



eBook

# Takeda Brings Clinical Data to Life for AI

Where data  
& AI come to **LIFE**™



# Contents

Introduction	3
Injecting AI Efficiency into Drug Development	4
Developing a Modern Cloud Data Backbone	6
A Data Hub to Spur R&D Innovation	8
Infusing Generative AI with Healthy Data	9
Saving Millions in Costs, Lifting Billions of Lives	10
Inside the Solution	11
About Us	12

# Introduction

**As a business leader, you understand the crucial connection between cloud modernization, data management and successful artificial intelligence (AI) initiatives. Modern cloud infrastructure supports advanced AI and machine learning (ML) applications, enhancing data processing and strengthening security.**

Moving away from traditional on-premises IT infrastructure helps reduce costs, boost innovation and improve market responsiveness. Additionally, comprehensive data management and integration pave the way for new AI innovations, facilitate smarter decisions and empower teams with enhanced data access.

The impact of this is being felt across industries as AI becomes increasingly more widespread. In this eBook, you'll learn why Takeda stands out as a prime example of an organization embracing cloud modernization to create a modern data hub, driving operational efficiency and enabling the organization to introduce new AI use cases.



**96% of data moved  
to the cloud**



**40% higher  
data productivity**



**Millions saved  
in IT overhead**

Takeda is focused on the discovery and development of life-transforming treatments in core therapeutic and business areas, including gastroenterology and inflammation, rare diseases, plasma-derived therapies, oncology, neuroscience and vaccines. To speed up clinical trials and fuel new AI use cases, Takeda modernized its cloud data backbone on Informatica and AWS. Now, a research and development (R&D) data hub streamlines trusted information-sharing and unified integration saves millions in IT ownership costs.

Read their story.

[informatica.com](https://www.informatica.com)



## Takeda Modernizes Data to the Cloud with Informatica

Hear from leaders at Takeda about modernizing their cloud data foundation on Informatica and AWS for trusted information-sharing and unified cloud data integration.



# Injecting AI Efficiency into Drug Development

In the high-stakes world of life sciences innovation, the need for speed is constant — and data can make all the difference. Whether it's identifying the right compounds for testing or using predictive models to support more efficient trials, the world's leading biopharmaceutical companies are tapping into the power of data and AI to speed up drug development.

Just ask Takeda, the Japan-based pioneer in life-transforming treatments dating back to 1781. "It's a really exciting time in pharma, with AI and Generative AI coming onto the healthcare scene," says Chief Data Officer Barbara Latulippe. "We all know clinical trials have a long development time. The more we can leverage data and technology, the faster we can get new therapies to our patients and drive positive change in their lives."

Takeda is focused on the discovery and development of life-transforming treatments in core therapeutic and business areas, including gastroenterology and inflammation, rare diseases, plasma-derived therapies, oncology, neuroscience and vaccines. Behind every breakthrough therapy is a complex web of actions, including R&D discovery, testing design, trial recruitment, data validation and regulatory approvals — all of which generate vast amounts of data that must be managed effectively.

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**"As a biopharmaceutical company, we're literally in the business of bringing data to life. To get therapies to our patients as quickly as possible, that means a focus on access, governance, quality and trust so our data is AI-ready."**

Barbara Latulippe, Chief Data Officer

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# Injecting AI Efficiency into Drug Development (continued)

Latulippe's prescription? A strong dose of data literacy, modernization and democratization. The goal was to fuel both a technical and cultural shift in how teams use data, supporting faster clinical innovation today while laying a future-proof foundation for responsible, scalable AI.

"Every CDO needs to drive value with data, whether that's simplification or acceleration in the ability to onboard data assets," she says of her C-level mandate, spanning data, digital and technology.

"As a biopharmaceutical company, we're literally in the business of bringing data to life. To get therapies to our patients as quickly as possible, that means a focus on access, governance, quality and trust so our data is AI-ready."

