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How to Design the Chief Data Officer Role for the Age of AI

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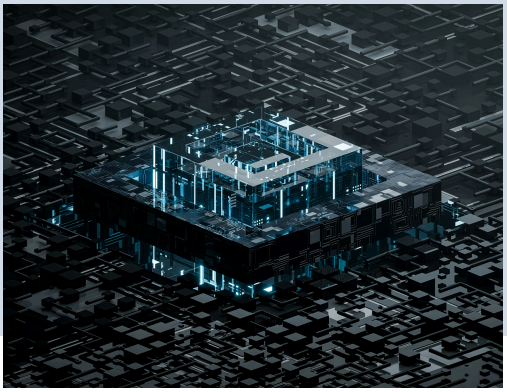

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Artificial intelligence promises transformation: smarter decisions, personalized experiences, and operational efficiency at scale. Yet for many organizations, that promise remains elusive. Despite investing heavily in AI tools and high-priced talent, enterprises often struggle to realize meaningful returns from AI initiatives.

Why?

The obstacle is not the models. It is the data—and too often, the experience and know-how of the people who've built it.

The Data Dilemma

At the heart of AI's underperformance lies a fundamental issue: Enterprise data is rarely in a state that's ready to be used by AI. The underlying datasets organizations use, such as transactional and operational data or financial and accounting figures, tend to be fragmented across silos—inconsistently formatted, poorly cataloged, and unavailable in real time. Without a solid and scalable data architecture, even the most advanced AI models can't function effectively.

This is not a new problem. It is a result of how enterprise data strategies have evolved over the past decade, and the legacy leadership that's developed them. The current generation of Chief Data Officers prioritized risk management and governance over data-driven decision-making, leaving many unprepared for the rise of AI—or without the expertise to build the modern data environments that support it.

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AT A GLANCE:

- At the heart of AI's underperformance lies a fundamental issue: Organizational data is rarely in a state that's ready to be used by AI.
- Today, 84% of organizations have appointed a chief data or chief data and analytics officer, up from 12% in 2012. Some 24% of CDOs now report directly to the CEO.
- A new generation of CDOs increasingly hails from engineering and data architecture backgrounds, approaching data as something to build with as well as to protect.

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While some 84% of organizations have appointed a chief data officer or chief data and analytics officer, up from just 12% in 2012, only 48% of organizations characterized the role as “very successful and well-established,” according to a 2025 industry survey from DataIQ. The majority said they see the role as nascent, evolving, or even failing, the survey of 125 data and technology leaders found.

Governance vs Architecture: The Legacy of the First Generation CDO

When the role of the Chief Data Officer first emerged in the early 2010s, it was largely a response to regulatory pressure. Financial institutions, healthcare providers, and government agencies needed leaders who could bring control and accountability to data. As a result, many of the first CDOs came from legal, compliance, or business backgrounds. Their mandate was to protect against risk rather than build for innovation.

That mindset helped bring much-needed structure to chaotic data environments. But it deprioritized the foundational engineering work required to make data useful for modern applications like AI. Architecture, platforms, and pipelines were often left to IT or analytics teams operating without an enterprise vision. Technical work often lacked a clear user-centric purpose or forward-looking roadmap. And until recently, few companies had a compelling vision for how AI would be used to create competitive advantage.

The AI Reckoning: Why Governance Alone Is No Longer Enough

Today, companies need data to be accessible, connected, and prepared for advanced analytics. Common problems today include:

- Data scientists spending most of their time preparing or cleaning data
- AI products being fragile or hard to scale due to relying on inflexible infrastructure
- Data lakes and warehouses that were never designed to support real-time data

In short, the foundation is missing. And without it, AI cannot deliver.

A Shift in the CDO Profile: From Steward to Architect

To close this gap, the solution must be both technical and talent-based. Many organizations are beginning to rethink the CDO role entirely, with a new generation emerging that hails from engineering and data architecture backgrounds. They have built data platforms, managed pipelines, and led infrastructure modernization efforts.

Some 24% of CDOs now report directly to the CEO, CIO Magazine's 2024 research finds.

More importantly, they approach data not only as something to protect, but something to build with. They know AI requires reusable data products, resilient infrastructure, and scalable platforms. They bring a product mindset, deep technical skills, and the ability to partner across business and tech. Finally, they recognize the need for data readiness. In a 2025 survey by AWS and Harvard Business Review, 52% of data decision-makers who said they're moving forward with genAI rate their data foundation's readiness as a five or lower on a scale of zero ("not at all ready") to 10 ("completely ready").

A Common Question: Should the Chief Data and AI Officers Be One Role or Two?

For many enterprises, especially those still maturing in their data capabilities, it makes sense to combine the roles. A single leader can create comprehensive accountability for making data usable and deploying AI across internal processes. With a unified vision, companies can avoid duplicate efforts and ensure that data and AI strategies are closely aligned.

But in organizations where AI is central to the customer experience, particularly in software companies that embed AI into client facing tools, it often makes more sense to separate the roles. In these cases, one team should focus on building a world-class data organization through modern infrastructure, reusable data products, and internal enablement. The other team should focus on applied AI, creating intelligent products, integrating large language models, and driving innovation on the customer front.

Structuring Data for AI

If companies want to succeed with AI, finding the right leaders with the right backgrounds and experience is only the first step. They must also make foundational changes in how they manage and structure their data.

This includes:

- Treating data as a product with clear ownership, high quality standards, and resuability
- Investing in data platforms that support real-time, large-scale processing
- Replacing legacy systems that were not built for AI workloads
- Integrating data quality, access control, and policy enforcement directly into data pipelines and platforms rather than layering it on top
- Empowering technical leaders to drive change across business and technology functions

AI is only as powerful as the infrastructure it depends on. Lost in the debate over which AI models to use or how to get AI adoption is ensuring the data it's trained on is valuable.

Building the New CDO Bench

Doing so often requires new leadership, new priorities, and a new vision for what a Chief Data Officer can be—one that moves beyond rigid governance frameworks and invests in the data's architectural foundations. Companies must clearly define these roles with an emphasis on technical ownership, platform accountability, and enterprise-scale impact. Executive teams and boards should begin building succession plans behind these roles now, developing leaders with strong backgrounds in data engineering, platform architecture, and operations rather than simply analytics or compliance.

Winning with AI will require more than investment in tools. It will require bold leadership from builders who can shape the future and teams prepared to lead it forward. In the age of intelligence, consistent enterprise-wide data is no longer optional. It is a core enabler of competitive advantage.

Rob Wilkes is a senior partner with Modern Executive Solutions specializing in technology and financial services talent advisory. A technologist with more than 20 years' experience in engineering, mobile, product management, and enterprise architecture, Wilkes held leadership roles at Salesforce, Korn Ferry, and Willis Towers Watson prior to Modern. He is based in New York.