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Cultivating evergreen
business value through
data and AI operations

New roles—and opportunities—for today's CIO

August 2023



Introduction

CIOs today are increasingly expected to produce and maintain more than a stable and secure technical infrastructure while managing costs. Shareholders and boards demand that technologies contribute directly to growing revenues and profits, with a specific focus on artificial intelligence (AI) and analytics to enable innovation and drive competitive advantage. Customers expect relevant, personalized, consistent experiences at every digital touch point. Line-of-business leaders need trustworthy data, real-time insights, and automations that help their organizations streamline manual processes and become more agile, scalable, and collaborative.

That's a lot more than just "keeping the lights on."

Legacy technologies and initiatives create their own complex demands. New CIOs often inherit technology programs that were initiated by someone else years ago to address priorities that have since shifted. Meantime, those same new CIOs are expected to show tangible, positive results rapidly—creating pressure to provide "quick fixes" that often fall short of opportunities for meaningful transformation or value.

Sustained enterprise growth is the talk of the C-suite. But many technology leaders find themselves unable to contribute meaningfully and impactfully to those conversations—much less help cultivate

new revenues and enhanced profitability—due to a range of issues such as:

- Insufficient understanding of how data and AI differ from traditional IT assets—and how that difference necessarily impacts the role, priorities, and activities of the CIO.
- Conflicting views and/or overlapping roles among leadership regarding ownership of data and AI.
- A lack of fluency and shared language among leadership around the relationship between data, AI, and value.
- Enterprisewide mistrust of AI—and often of the IT organization itself—leading to insufficient adoption of new capabilities and/or "shadow IT."

The CIO cannot stand by while others blaze the trail. Successfully mapping and navigating the path ahead requires careful cultivation of data, analytics, AI and automation. This puts today's leader of technology in position to become tomorrow's driver of change and sustainable, evergreen value.

In this paper, we explore key challenges and steps along the path.





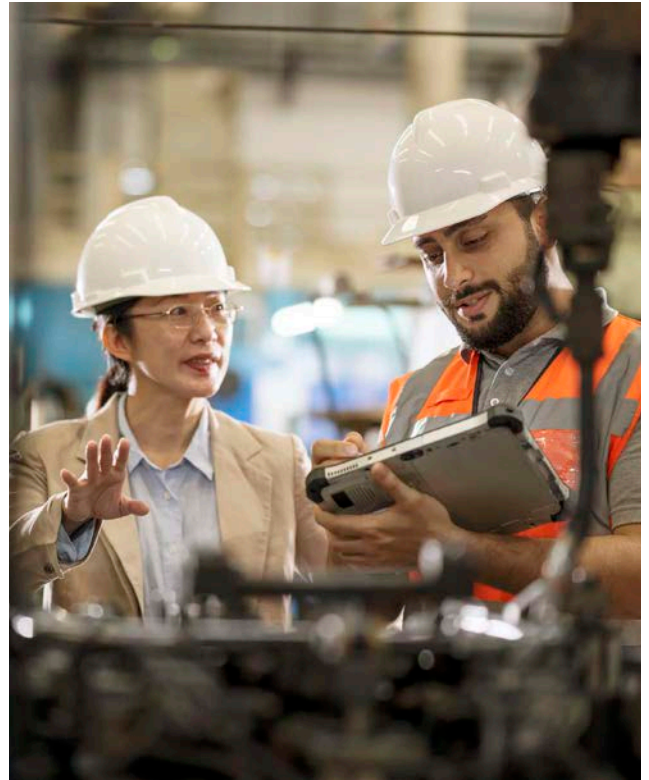
Aligning to enterprise strategy

The challenge

Traditionally, the role of the CIO was that of a “trusted operator” of enterprise technologies and infrastructure, with a mandate to maintain reliability and operational stability, enhance efficiency and security, and reduce costs. This support-oriented, efficiency-focused role made sense in a world where human intelligence and labor served as the primary drivers of business innovation, insight, and differentiation.