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**"IDMC helps us bring all the data management capabilities together in the best data architecture you can imagine. Rather than juggling multiple data products and siloed tasks, IDMC gives you a single plane to visualize all the work across any cloud or platform, from data sourcing and quality to consumption."**

Sudeep Regmi, Head of Data Management and Innovation

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# Developing a Modern Cloud Data Backbone

The first step in realizing this data-driven vision was modernization. Decades of organic and inorganic growth at Takeda had gradually created a large and fragmented data estate. Growing data volumes and myriad point solutions made it difficult to efficiently turn vast R&D datasets into breakthrough insights. There were also the immense IT overhead costs of a dozen on-premises data centers.

"With data volumes growing 20% each year, we needed the strategy of a cloud-first, AI-driven infrastructure as a service that can be optimized across the company," says Latulippe of her new approach. "Modernizing our infrastructure in the cloud allows us to leverage greater performance and scalability. We can simplify our tech stack and improve the user experience while driving cost efficiencies."

Takeda's new data architecture would need to combine data lakes, warehouses and integration into a centralized, cloud-native layer.



## Developing a Modern Cloud Data Backbone (continued)

A long-time Informatica customer, Takeda doubled down on the partnership and chose to modernize to the **Intelligent Data Management Cloud™** (IDMC), powered by the AI and machine learning engine called CLAIRE®, and designed to assist IDMC users across the available data management services. IDMC made it easy to ingest data into new data lakes hosted on Amazon S3 and orchestrate data management across storage layers.

Using Informatica **PowerCenter Cloud Edition**, the team shifted 11,000 job mappings to IDMC, moving 96% of its data to the cloud within just eighteen months and simplifying its on-premises footprint to three data centers. Informatica API-driven, CLAIRE®-powered **cloud data integration** not only speeds up data flows between different business platforms but also ensures downstream cloud data warehouses and data lakes – as well as apps like Databricks and Salesforce – are updated with real-time data.

IDMC's robust data management capabilities, which include over 250 intelligent cloud services, have solidified Informatica's role in the data stack, enabling Takeda to rationalize its data management vendors from over nine solutions to just two strategic partners.

"Informatica and AWS form our enterprise data backbone," says Sudeep Regmi, Head of Data Management and Innovation. "Both platforms complement each other, working together perfectly from data ingestion to moving data across different storage layers, helping us make high-quality data available to the business with less manual work."

The new architecture has been a game-changer for Takeda's internal developers and IT teams. "IDMC helps us bring all the data management capabilities together in the best data architecture you can imagine," says Regmi. "Rather than juggling multiple data products and siloed tasks, IDMC gives you a single plane to visualize all the work across any cloud or platform, from data sourcing and quality to consumption."



# A Data Hub to Spur R&D Innovation

**In addition to back-end efficiency, bolstering trust and access to data is also crucial at Takeda. The company works with numerous healthcare providers (HCPs) and organizations (HCOs), each with their own IT systems and processes.**

To build a single view of key entities across business functions for everyone – from scientists and doctors to patients – Takeda consolidated six legacy master data management (MDM) instances into one integrated multidomain environment on IDMC. Informatica's CLAIRE®-powered platform helps improve match configurations across HCP and HCO partners, creating a "golden" version of master data from activities to payment. **Cloud Data Governance** and **Catalog**, including CLAIRE®- powered scanners for metadata and data quality, drive up to 40% productivity gains for Takeda's data engineers by automating critical data management processes. Now, a central **cloud data marketplace** empowers business users with secure, self-service access to reliable data.

A major milestone in Takeda's modernization journey was the successful migration of its R&D division to the cloud in Q4 FY 2023. The new clinical trials "data hub" makes it easy for global research teams to access and share vetted, critical information like chemical compounds, dosage details, side effects and trial results.

"R&D was the first group to take full advantage of our integrated IDMC solution and it was a huge success across our company," explains Latulippe. "Having a data marketplace truly enables our business partners to consume data as a product at scale, making it easy for them to search, discover and understand the quality of available datasets."

This centralized repository, powered by IDMC, streamlines collaboration across internal teams as well as hundreds of external data partners, enabling faster drug discovery and development.





# Infusing Generative AI with Healthy Data

With a modern data foundation in place, Takeda turned its attention to preparing data for AI consumption and business adoption. Latulippe's team worked closely with an enterprise AI steering committee to identify over 120 high-impact use cases mapped to critical data domains like clinical development, R&D and manufacturing.

