuals' records](#). This was just one of the 725 reported incidents in the U.S. involving more than 500 or more records, making 2024 the third consecutive year of over 700 data security incidents. These events may have exposed as many as 172 million individuals – [more than half the population](#) of the United States.

### New and evolving regulations

In response to the breaches, the U.S. Department of Health and Human Services has proposed [new rules to strengthen HIPAA security rules](#), including requiring the use of multi-factor authentication and comprehensive encryption protocols. States will continue to respond to the data security crisis as well. New York State already has taken proactive steps, passing the [Health Information Privacy Act](#) to establish strict requirements for handling health data. The legislation is similar to [Washington's My Health My Data Act](#) and [Nevada's SB 370](#).

The shape of AI regulations will continue to evolve and unfold. While the U.S. federal government's current approach to AI policy has been hands-off, many states have passed their own regulations. The European Union passed the AI Act in March 2024, which imposes strict rules for high-risk AI, for example AI solutions that impact critical infrastructure and law enforcement, as well as transparency obligations about how an organization's AI works.

### AI experts drive important conversations

More AI experts from around the globe will also weigh in. In January 2025, the [International AI Safety Report](#) was published by 100 AI experts from 33 countries and intergovernmental organizations. The report highlights the risks of advanced AI systems, including the erosion of privacy and the possible misuse by bad actors, emphasizing the need for robust safeguards and comprehensive regulatory frameworks. AI leaders across the globe will continue these much-needed conversations about AI, privacy and security.





# THE STATE OF THE AI DATA CLOUD FOR HEALTHCARE & LIFE SCIENCES

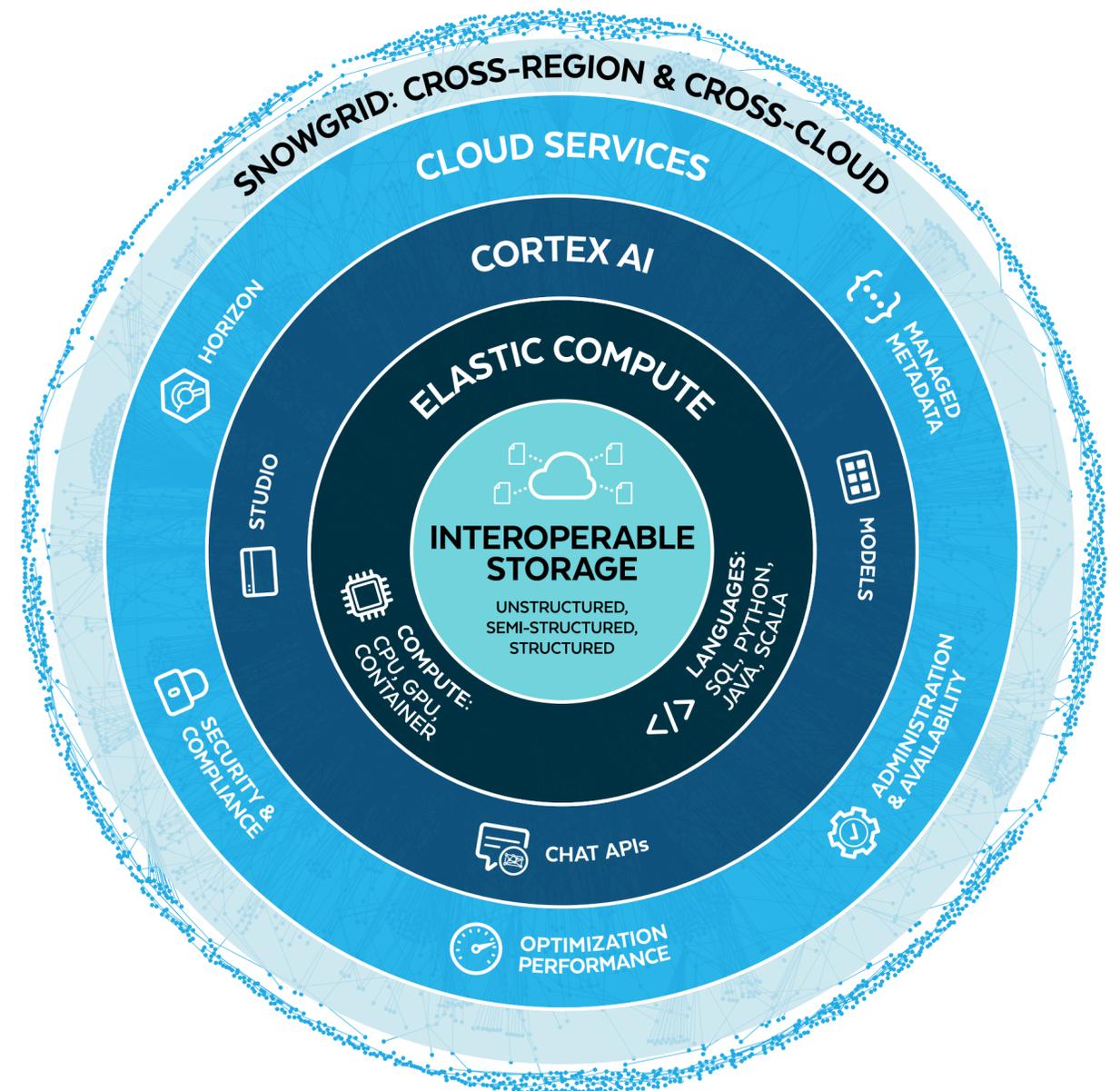
## Easy. Connected. Trusted.

Secure data sharing and collaboration have never been more essential for healthcare and life sciences organizations. It's the key to powering myriad use cases, from AI and supply chain management to improving patient outcomes and enhancing operational efficiency.

