

Six shifts redefining the modern CIO

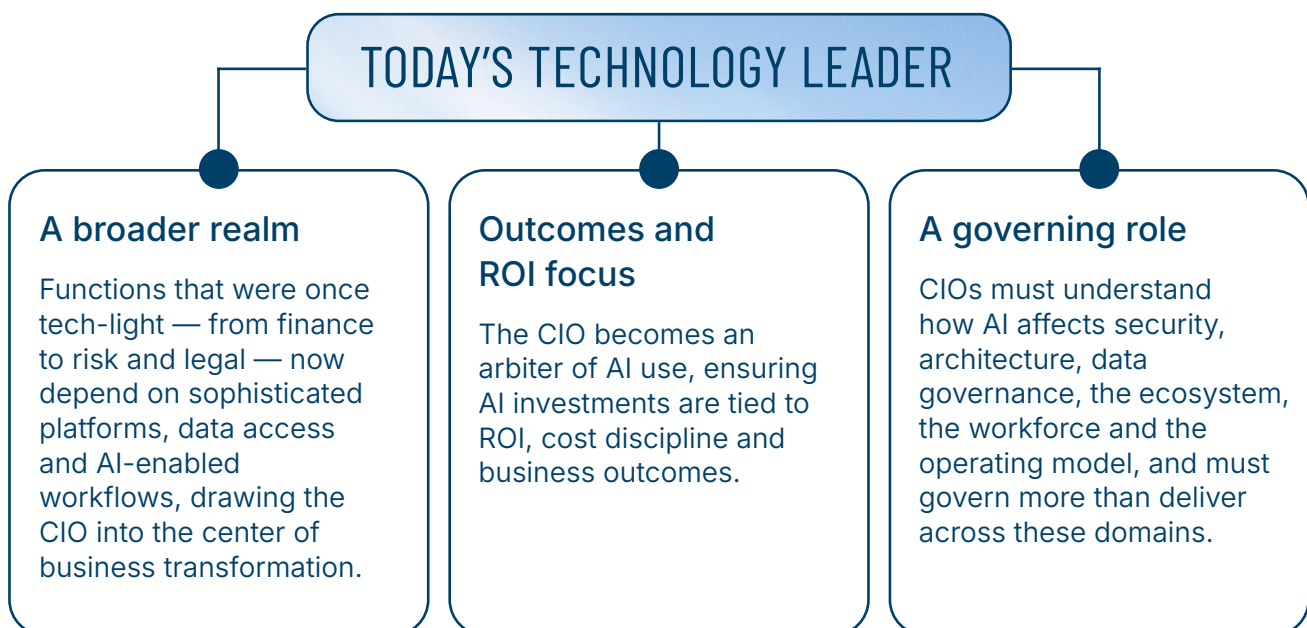
A defining moment for the CIO

As artificial intelligence (AI) continues to dominate the center of the technology stage, the role of the chief information or technology officer — CIO or CTO — is entering its most consequential period in decades. This change brought by AI is so dramatic that it requires a whole new understanding of what it means to be chief enterprise technologist, and a corresponding behavioral change.

Think of a landscape that has transformed from solid ground to a moving ocean overnight. You need an entirely different mindset, skills and set of tools to navigate it.

Historically, the CIO was the only purveyor of technology within the enterprise, managing durable systems with centralized control, slower governance and limited access points, and interacting with C-suite stakeholders that you could count on one hand.

As technology evolved and organizations moved from mainframe to cloud and to the AI-driven environments of today, the CIO evolved from controlling a defined-boundary system to orchestrating a highly democratized, fast-moving and impermanent environment where every employee is a stakeholder and an AI-empowered change agent. Today, end users are in possession of powerful tools and capable of building their own. Innovation can be initiated from every corner of the organization, no longer limited to the technology department. This is a step change, not just in what a technology leader must do, but also in how they need to be — how to think, behave and lead in this new environment that demands greater flexibility and speed than ever before.