Today, data-driven analytics, AI, and machine learning (ML) tools are capable of revealing opportunities and activating insights in ways that are effectively impossible for humans alone to achieve. As a result, data and AI have become topics of board-level importance and core drivers of business performance, transformation, and value.

This shift places pressure on the CIO to drive the strategic agenda for data and AI—while still maintaining operational resiliency, security, and stability.



The solution

The evergreen enterprise depends on an evergreen CIO—a technology leader who orients every decision and action toward driving ever-greater profitability, ever-nimble collaboration, and ever-deeper customer connections in ways that align with enterprise strategy.

For most tech leaders, this is not a trivial shift. But it is increasingly essential. Success depends on three interrelated moves.

1. Redefine how you manage data, analytics, and AI.

In most companies, data, analytics, and AI are largely siloed within different business units and functions, with enterprise IT relegated to an operational and technical support function. Automations and insights may sprout here or there—but when they can’t cross-pollinate or tap resources outside their respective silos, they often wither.

In the evergreen enterprise, streams of data are channeled into a single pool to feed an interconnected, interdependent, and observable ecosystem of analytics platforms, AI-powered tools, and other intelligent automations.

This isn’t just about breaking down silos. It’s also about building new capabilities to cultivate and connect the seeds of potential that are unleashed. This will require an evolution of talent and operating models and a new approach to cost-benefit analyses and return on investments calculations, along with new connections, collaboration, and governance. But which is a better model for sustained enterprise value: silos that require constant input and maintenance—or a connected, self-sustaining ecosystem that evolves and grows?

2. Recalibrate your definition of impact.

Technology leaders have traditionally focused on helping other areas of the enterprise increase efficiency—primarily by implementing applications and systems that eliminate manual work and speed up processes, and by engaging lower-cost service providers to help manage those applications and systems.

The evergreen CIO measures success based not just on costs reduced or eliminated, but also on value created. That means drawing direct lines of connection between strategic business cases and data and AI initiatives—



and then finding the right internal and external tools and support to turn strategy into reality. As part of this shift, new methods of defining and measuring success are needed in order to communicate the goals and impact of analytics and automation initiatives.

3. Reposition your role.

The evergreen CIO is much more than a trusted operator of enterprise technology. The most impactful technology leaders are those who have evolved the role into that of

a business co-creator and, ultimately, change agent. (See box below.)

Getting there depends, first and foremost, on becoming fluent in how the enterprise makes money and what levers drive sustainable value—and then working backward from there to identify the most effective ways for data and AI-powered solutions to pull those levers. It also means building confidence across the C-suite and with line-of-business leaders that you understand their needs and concerns, and

that you can be trusted as a partner and leader of innovation.

In the following sections we will explore how redefining, recalibrating, and repositioning the role of the CIO and work and remit of the IT organization as a whole can help unlock and perpetuate evergreen value.

