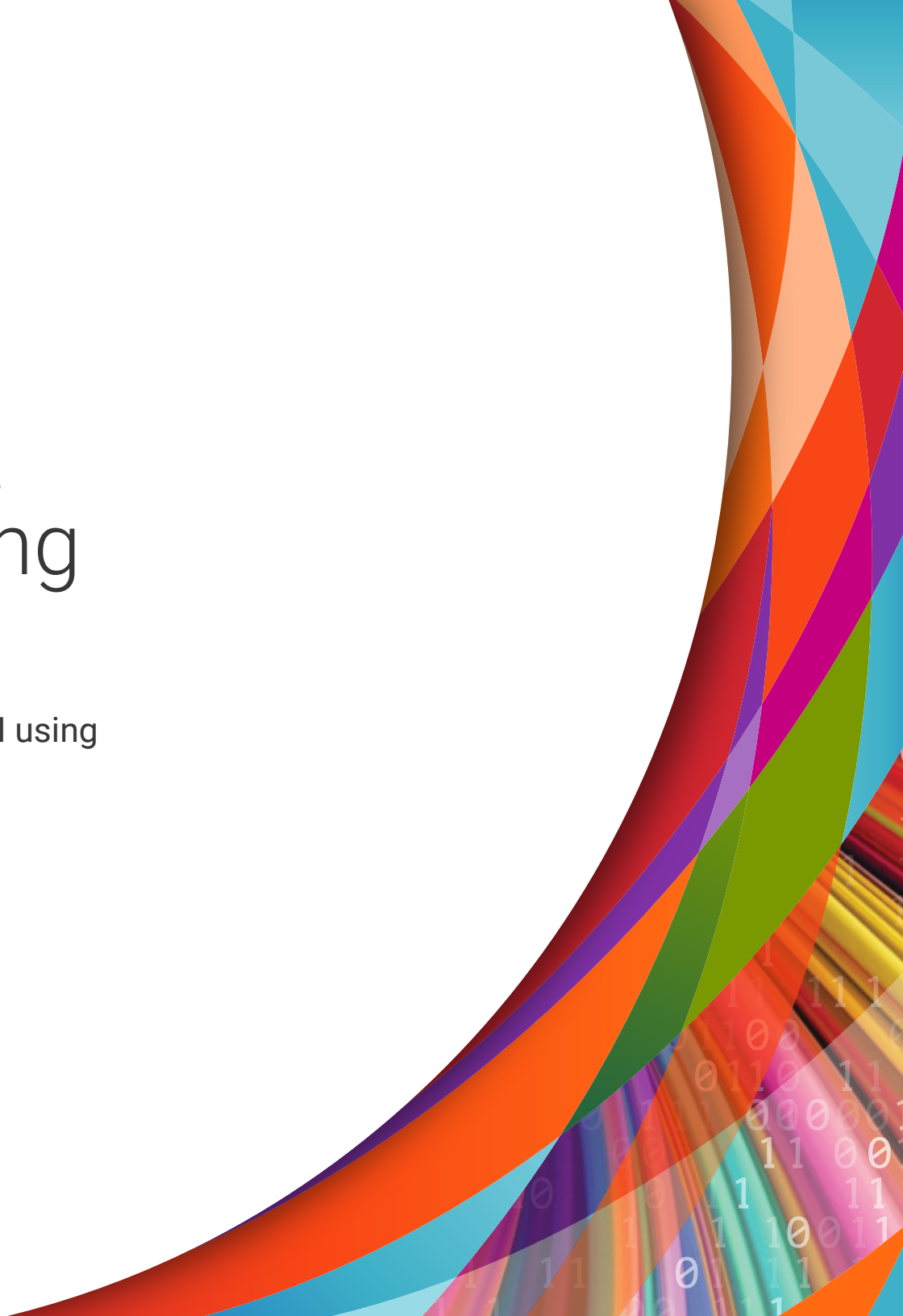## Informatica

eBook

CDO and CIO Best Practices for Driving AI Readiness

How data leaders successfully implement AI using an AI-powered data management approach

Where data & AI come to LIFE™

Contents

Introduction

Gain GenAI Insights from Experts

Data leaders know that AI technologies such as generative AI (GenAI) can boost productivity and efficiency, foster improved customer engagement through personalized interactions, and drive innovation and top-line revenue growth. The benefits of GenAI are clear and compelling.