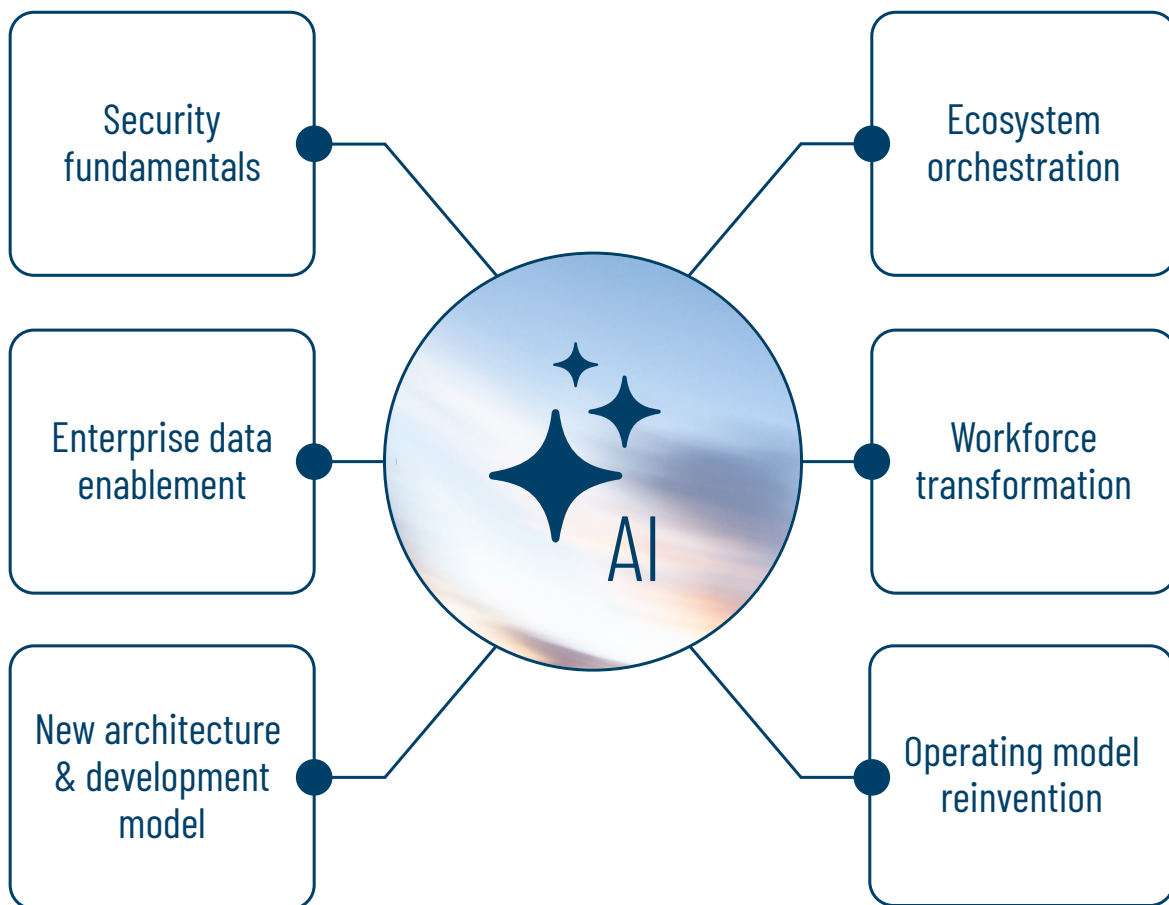


AI: A fundamental force driving six big shifts

AI — and especially agentic AI — is a structural force reshaping the enterprise — from security, architecture and data governance to ecosystem, workforce and operating model reinvention.

Why is this happening?

- AI is no longer experimental; it is becoming a primary engine of enterprise value.
- AI is redefining where technological change happens — no longer initiated by the IT function.
- AI accelerates change, creating a constantly transforming technology environment in which only fundamentals are solid and everything else can change tomorrow.



01 Security fundamentals

AI is pushing technology and cybersecurity to operate at machine speed. **Security fundamentals become inseparable from technology strategy.**

What is changing?

- **The attack surface is expanding** — AI APIs, plug-ins, and new data pipelines create more entry points.
- **AI stresses security controls** — frontier models are outpacing traditional cybersecurity response speeds.
- **Pressure on the fundamentals increases** — identity, data governance and patching become critical.
- **Legacy architecture raises risk** — perimeter-based security models no longer suitable for distributed AI workloads.

What is required?

- **Modern operating models** (beyond cloud hosting) with built-in flexibility and speed — zero-trust architectures, risk-based prioritization, strong identity and access controls, data governance
- **Embedded security** into processes and operating models — SDLC, cloud engineering workflows, infrastructure-as-code
- **Proactive security engineering** — “shift left” practices, continuous visibility and telemetry across the stack

How must the CIO think differently?

Adopt a cross-domain governance mindset where security is inseparable from technology strategy:

- Orchestrate security across data, architecture, workforce, ecosystems and stakeholders.
- Align technology modernization, security investment and risk prioritization.
- Partner closely with security leaders but retain accountability for architectural and strategic decisions.
- Govern identity, data trust and resilience as enterprisewide concerns.