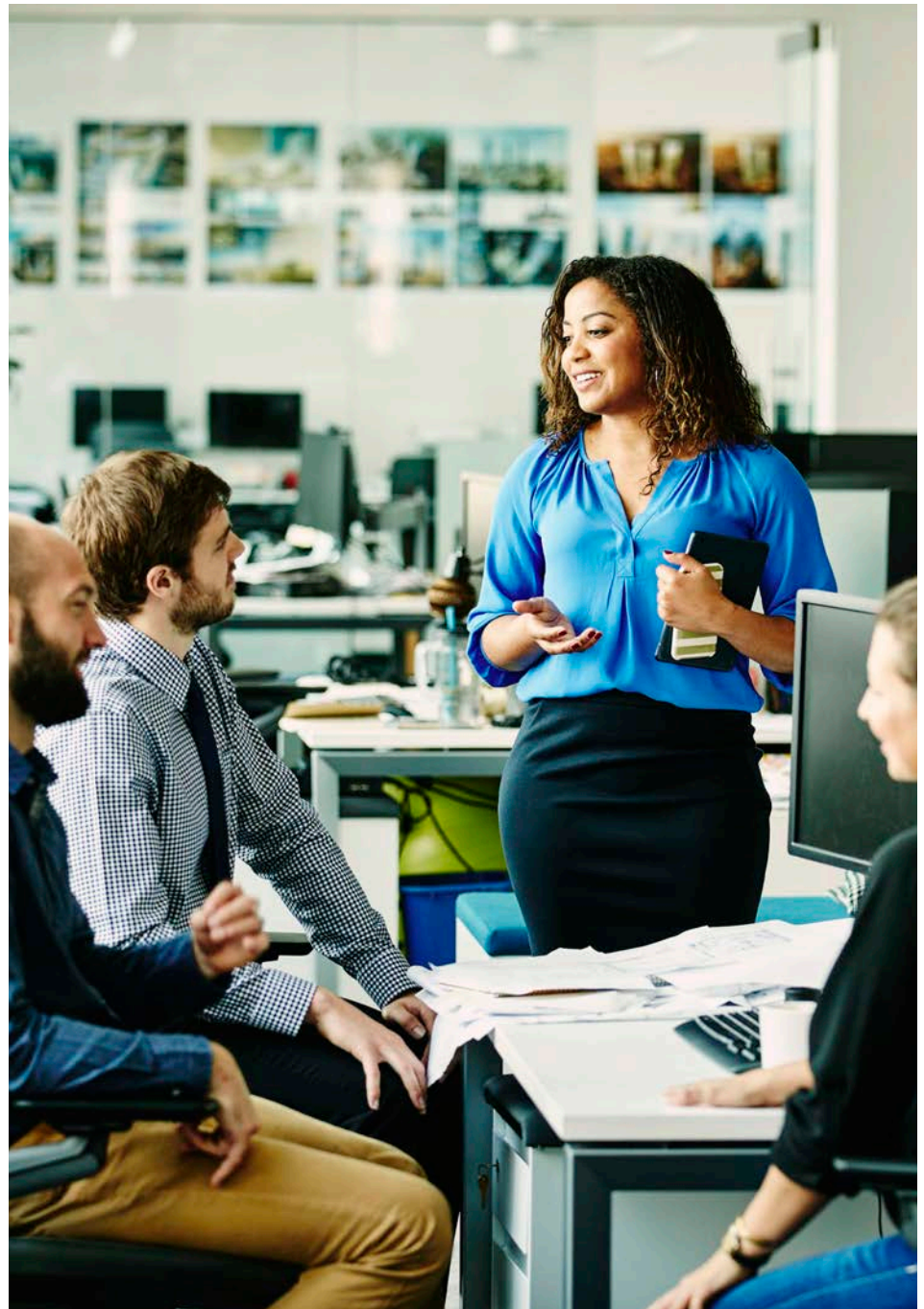


The evergreen CIO: Repositioning tech leadership

Trusted operators deliver operational discipline by focusing on efficiency, reliability, and cost. In this traditional role, they provide enabling technologies and align with business strategy.

Business co-creators spend most of their time driving business strategy and enabling change within their businesses to ensure effective execution of the strategy.

Change agents take the lead on technology-enabled business transformation. They also focus on delivering emerging technologies and supporting business strategy.¹



An aerial photograph of a dense, vibrant green forest. A complex network of blue rivers and streams winds through the trees, creating a pattern that resembles a brain or a cellular structure. The water is a deep, clear blue, contrasting sharply with the rich green of the foliage. The overall scene is one of natural complexity and interconnectedness.

Connecting AI and data ownership

The challenge

Legacy approaches to data operations are characterized by decentralized, disconnected approaches to capturing, managing, analyzing, and activating data. Functional leaders are typically protective of the mission-critical data that they “own” and are skeptical of losing control over it. Marketers want control of customer data. Finance protects its ownership of enterprise resource planning data. The list goes on. Leaders may *speak* of developing a “single source of truth” or “golden record” for data ... but too often, conflicting needs and priorities result in redundancies and inconsistencies across different areas of the enterprise, so the *doing* doesn't get done.

Similarly, AI- and machine learning-based experiments are often developed—and subsequently trapped—within business silos.