But the team also had to get its fundamentals right. "To be really successful in AI and Generative AI ambitions, you need to focus on what I call 'happy data,'" explains Regmi. "This involves data integration, observability, quality, MDM, governance, ethics and privacy as a baseline. It stitches these data management capabilities together to make data 'happy,' and in turn, easily trusted and consumable by the business."

To accelerate the development of "happy" data pipelines for AI, Takeda leverages Informatica CLAIRE® as an AI copilot. Its metadata intelligence fuels faster data discovery and classification, while the new **CLAIRE GPT**, a natural language-based experience revolutionizes data management and vastly improves productivity across data teams.



# Saving Millions in Costs, Lifting Billions of Lives

**Takeda's cloud-first, AI-led data strategy is already generating transformative business results. Each month, Informatica's scalable infrastructure efficiently runs over 450,000 data integration jobs and processes more than 30 billion records. By simplifying its data and AI architecture in the cloud, Takeda saves millions in IT overhead and total cost of ownership (TCO) – savings that can be reinvested into life-saving R&D and drug discovery.**

"We've seen a lot of benefits from IDMC's cost optimization, including bottom-line savings and indirect efficiencies of up to 40% with our cloud migration and unified integration hub," says Latulippe.

With a flexible cloud data architecture, Takeda can easily scale resources up or down on-demand. Informatica's flexible, all-in-one **IPU pricing model** allows teams to seamlessly move into new products and use cases without any need to re-engage procurement while paying only for utilized services.

Now, data engineers and analysts can accelerate the delivery of new applications and services, enabling faster responses to evolving market trends, merger and acquisition (M&A) activity and geographic expansion. Most importantly, with trusted data at their fingertips, Takeda's researchers and scientists can facilitate faster, more efficient clinical trials and precise therapy development, getting safe, innovative treatments to market faster than ever.

"Most important to me is the business experience, and I think that's key to the power of IDMC," adds Latulippe. "It keeps all data management

activities under one platform and offers a truly seamless experience. Then, you layer on data lineage and data quality, and teams have everything they need to ensure data is explainable, discoverable and used responsibly for any AI use case."

As data leaders look ahead to an AI-enabled future, Regmi has guidance for others embarking on similar journeys. "Generative AI is not a technology solution; it must be a business solution," he says. "Working with the business, bringing everyone together to co-develop these solutions is very important. Otherwise, you're stuck with siloed solutions that might not work, scale or comply with the latest ethics policies."

Strategic partnerships with data leaders like Informatica and AWS will continue to play a central role for Takeda. "Informatica has been an incredibly strong partner on our journey to the cloud," shares Latulippe. "Professional services stepped in and really acted as one team to co-design a plan with us. The account management team has been great at helping us really refine the strategy and be more thought-provoking. And the product team has been very engaged in listening to us about future product enhancements."

Next on the roadmap is expanding MDM to more domains across commercial, product and supply chain functions, helping ensure trusted data entities and minimize potential disruptions. The team will also continue to support responsible AI innovation, working closely with privacy and ethics groups to turn data into a major asset for Takeda, one that helps advance the future of medicine and breakthrough therapies.

# Inside the Solution

- **Intelligent Data Management Cloud**
- **PowerCenter Cloud Modernization**
- **Cloud Data Integration**
- **Cloud Data Governance and Catalog**
- **Cloud Data Marketplace**
- **Claire GPT**
- **Informatica for Amazon Web Services**



# About Us

Informatica (NYSE: INFA), a leader in enterprise AI-powered cloud data management, brings data and AI to life by empowering businesses to realize the transformative power of their most critical assets. We have created a new category of software, the Informatica Intelligent Data Management Cloud™ (IDMC), powered by AI and an end-to-end data management platform that connects, manages and unifies data across virtually any multi-cloud, hybrid system, democratizing data and enabling enterprises to modernize their business strategies. Customers in approximately 100 countries and more than 80 of the Fortune 100 rely on Informatica to drive data-led digital transformation.

**Informatica. Where data and AI come to life.™**

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