Yet without the right data and appropriate data management strategies, it can be difficult to deliver relevant, responsible and robust AI. GenAI models require vast amounts of high-quality data to function effectively and produce reliable results. Many organizations struggle with problems such as data silos, inconsistent data and incomplete datasets — which can lead to biased or inaccurate AI outputs. Another challenge is ensuring data privacy and security, especially considering today's stringent regulations and potential risk exposure.

What's more, integrating and managing diverse data types from multiple sources is technically complex and resource intensive. For many years, enterprises relied primarily on well-defined, predictable, structured data from internal systems such as ERP or CRM to support their decision-making. Now unstructured data — from sources such as text files, videos, search engine queries, customer reviews, chatbots and social media — comprises up to 80% of enterprise data.[1] There's also been a

rise in the volume of semi-structured data, which does not have a fixed schema but uses tags and business metadata, as it streams from IoT-connected devices, sensors, mobile applications and email applications.

To deliver valuable outputs, GenAI needs domain-specific, diverse and trustworthy data. Meeting this need requires a modern data architecture that manages and governs multi-structured data, combining technology designed for unstructured data with traditional elements such as SQL data warehouses and ETL/ELT pipelines.

To help you achieve AI readiness, **this eBook provides best practices and insights shared by experienced data leaders in a recent roundtable hosted by Informatica.** It examines challenges in data management, governance and compliance issues, as well as AI adoption topics and strategies. This eBook also offers critical advice for investing in and moving forward with AI initiatives.

Companies are using GenAI but still having difficulties scaling them to production

65%
of respondents say their organizations are regularly using GenAI in at least one business function, up from one-third a year earlier[2]

67%
of CDOs have been unable to transition even half of their GenAI pilots to production[3]

1 https://technologyadvice.com/blog/information-technology/structured-vs-unstructured-data/

2 https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai

3 "CDO Insights 2025: Racing ahead on GenAI and data investments while navigating potential speed bumps," Wakefield, 2025.

Data management challenges

Take Control of Data Management

CDOs, CDAOs and CIOs require an AI-powered data management approach that helps deliver AI-ready data — scalably, at lower risk and with more predictable outcomes. For many enterprises, however, data management can become a key barrier to achieving AI readiness (see sidebar).

According to the most recent Informatica CDO Insights 2025 **survey,** "51% of CDOs anticipate needing 10 or more separate tools to support their 2025 data management priorities."[4]

What steps do experienced data leaders take to proactively address these data management challenges?

All Data Quality Matters

Establishing trust in your data is the first step in developing AI readiness. While many enterprises have developed solid data management practices for their structured data, they often lack the equivalent levels of governance and management for unstructured and semi-structured data.

How can companies apply the data quality lessons and best practices developed for structured data to unstructured and semi-structured data assets? The CDO of one professional services firm found that a culture shift was necessary, especially for business users.

"We experienced a fair amount of resistance from the business," said the CDO. "We knew that if there were dozens of versions of a slide deck and only one that was final, we needed to train our people to think differently about how they could mark, tag and classify that final version."

[4] **"CDO Insights 2025: Racing ahead on GenAI and data investments while navigating potential speed bumps,"** Wakefield, 2025.

Top 5 Data Management Challenges

The majority of enterprises struggle with the following aspects of data management:

- **Scaling AI-ready data** by managing massive volumes of structured and unstructured data across various sources, while also improving data availability

- **Ensuring AI-ready data completeness** by balancing quality, context, and consistency for effective AI training and output

- **Maintaining compliance of AI-ready data**, while also achieving accurate, context-aware responses, maintaining consistency and adhering to compliance standards

- **Democratizing AI-ready data** by organizing it to support easy, governed access and sharing and using AI tools to provide accurate, relevant information across teams

- **Efficiently integrating AI-ready data**, integrating AI tools with existing workflows and systems while maintaining data privacy and security

Data Management Challenges

Take Control of Data Management (continued)

The firm is now working to develop the right culture, processes and practices to help business users boost the quality of unstructured and semi-structured data. "We believe that's where there's an enormous amount of value we haven't tapped yet," she said.