This diffused, fragmented approach to data and AI management and development has grown even more prevalent during the current hype cycle, with leaders at every level of the enterprise pushing for new AI-based solutions—even at times “going rogue” by adopting point solutions that lack transparency or connection to the whole enterprise.

Too often, these issues result in data and AI that can't be trusted, connected, and leveraged in consistent, compliant ways that drive profitability and unleash evergreen value.

The solution

The evergreen enterprise is a connected enterprise. Every part of the business benefits—and the whole becomes stronger—when ever-ready data and ever-learning AI models are integrated and managed consistently across all functions of the enterprise. The goal should be to develop and maintain single sources of truth about your customers, your business, and your markets—and to find ways to connect across those domains in ways that support strategic priorities at the business, function, and enterprise levels.

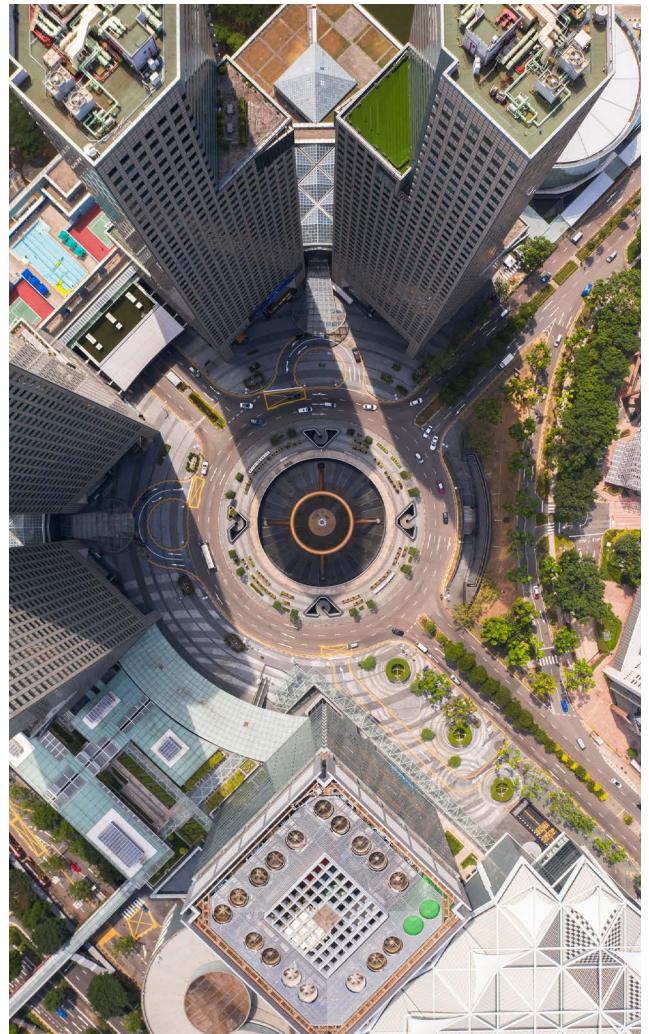
That starts with *redefining* data and AI as investible enterprise (rather than just business or function) assets; and linking teams, technologies, and processes in ways that facilitate cross-discipline collaboration, creativity, innovation, and insight-sharing.

To be sure, AI models should still be designed to address specific use cases. Similarly, decentralized and federated approaches to managing data and AI remain viable options, provided you have instituted a center of excellence (CoE) to help ensure enterprisewide availability, alignment, and transparency. This shift is about avoiding situations where multiple teams in multiple departments develop and deploy AI models aimed at addressing the same or similar purposes—a circumstance that can rapidly lead to tech debt, conflicting insights, and inconsistent experiences

for customers, employees, and partners. Enterprisewide visibility and coordination of data and AI help to ensure that insights and automations are able to drive evergreen value while also avoiding unnecessary costs.

The key to success is establishing consistent governance of data and AI. Uniform standards, support, and performance tracking need to be established and guardrails put in place—either through centralized data and AI management or via a CoE—to ensure that data and AI are being used in consistent, transparent, compliant ways that align with enterprise strategy while avoiding redundancies and risk.