02 Enterprise data enablement

AI requires treating data as a product — business-owned, shareable and continuously improved. This demands a CIO shift from **data guardian to data educator and enabler**.

What is changing?

- **AI is expanding access to data** and insight creation — users are empowered by natural-language Q&A, AI-generated insights, embedded dashboards, and “vibe coding” for rapid pipeline creation.
- **Risk is shifting** from access to misuse and misinterpretation — the danger is in inconsistent definitions, governance gaps, broader exposure, and hallucinated or unverifiable outputs.
- **Cross-border restrictions and data sovereignty laws** constrain data availability and flow.

What is required?

- **AI-friendly data architecture** — modular, adaptable, API-based, built for agent-driven workflows
- **New data ownership models** — i.e., thick spoke/ federated, to enable self-service analytics without central bottlenecks
- **Semantic governance** as a core capability
 - From static data catalogs to dynamic semantic layers
 - Shared definitions, business context, interpretability layers
- **Region-specific data domains**, location-aware data architecture, alternative data pathways

How must the CIO think differently?

Abandon the “IT builds, business consumes” frame. Enable safe, governed self-service analytics at scale absorbing users’ new ability to create insights while minimizing risk.

- Operationalize “data as a product,” with clear ownership and responsibilities across IT, data leaders and business users.
- Shift from data control to semantic governance — focus on definitions, context and shared meaning to reduce the real risk of misinterpretation, not access.
- Redefine and enable trust through ownership models, semantics and governance — not infrastructure.
- Become a data educator — demystify AI (analytics vs. ML vs. LLMs vs. agents), clarify limitations and reinforce where human judgment is required.

03 New architecture and development model

AI acceleration demands modular, composable architecture and faster development approaches. As code becomes faster to generate and easier to discard, the CIO role shifts from overseeing individual solutions to **enforcing durable architectural principles**.

What is changing?

- **AI accelerates development** and deployment cycles.
- Faster code generation increases the **risk of fragmentation and technical debt**.
- **Misconfigurations, unpatched systems** and weak monitoring propagate faster and at a larger scale.

What is required?

- **Designing for modularity, interoperability and change** — shift from monolithic systems to composable platforms and embrace “disposable code” where appropriate, anchored by durable architecture
- **Stricter engineering discipline**, with stronger expectations for testing and validation, security by design, and auditability and compliance
- **Redefining the developer role** — from I-shaped specialists to T-shaped contributors who are business-aware, architecturally fluent and able to manage AI agents as teammates

How must the CIO think differently?

Adopt a principles mindset — move from approving technologies or codebases to enforcing durable architectural principles that can absorb AI change:

- Embrace impermanence by design — distinguish durable entities (core data, IAM frameworks, governance and controls) from those that are short-lived (code, interfaces, pipelines).
- Lean into security fundamentals — drive the notion that speed and safety are not trade-offs. (You wouldn’t build a house on a shaky foundation to get it built faster.)

04 Orchestrating a technology ecosystem

Enterprise value today is increasingly a result of how well you integrate SaaS, hyperscalers and AI-native vendors. Buy-versus-build decisioning becomes a continuous orchestration and cost discipline — with the CIO becoming the ecosystem's governor.

What is changing?

- Companies increasingly rely on model providers, hyperscalers and **opaque pricing structures**.
- **Third-party risk** now includes data provenance, model training and capacity constraints.
- **FinOps evolves into AI FinOps** — from predictable spend to variable costs based on consumption.

What is required?

- **Next-level third party risk management** — from upfront vendor due diligence to ongoing usage governance, with visibility into fourth-party dependencies and layered risk exposure
- **AI use arbitration**. Ask:
 - Which workloads justify AI?
 - Which vendors fit which use cases?
 - Where can simpler, non-AI solutions be more effective?
- **Managing compute consumption** to address AI-driven cost volatility

How must the CIO think differently?

Think as a fiscally responsible ecosystem governor:

- Manage fluidity — balance humans, automation and agents across internal and external workflows using cost control and outcome quality as measures.
- Adopt a fit-for-purpose mindset — decide where AI adds real value, where simpler solutions are superior, and when not to deploy AI at all.
- Treat compute consumption, model usage and automation as variable operating costs that require ongoing oversight, not onetime budgeting.

05 Workforce transformation

The blending of human and agentic workforces requires the CIO to act as a **visionary co-leader in an enterprisewide workforce redesign challenge**.

What is changing?