Leading healthcare and life sciences organizations are modernizing their data foundation, breaking down data silos, and powering interoperability with the [AI Data Cloud for Healthcare & Life Sciences Data Cloud](#). A unified, fully managed AI data cloud platform, Snowflake allows organizations to use data securely, effectively and easily, from everything from better decision-making to cost efficiency.

### How Snowflake does it:

- **Easy:** The Snowflake AI Data Cloud is fully managed, always available and fully integrated across data types, clouds and personas.
- **Connected:** Snowflake integrates with open standards, marketplaces and tools to seamlessly connect and share data, models and AI applications across clouds.
- **Trusted:** A managed, interoperable platform with a single engine, Snowflake enables powerful governance, security and business continuity features.





## CORTEX AI OVERVIEW

Built for the enterprise, Cortex AI allows organizations to build AI, gen AI and LLM applications easily and securely, enabling them to have fast and productive conversations with their data to deliver data-driven insights, business-critical solutions and innovations faster.

Cortex powers business intelligence for key use cases, including:

- AI-augmented business intelligence
- Text processing and summarization
- Document chatbots and more

## CORTEX CAPABILITIES

### Analytics in Seconds

- Use AI and LLMs in everyday analytics within seconds.
- No AI expertise or integrations needed.

### AI Solutions in Minutes

- Build and deploy AI and LLM apps in as little as minutes.
- Deliver quick apps in minutes or go fully custom in days.

### Robust Security and Governance

- Secure and govern data and models with comprehensive features.
- Robust foundation to help you safeguard your IP from unintended use with role-based access definitions on data, models and apps in Snowflake.



## Snowflake advantages for the industry

In a rapidly evolving business and regulatory environment, the Snowflake AI Data Cloud offers several key advantages:

- **Achieve a secure, 360-degree view of organizational data:** By bringing together structured, unstructured and multimodal data or data from multiple sources, Snowflake empowers healthcare and life sciences organizations across the ecosystem to aggregate their siloed data, run analytics on top of their data, and deliver downstream efficiencies and improved patient and business outcomes. It seamlessly simplifies access to data and enables secure data collaboration – alleviating operational and IT burdens to increase agility and cost savings. Organizations can also securely augment their first-party data with robust datasets from [Snowflake Marketplace](#), delivering comprehensive views of patients, markets, population health and more.
- **Power secure AI:** With the AI Data Cloud, companies can deploy native AI capabilities and out-of-the-box solutions with [Cortex AI](#) to reduce costs, improve patient outcomes, expedite clinical processes, and improve decision-making and competitiveness simply by asking questions using natural language. Organizations can customize their gen AI and LLM solutions in hours, easily, quickly and securely use gen AI and LLMs, and keep them securely in-house to preserve data governance and privacy controls and protect their data and IP.
- **Build applications on top of data to power insights and efficiencies:** Data-driven applications democratize data insights and provide a variety of benefits for healthcare and life sciences organizations. From automating administrative tasks to clinical note-taking and improving cohort selection to easily collaborating with internal and external stakeholders, [Snowflake Native Apps](#) and bespoke apps provide organizations unparalleled efficiency and security. Organizations also can accelerate the development of interactive apps that leverage AI with [Streamlit](#), further democratizing data insights across the organization even for nontechnical colleagues.



## USING DATA SHARING, COLLABORATION AND STRONG PARTNERSHIPS TO ADDRESS CRITICAL HEALTHCARE AND LIFE SCIENCES BUSINESS CHALLENGES

The Snowflake AI Data Cloud modernizes how organizations access and leverage data via secure data sharing and data collaboration, supported by a strong partner network. For example, [AWS](#) and Snowflake enable a unified data and AI strategy, helping organizations ingest, transform and share data at scale and powering critical workloads across analytics, data engineering, AI and app development. With fully managed infrastructure, businesses gain simplicity, scalability and governance while leveraging integrated AI services and real-time collaboration capabilities. Organizations can do more with their data and reach AI-driven insights faster with Snowflake and AWS.

With [Snowflake Marketplace](#), healthcare and life sciences companies can access live, ready-to-use data, services, AI products and Snowflake Native Apps for use cases related to patient experience, commercialization, precision medicine, real-world evidence, optimizing supply chain management and beyond.



# A DECISIVE AI FUTURE

The AI future is decidedly here. In 2025, its use will grow exponentially as more healthcare and life sciences organizations successfully employ it, motivating them to break down more data silos to unlock its power across their organizations. The result will be new, novel AI solutions that improve and accelerate decision-making, speed planning and execution and more, spanning a variety of clinical and business use cases.

As AI and gen AI become an integral part of more organizations' tech stack, they will naturally prioritize unifying their data management and governance. Data interoperability will also stop being overwhelming. It will just be a natural, necessary part of the new AI landscape.

Last year at Snowflake, we saw remarkable innovation across the healthcare and life sciences landscape – from payors and providers to pharmaceutical companies and healthtechs – and we can't wait to see what tech breakthroughs and advancements are in the store this year.

Learn how the [AI Data Cloud for Healthcare & Life Sciences](#) can help position your organization for a strong future.



## WANT MORE GREAT INSIGHTS?

Watch our [2025 AI + Data Predictions in Healthcare and Life Sciences on-demand webinar](#)



Snowflake makes enterprise AI easy, efficient and trusted. Thousands of companies around the globe, including hundreds of the world's largest, use Snowflake's AI Data Cloud to share data, build applications, and power their business with AI. The era of enterprise AI is here.

Learn more at [snowflake.com](https://snowflake.com)

(NYSE: SNOW)



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