Data Sources Should Be Connected

Fragmented IT systems can make it difficult to create a single version of the truth, compromising AI readiness. The CDO Insights 2025 survey reveals that 53% of CDOs fear using the wrong or incomplete data for outputs."[5] For its first GenAI project a year ago, one leading healthcare provider took steps to address this problem.

The company began to build a robust business metric layer, according to its chief data and analytics officer. This ontology layer is helping the company enable some innovative GenAI use cases, leading to powerful business insights and helping improve patient outcomes.

Sticky Data Integration and Quality Issues Require Ongoing Effort

Some data management challenges are still a work in progress. For example, one higher education institution has concerns about protecting its data even while scaling out its GenAI initiatives.

Security issues have slowed the organization's progress toward data readiness as data leaders consider the best way to proceed. "How do we build this tool at scale when there are certain pockets of information we want to protect?" asks the CDO.

70%

of top performers say they have experienced difficulties integrating data into AI models, ranging from issues with data quality, defining processes for data governance and having sufficient training data[6]

56%

of CDOs cite data reliability as a key barrier, or even the top barrier, to transitioning more GenAI pilots to production[7]

[5] **"CDO Insights 2025: Racing ahead on GenAI and data investments while navigating potential speed bumps,"** Wakefield, 2025.

[6] https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/charting-a-path-to-the-data-and-ai-driven-enterprise-of-2030

[7] **"CDO Insights 2025: Racing ahead on GenAI and data investments while navigating potential speed bumps,"** Wakefield, 2025.

Governance and Compliance

Stay Ahead of Changing Governance and Compliance Rules

With the growing adoption of GenAI technology, data leaders who want to support compliance and mitigate legal risks feel pressured to stay abreast of relevant laws and regulations, including AI compliance mandates, intellectual property rights and data protection rules.

As the size, complexity and distributed nature of data expands, it's clear that manual data governance and compliance practices related to GenAI are no longer sufficient to meet the legal and business needs of your organization. Robust data governance that ensures the availability and security of high-quality, reliable data throughout the enterprise is essential (see sidebar).

How are today's data leaders addressing governance and compliance for their GenAI initiatives?

93%

of CDOs feel the regulatory environment has held back AI efforts [8]

[8]IBID

Three Steps for Responsible AI Governance

To begin addressing the evolving challenges of AI governance and compliance, take the following steps:

- Review and understand the scope, implications and requirements for navigating the latest AI regulations with key stakeholders across the enterprise.

- Develop a detailed risk management framework that addresses the specific exposures associated with unreliable AI and data management practices or unknowns (e.g., user access rights).

- Establish and communicate clear data and AI policies regarding data usage, AI model deployment and regulatory compliance.

Governance and Compliance

Stay Ahead of Changing Governance and Compliance Rules (continued)

Security Must Inform Data Governance

Maturing information security practices taught organizations to deploy guardrails, classify data, create data boundaries and protect assets. But the nature of GenAI — which often assumes that all data should be loaded into the database and used to inform decision-making — changes the traditional approach to data protection.

Often, business users push for faster time to market without understanding the risk of this approach. The desire for speed and maximum data nearly erases the boundaries of data security, explained one data leader who works for a multinational finance company.

Some business users think that any internal data is fair game for a GenAI use case. "Information security lights up all the possible red alerts," said the executive. "It really shows how much organizations lack an AI strategy when it comes to classifying data and using [the data]."

Data Classification and Access Risks Offer Opportunities

One way to improve the success of GenAI applications is to prioritize information security, according to the CIO of a high-tech company. Recognizing the value of its data assets, the company began investing in data classification and access permission capabilities nearly a decade ago.

"When we started embedding AI solutions," said the CIO, "the data was already classified, and we had a robust permission mechanism for who can access which data and what granularity of data could be exposed. We took the infosec risk as an opportunity we could leverage."

Humans Are Always in the Loop

GenAI is designed to minimize the need for humans in the loop, yet you still must consider your people if you want the technology to be compliant and well-governed.

Governance and Compliance

Stay Ahead of Changing Governance and Compliance Rules (continued)

One CDAO in the life sciences field advised enterprises to point their models to the right data, according to the data access rights assigned to different users. The executive's company uses retrieval-augmented generation (RAG) to determine which data a model can access and how users can interact with it.