- Investment in AI is driving the **evolution of roles** within organizations.
- **Hybrid teams made up of humans and agents** are becoming more prevalent.
- **The skill mix is evolving** — fewer traditional developers and task performers and more roles in product and process design, testing and validation, and AI governance and oversight.

What is required?

- **Workforce transformation** beyond reskilling — deliberate decisions on where humans, AI agents or hybrid teams create the most value
- **Blending of generational strengths** — combining AI-savvy talent with experienced workforce veterans to preserve institutional knowledge while accelerating innovation
- **Designing human-agent operating models** — teams shift from execution to orchestration; accountability moves from “doing the work” to designing and managing systems of work

How must the CIO think differently?

Step into a shared leadership role with the CEO, the CHRO and the CFO:

- Recognize that AI-driven workforce transformation is an enterprise design challenge, not a technology change initiative.
- Confront the reality that AI is disrupting the workforce as we know it. Help with complex decisions about role redesign, new roles creation and changing accountability.
- Reframe productivity — from individual performance toward the performance of end-to-end systems of work in which humans oversee AI-driven execution.

06 Operating model reinvention

Leading through influence becomes the new operating model for the CIO. Measurable business value becomes the new North Star as technology, transformation and performance management converge.

What is changing?

- **AI is democratizing technology** — previously tech-light functions are now collaborating closely with IT.
- Technology decisions are made everywhere — business functions procure tools, build automations and deploy agents **faster than enterprise governance can react**.
- “Transformation” is no longer a standalone program but a **continuous operating model evolution** driven by AI and accelerating tech adoption.
- AI and analytics shape business decisions, **expanding CIO accountability** into outcomes, not just systems and availability.

What is required?

- **Deep integration with other functional leaders** — CFO, CHRO, CISO, CMO, CRO and legal
- **Deep business acumen** and profit-and-loss mindset — aligning tech investments directly to ROI and growth
- **A close CIO-CFO alignment** due to the new dynamic nature of technology spend
- Reinventing the IT operating model for **value-based prioritization** — ROI, value streams and OKRs become the primary measures of success

How must the CIO think differently?

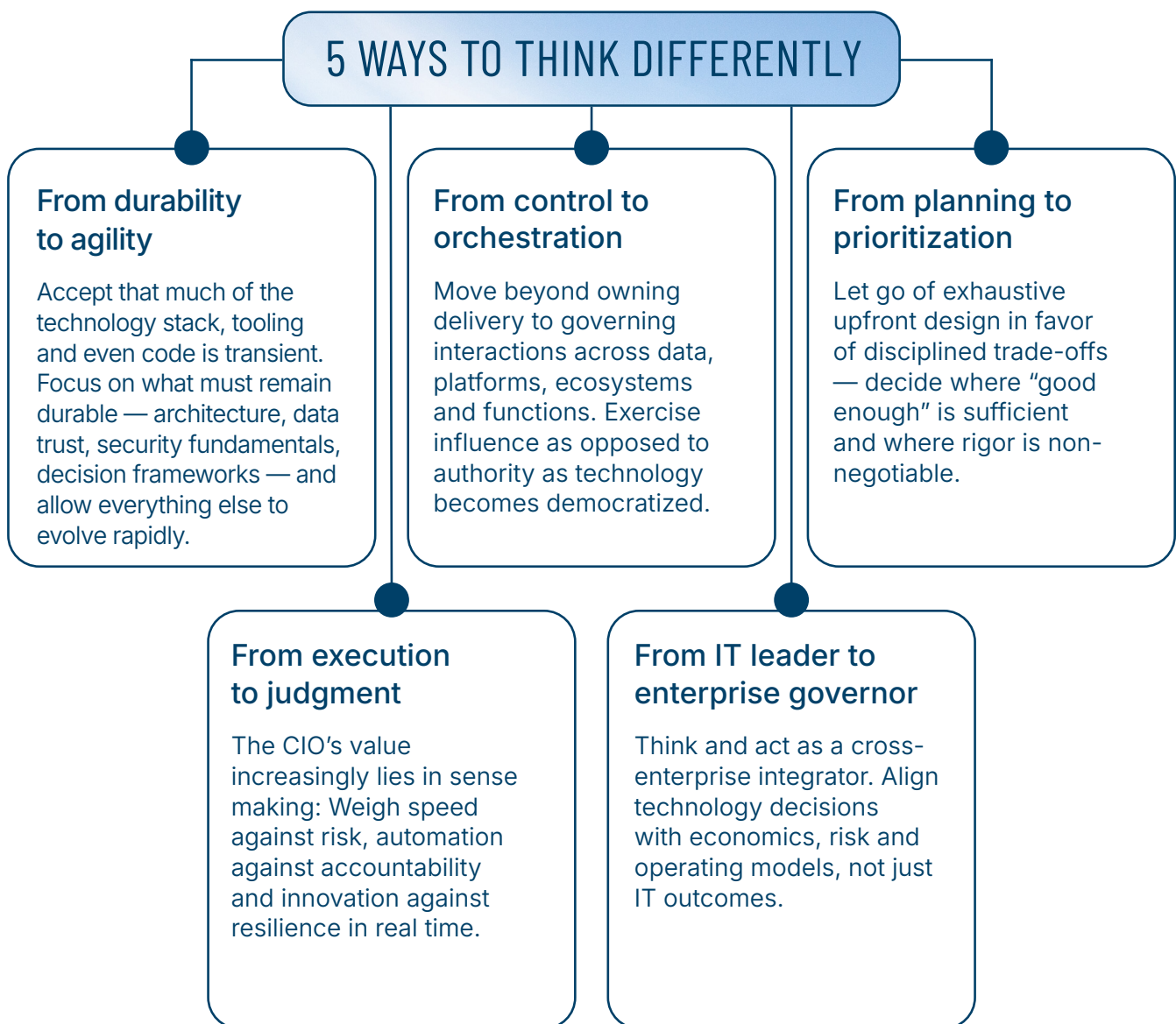
Embrace influence, communication, negotiation and cross-functional leadership as core CIO skills.