Particular attention should be paid to trust, ethics, and compliance. The rapid and accelerating advances of AI and ML capabilities of recent years, coupled with



the ever-greater volume of available data, have led to instances of biased algorithms, misused data, “AI hallucination” (false outputs), and other issues that can damage trust and even cause harm. Enterprisewide governance of data and AI helps to ensure that rogue experiments don't create unnecessary risks.

In most organizations, CIOs are uniquely positioned to lead this charge. Data, after all, is information—the CIO's middle name.

That said, the range and diversity of C-suite roles in the modern enterprise continues to evolve. When your executive cohorts include a chief data officer (CDO), chief information security officer, chief AI officer, and/or other related roles, it is essential to partner closely and effectively, with clear delineation of roles and shared responsibility for outcomes. For example, if your data and AI models are owned by the CDO while underlying platforms and/or coding standards are owned by the CIO, effective partnership

means ensuring that the CIO provides the technical capability to activate AI models at enterprise scale and within enterprisewide technology governance standards.



In many enterprises, data, AI, and/or other technologies are under the ownership and responsibilities of different leaders.

Among enterprises surveyed in 2023 ...

72%
have a chief information officer

51%
have a chief technology officer

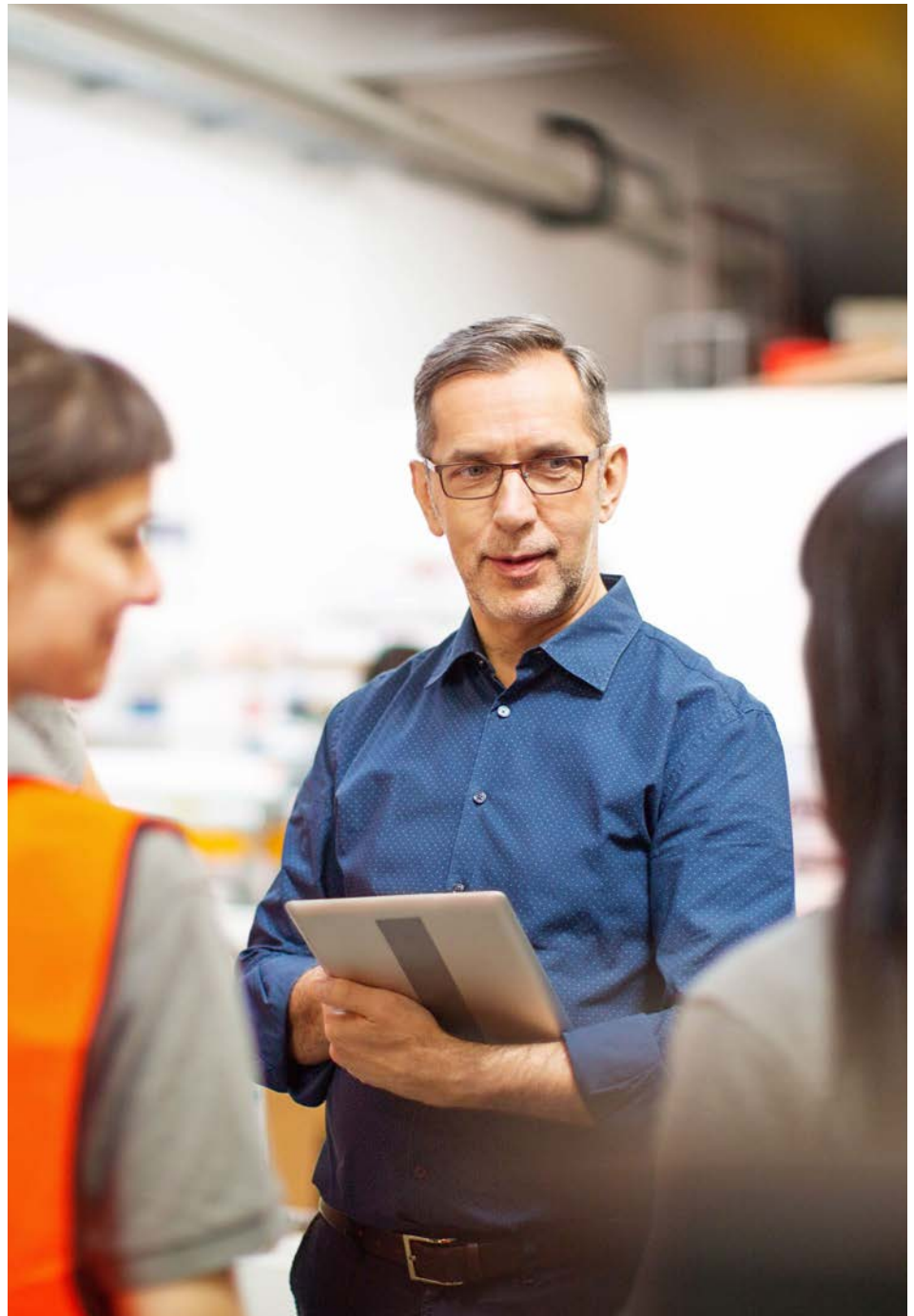
47%
have a chief information security officer