The CDAO also warns that not every use case is worth pursuing — even those that can be executed quickly. "We need to ensure that we identify high-impact use cases," he said. "The saying 'Build it and they will come' doesn't work with AI. You funnel in the opportunities that come to the top, and those are the ones you move forward with."
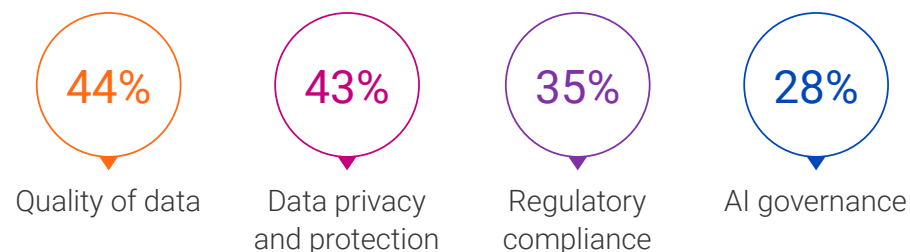
The executive noted that the more timely engineering and training the company offers, the more effectively users communicate with its large language models (LLMs). Training also emphasizes that employees are responsible for the outputs of GenAI-enabled applications, which enhances accountability.

Top Obstacles Preventing More GenAI Initiatives from Moving Forward[9]

44%	43%	35%	28%
Quality of data	Data privacy and protection	Regulatory compliance	AI governance

GenAI Is Popular, But Is It Compliant or Well-Governed?

91%
of respondents say they use GenAI for work[10]

BUT

75%
of respondents say they use AI without their boss's approval[11]

[9] **"CDO Insights 2025: Racing ahead on GenAI and data investments while navigating potential speed bumps,"** Wakefield, 2025.

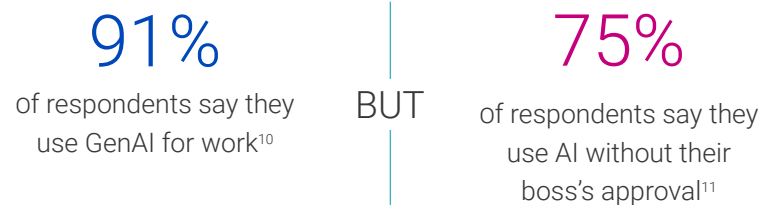[10] https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/gen-ais-next-inflection-point-from-employee-experimentation-to-organizational-transformation

[11] https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/a-data-leaders-technical-guide-to-scaling-gen-ai

AI Adoption and Strategy

Re-Evaluate Your AI Adoption Plans and Strategies

Deploying and gaining maximum value from GenAI technology requires technical expertise as well as deep planning and human management skills.

Only when data teams are confident in using AI technologies can they develop trusted AI models that generate reliable, responsible and predictable business outcomes. AI fluency helps organizations harness the full potential of AI technologies and drive innovation — empowering data professionals to effectively guide AI models, make informed decisions and drive business value.

To develop AI fluency, your team needs a detailed understanding of data quality, completeness, governance and privacy, which are key aspects of AI readiness. Building on this foundation of data literacy, AI fluency encompasses the ability to understand, analyze and interpret data in the context of AI technologies. It also helps analysts, architects, developers and executives develop expertise in manipulating and deploying AI tools — understanding how they can integrate AI solutions into routine tasks, troubleshoot technical problems, and optimize business processes through AI-driven insights.

Workers' Concerns Are Important

Addressing cultural shifts and the human response to change is equally critical to achieving AI readiness. With the current maturity of the GenAI market, most organizations deploy the technology to address two issues: to improve the customer experience or to increase internal productivity.

Business Priorities Driving GenAI Initiatives[12]

43%
Improving operational efficiency

43%
Enhancing the customer experience
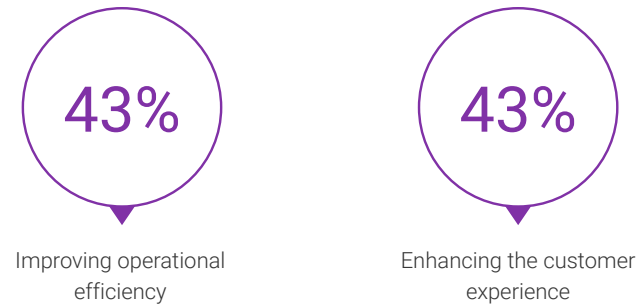
[12] **"CDO Insights 2025: Racing ahead on GenAI and data investments while navigating potential speed bumps,"** Wakefield, 2025.