- Drive alignment across the C-suite recognizing that the CIO no longer owns all technology decisions.
- Operate with continuous adaptability and constantly reprioritize in response to shifts in AI, market and risk.
- Act as a translator — bridge technical possibilities with business strategy, risk, governance and innovation.

Navigating the shifts with confidence

In an AI-shaped environment defined by speed and uncertainty, CIO effectiveness is determined less by what they build and more by how they think — comfortably navigating change while providing clarity, governance and leadership on shifting ground.

These mindset adjustments can help CIOs thrive amid change instead of fear it:



What CIO success looks like

- Technology decisions are explicitly tied to enterprise value.
- CIOs are engaged in enterprise prioritization decisions, not just implementation. Their judgment is trusted.
- Technology architecture can absorb change while technical debt is actively reduced.
- Data is productized across the enterprise. AI-enabled business decisions are based on trusted data.
- AI deployments move beyond pilots into repeatable, governed patterns with clear guardrails for autonomy, risk, cost and accountability.
- Ecosystem transparency is the norm — the CIO can clearly articulate the role and value of each vendor, platform and partner.
- Security and resilience improve despite increasing complexity.
- Productivity gains are achieved without proportional increases in headcount.

How Protiviti can help

Protiviti partners with technology leaders to accelerate modernization and unlock business value. By connecting technology strategy with enterprise priorities, Protiviti helps organizations balance the demands of secure, reliable operations with the need to innovate at speed. Across platform transformation, application modernization, AI, data and cybersecurity, Protiviti brings the capabilities, industry insight and partner relationships needed to execute complex transformation initiatives. The result is a more agile, resilient organization equipped to adapt, grow and compete in an evolving digital landscape.

About Protiviti

Protiviti (www.protiviti.com) is a global consulting firm that helps clients transform and protect their businesses, and respond to planned and unexpected events. Through a network of more than 90 offices in over 25 countries, Protiviti and its independent and locally owned member firms deliver deep expertise and tailored capabilities across technology, artificial intelligence, data, operations, finance, legal, compliance, HR, marketing, digital, risk, and internal audit—enabling organizations to accelerate innovation, navigate risks and safeguard what matters most.

Named to the *Fortune* 100 Best Companies to Work For® list since 2015, Protiviti Inc. has served more than 80 percent of Fortune 100 and nearly 80 percent of Fortune 500 companies. The firm also works with government agencies and smaller, growing companies, including those looking to go public. Protiviti Inc. is a wholly owned subsidiary of Robert Half (NYSE: RHI).

About the author



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Kim Bozzella, Global CIO & CISO Solutions leader, is focused on advising technology executives on their most critical priorities, including technology strategy and architecture, enterprise platforms, data and analytics, operating model evolution, and IT value realization. Previously, Kim served as the global lead for Protiviti's Technology Consulting solutions. With more than 30 years of experience in the financial services industry, information technology and consulting — many as an industry CIO — Kim has been at the convergence of technology innovation, business management and IT regulatory reform for the majority of her career.

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