27%
have a chief data officer

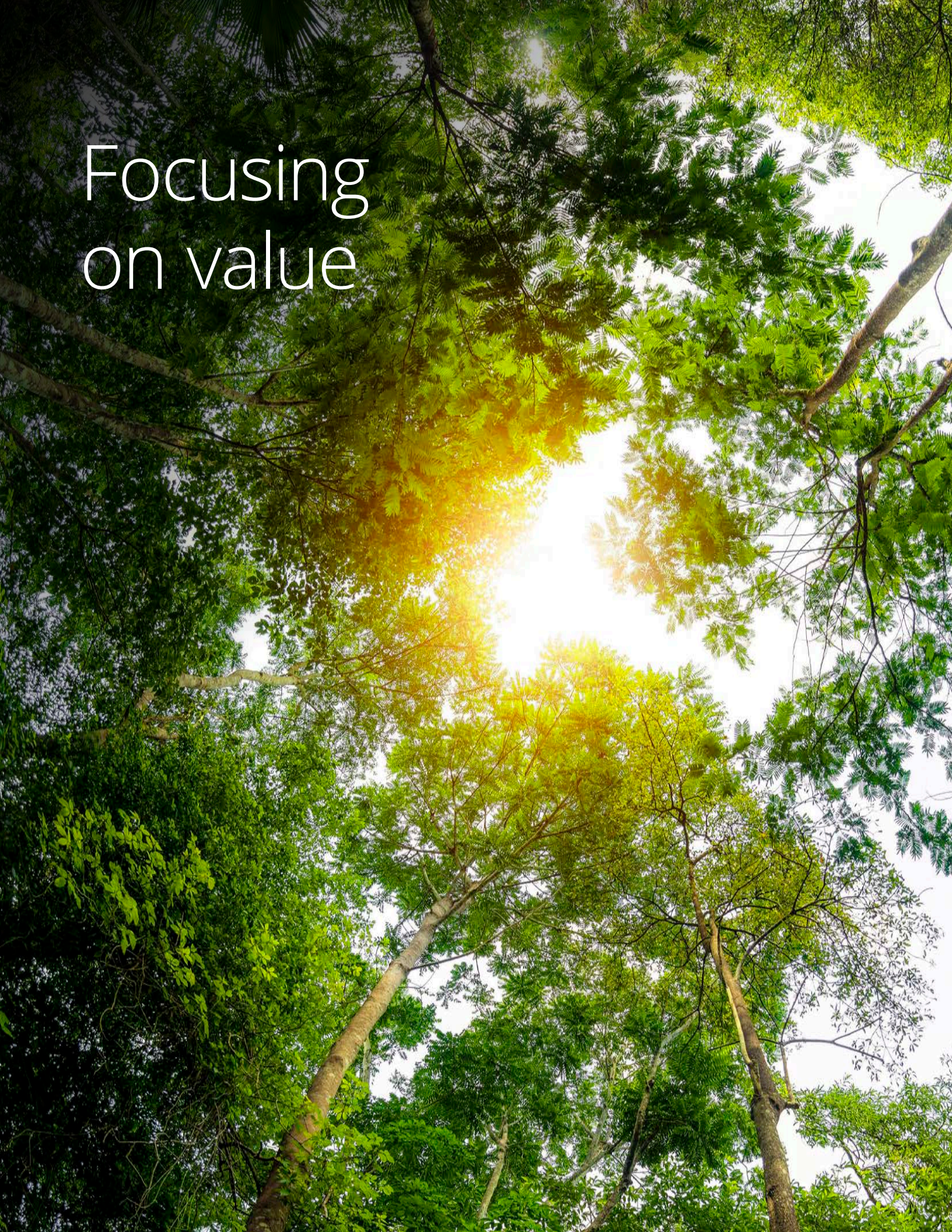
25%
have a chief digital officer

9%
had all three of these titles: chief digital officer, chief data officer, chief technology officer

.....
When data and/or AI fall outside the unilateral control of the CIO or responsibilities are shared with other leaders, effective partnership is critical to drive evergreen value.²



Focusing
on value



The challenge

In many companies, IT assets continue to be managed with a primary goal of lowering costs. To accomplish that, technology leaders typically lean into offshore labor arbitrage and outsourcing.

The trouble is that AI and data aren't just business enablers. They are increasingly foundational to how you innovate, how you automate insights and experiences, how you drive agility and accelerate speed to market—and ultimately how you create and sustain value. Leaders who remain focused on cost control risk missing or undermining the potential of AI and data in the enterprise.



The solution

The evergreen enterprise competes on value more than price—and enhances profits by prioritizing revenue generation over cost reduction.

The evergreen CIO has a critical role to play in serving and furthering those priorities by deploying analytics and AI/ML-modeled solutions that not only provide insight and enable faster decision-making, but also drive sustainable value. These are not mutually exclusive goals. For example, AI-powered service chatbots may help speed customer issue resolution in ways that save money; but their greater potential lies in elevating customer experiences in ways that amplify trust, loyalty, and customer lifetime value. Similarly, automations that eliminate repetitive, manual work may incrementally improve operational efficiency; but when automations free and empower workers to focus on innovation, creativity, and other high-value work, transformational and sustained value can be unlocked.

To activate that potential, CIOs need to *recalibrate* the way they think about achieving impact through data and AI operations.

