



Voice of the CIO

A recurring conversation with CIOs
on IT-related issues



December 2024

From data chaos to clarity: CIOs embrace data modernization

Our conversations with chief information officers (CIOs) reveal we're all in a long, arduous journey with artificial intelligence (AI). The reasons are many, from the incompatibility of legacy systems with AI's requirements to the mistiming of budget and innovations. However, our CIO group has made tremendous progress in 2024 that is remarkable in a moment of reflection. The task ahead is centered on a fundamental aspect, like plumbing in a house. It's data and

how AI demands it—high-quality, diverse data that is thoroughly documented. Regardless of organization or industry, the data demand is a hard bar to reach. Fortunately, as our annual global tech report shows, companies are turning to value management and focusing on data management initiatives to get their data right. There is a collective sense among CIOs that the pilot stage is winding down and the real work of data modernization must occur.

On the CIO agenda

Global tech report

Key findings

The data dilemma

The challenge of getting data right

Enterprise data governance

How to apply value management

Global tech report

Key findings

KPMG released its annual global tech report with findings of interest to CIOs. A key finding for US companies is a marked shift towards mature digital initiatives with a focus on value management.

Matteo Colombo, the data modernization leader at KPMG LLP, gleaned more from the report that applied specifically to the unique challenges facing CIOs.

“The survey found that technologies are outpacing the financial cycles. With GenAI and data modernization, the pace of innovation occurs almost weekly while CIOs and CXOs are managing their increments quarterly or yearly. It’s becoming problematic, plus the number one priority is data security.”

A key stat from the report indicates where CIOs should invest. Over 70 percent of the organizations surveyed worldwide apply value management to digital transformations with data and data management initiatives delivering the highest value.

There are also levels of data modernization based on regions of the globe. It’s close to a 10-point lag between US and Asia and, to some degree, Europe. The CIO for a multinational retailer knows why.

“Asia and Europe, they’re jumping directly into the cloud. They don’t have

any backlog of moving from the data center. When the adoption of a data lake happens, conversion is faster.”

According to Colombo, one of the main obstacles for US companies in achieving speed and results is tech debt. Most large organizations have been on a tech spending spree for decades and now have legacy infrastructure to maintain, all while innovation never sleeps, and tech demands have changed.

A CIO for an energy company shared his dilemma. “Our use of data is speeding up decision-making, and our AI pilots are being used by our coworkers. But when

incorporating insights into our software, the cycle time isn’t matching the speed. There is an imbalance.”

For CIOs, the fundamental challenge is how to focus on establishing data governance priorities and guardrails, and then begin implementations that are real, but budget challenged and weighted down by the built-up information technology infrastructure.

As the business pursues ideas like generative AI (GenAI), CIOs need to address their data holdings throughout the enterprise. Without good quality data and a single source of truth, no idea will get past the pilot stage.

“There is anxiety in the C-suite about getting AI wrong.”

Matteo Colombo, Principal, KPMG Global Leader – Cloud, Data, AI

The data dilemma

The challenge of getting data right

As the global tech report showed, organizations are getting the highest value from data and data management initiatives. The challenge: getting data right is a work in progress.

The retailer CIO shared, “I have generative AI in production, but how clean is the data and how comfortable are we with the answer we’re getting?”

Many of the CIOs work for multinational companies, which makes data governance a struggle but possible over time and with a commitment of resources.

“Our governance is nailed down, and they’re working towards proper tooling and transformation of the data. Still, today we don’t have a global picture of our master data,” acknowledged the CIO of a dental and medical supply company.

For some CIOs, the struggle to get their data right is more a reflection in how their organization is structured. A company with a decentralized structure must overcome fiefdoms with a shared vision of data for all. It’s possible. It just takes a journey, which many CIOs refer to as the long-term process of getting data right for AI and GenAI applications.

“We had an enterprise view into what each division was doing, but we allowed each division to create their own governance and work at their own pace,” said the CIO of a US automotive company.

An action-minded CIO addressed her CIO challenges this way. “What started to work for us is to stop talking about it in abstraction. Instead, pull specific use cases off the shelf and build the technical landscape underneath.”

“We started to see momentum when we moved to a show-and-tell model with our business and using very specific and

pragmatic use cases,” added the CIO with a pharmaceutical company.

These field examples show where there is a will, there is a way. Advanced analytics and GenAI applications have exposed a weakness that CIOs are painfully aware of. Data in its current form is not up to the good quality standard that the latest tools and applications require. Pilots can work, but scaling up doesn’t. Despite problematic budgeting, anxiety in the C-suite, and a legacy past, CIOs must rise above the fray and embrace enterprise data governance.

“I want to be on the billboard for the right reasons, not the wrong reasons.”

Retailer CIO

Enterprise data governance

How to apply value management

CIOs have seen early success with value-concentrated use cases. The holdup is in building an enterprise data governance model designed to produce quality data for AI applications.

For the CIO of a US-based manufacturer of heavy building materials, the key is getting past legal and compliance issues, but progress is being made.

“Once we have all the structured data, clean data, and managed data, along with unstructured data set up with easy access, we can take advantage of these technologies popping up with GenAI.”

With the goal of accelerating enterprise data governance, many CIOs have hired

chief data officers (CDOs) or given that responsibility to another higher-level executive. Having someone dedicated lifts that burden from CIOs while ensuring work is being done. Governing and managing unstructured data will be especially problematic for CIOs and CDOs.

“We have more branches in the data than we have branches,” said the CIO of a publicly traded bank. “We hired a chief data officer and all they did for six months was governance. I highly recommend a CDO because it gives the CIO the opportunity to be in the sponsor role.”

The only thing better than working smarter instead of working harder is turning back the clock and focusing on building an enterprise data management and governance program. A health system CIO shared how an early focus on data changed how they do business now.

The CIO led the effort to ingest all historical clinical data through a core machine learning AI tool. During care episodes, the hospitalist oversees the AI-generated output that helps decide what services to offer. The AI component also creates a discharge summary that concisely directs postacute care.

A private language model generates the discharge summaries. A human in the loop verifies each summary. As a result of data and AI, hospitalists have more time with patients, patient outcomes are focused on quality and safety, and there are fewer cases of burnout by health system clinicians.

If a healthcare organization can leverage data and AI with all its legal and compliance requirements and patient safety of the utmost importance, our intrepid CIO group can too. The global tech report indicated where to go from here—apply value management and modernize data and data governance.

“AI is forcing organizations to double down on data governance.”

Marcus Murph, CIO Advisory Leader, KPMG

Key considerations

- Advocate hiring a chief data officer
- Focus on data management and governance
- Step up communications with the board

Additional insights

[2024 KPMG US technology survey report: The digital dividend](#)

[Is your corporate culture AI ready?](#)

[CIO-led AI transformation](#)

[Improving Cloud ROI](#)



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