AI Adoption and Strategy

Re-Evaluate Your AI Adoption Plans and Strategies (continued)

Customers can determine whether they like these tools and choose if they want to engage with you. But employees and other workers have fewer options.

When you deploy a chatbot in HR, for example, the productivity benefits are obvious to data leaders. HR workers are freed from answering simple questions, handling worker requests and updating benefits data. But for employees, encountering GenAI-enabled tools in their day-to-day work can feel like a massive cultural shock — one that they neither want nor appreciate.

Data leaders must anticipate these responses by proactively communicating the value of GenAI to both the company and its workers before implementing the technology. Then businesses need to upskill their workforces to become more data literate and AI fluent, so people can use the technology comfortably, effectively and responsibly.

97%

of data leaders have encountered issues with their workforce using GenAI, such as using wrong or incomplete data for inputs, copyright or licensing issues, unauthorized use of sensitive data and not reviewing inputs for bias[13]

99%

of data leaders believe more training is needed for their workforce to responsibly use AI or its outputs in their day-to-day operations[14]

Does Your Board Understand the Importance of AI Readiness?

Helping your board of directors understand the value of AI readiness is another critical step in the GenAI journey. Successful organizations understand that AI readiness is not a one-time cost but an ongoing investment.

[13] **"CDO Insights 2025: Racing ahead on GenAI and data investments while navigating potential speed bumps,"** Wakefield, 2025.

[14] IBID

AI Adoption and Strategy

Re-Evaluate Your AI Adoption Plans and Strategies (continued)

As explained by the CIO of the high-tech company, communicating the value of AI readiness isn't an overnight process. The CIO's team justifies internal uses of GenAI — to automate previously manual processes in legal, sales, finance and HR groups, for example — on a case-by-case basis.

"It requires some time to take bold decisions about efficiency that will not be just on paper," she explained. Some people resist the use of AI technology because they don't want it to replace existing workers. "We have a rule that we're internally implementing AI solutions only if we have a commitment from the unit receiving this solution that they will optimize their resources. And that's what we've done."

The finance industry data leader added that his company tracks metrics to better understand the value returned for every IT investment. "We've made AI available to the associates to do day-to-day tasks, with proper guardrails, of course. We've observed that efficiency has risen more than 5X," he said.

Some use cases that employ GenAI as an assistive device while retaining humans in the loop have yielded metrics beyond the company's baseline expectations. "Most of our funding is based on those metrics," he said.

One set of metrics assesses code produced by human workers compared with GenAI. "You see a world of difference in the generated reports on code quality and static code vulnerability," he added. "Now we must expand the adoption of the GenAI and ensure that this becomes business as usual for the entire organization."

One potential pitfall is that some boards expect data leaders to use GenAI to quickly replace a whole workforce or deliver jaw-dropping ROI in just a few months. Some board members think that adding more technology or funding should accelerate results.

"That's not how Gen AI works, unfortunately," explained the data leader. "Unless an organization's data is ready from all dimensions, you cannot realize those numbers. Data maturity is a prerequisite to exploit GenAI."

AI Adoption and Strategy

Re-Evaluate Your AI Adoption Plans and Strategies (continued)

97%

of data leaders who are using or planning to use GenAI have faced difficulty demonstrating the business value[15]

92%

of respondents believe others in the C-suite expect GenAI initiatives to generate ROI a lot faster than they will[16]

"Data maturity is a prerequisite to exploit GenAI."

Finance industry executive in charge of GenAI technology architecture

[15] **"CDO Insights 2025: Racing ahead on GenAI and data investments while navigating potential speed bumps,"** Wakefield, 2025.

[16] IBID

Use Case: Getting the Board's Buy-In

To convince the board to invest in its GenAI strategy, a large healthcare organization mapped all of its manual business processes. The data team assigned an expected ROI to each process that could be replaced or augmented by GenAI.

The resulting framework allows the board to prioritize its GenAI goals, creating a foundation for the ROI. "It's a much easier sell because the framework is clearly aligned with the business strategies and goals," said the CDAO.

Ongoing Investments in AI

Develop an Ongoing Strategy for GenAI Investment and Scaling

AI readiness requires an ongoing investment in infrastructure, talent and governance. Preparing for GenAI and managing data to optimize business outcomes is truly a journey, not an individual action.

As part of your journey, be sure to take advantage of technologies that simplify the deployment, maintenance and sustainability of GenAI. Although many data leaders are currently focused on building powerful LLMs and developing RAG processes to optimize them, other technologies — such as AI-powered data management platforms — can help you simplify data pipelines, govern data efficiently and scale your GenAI initiatives.

Not All GenAI Product Strategies Are Equal

Experienced data leaders have already discovered that certain strategies are more effective than others when it comes to creating new GenAI-enabled products. The high-tech CIO explained that her company monetizes data for all IT products, but the internal use of AI is a more straightforward discussion.

"We can easily sell that to the board because we have business models behind it that show the value," she explained. "If they invest in it, what products can [we create], how can we improve that and [how can we] sell better to our customers? From a product perspective, it was an easy pitch."

Where Does GenAI Belong?

As the enthusiasm for GenAI builds, it's important to remember that not all use cases are appropriate for the technology. One data leader pointed out that some people want to use GenAI to solve problems for which it is not designed. Use cases that support transformational learning and use natural language processing are generally a good fit.

"Choosing the right use case seems to be the biggest challenge. My heart stops every time people say, 'I'm going to use GenAI for analytics or forecasting.' Don't do that. Just because GenAI is there doesn't mean you have to use it."

How Informatica Can Help
How Informatica Supports AI Readiness

Informatica Intelligent Data Management Cloud™ (IDMC) enables relevant, responsible and robust data for AI. The platform provides a comprehensive inventory, governed access, quality, master data management and integration across AI ecosystems.

With prebuilt LLM connectivity, IDMC accelerates the ability to integrate publicly available AI models. Using the power of **CLAIRE**®, an AI and machine learning engine, IDMC simplifies data management tasks through easy-to-use natural language interfaces and GenAI insights, enabling organizations to efficiently and effectively scale the full potential of GenAI to diverse users.

IDMC offers several key capabilities that support your GenAI initiatives:

- **Relevant data for GenAI:** Ensures data is accurate, transparent and contextual through a universal metadata foundation and profiling

- **Responsible data for GenAI:** Secures data democratization, enforces data quality rules and governs established data policies through integrated services

- **Robust data for GenAI:** Drives resilient data-driven outcomes through dynamic application and data integration, with data profiling capabilities for validated AI-ready data

- **GenAI-driven data management for GenAI:** Speeds the development of AI-ready data through natural-language prompts that reduce traditionally complex work

- **Unified data management for GenAI:** Accelerates AI-ready data and achieves greater business outcomes with the only end-to-end AI-powered platform that connects, integrates, manages and unifies your data across virtually any multi-cloud, hybrid environment

Key benefits of IDMC includes:

- Improved accuracy, effectiveness and usefulness of GenAI outputs

- Better decision-making and mitigated potential data-risk exposure associated with GenAI

- A resilient data foundation for scalable GenAI solutions, making AI more agile and reliable

- Democratization of data management to support evolving corporate AI projects with confidence

- Reduced costs and accelerated time to value with cohesive data integration, data quality, master data management and governance

Conclusion

Confidently Pursue Your Future with GenAI

GenAI has captured the imaginations of business users and technology experts alike. Although it presents many data management, governance and compliance and adoption challenges, the technology offers tremendous opportunities to drive innovation, improve efficiencies and revenue opportunities and transform your business.

Whether you want to use GenAI to enable interactive customer support, personalize content creation, streamline software development or support another business goal, you need advanced solutions that will help you deliver responsible, relevant and robust data for the adoption of AI. With the right data management platform to help you achieve reliable performance outcomes, the possibilities are seemingly endless.

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.™**

Where data & AI come to

Worldwide Headquarters
2100 Seaport Blvd.
Redwood City, CA 94063, USA
Phone: 650.385.5000
Fax: 650.385.5500
Toll-free in the US: 1.800.653.3871

informatica.com
linkedin.com/company/informatica
x.com/Informatica

CONTACT US

IN19-5115-0225

informatica.com