It begins with viewing data and AI as investments that you curate and nurture.

While data management has often been treated as commodity work to offload to low-cost providers, a focus on value demands new ways of revealing insights, supporting new automations, and

enabling new business cases through data operations. In a similar sense, an investment orientation toward AI means not just implementing new automations, but infusing them with machine learning capabilities to self-monitor, self-heal, and self-improve over time—driving ever-greater value from your investment.

An investment orientation also means proactively and creatively identifying opportunities for value that others have missed: For example, by seeing where and how an infusion of AI into commerce platforms can improve experience personalization and enable real-time pricing optimization to increase incremental revenues. Or, by using advanced analytics to identify product feature improvements that result in competitive advantage.

To support this shift in focus, key outsourcing relationships should be reimagined, reconfigured, and, in some cases, consolidated. The right partners are able to bring *end-to-end capabilities*—from strategy and design through implementation, change management, and ongoing solution operation—that help score quick wins and ensure ongoing improvements. They *deliver the right skills at the right time* to enhance scalability and agility. They have *skin in the game*—meaning they are engaged in ways that allow them to create value for both your business and their own through constantly improving processes, efficient resource utilization, the ability to leverage their own existing IP and technology resources, and

effective automation. And ultimately, like you, they are *focused on driving valuable, evergreen business outcomes*.

Perhaps the biggest challenge in making this shift comes in how you prove the value you create. Quite often, the benefits from effective data and AI operations are indirect: Data pipeline issues are recognized and repaired before they create problems, employees are more engaged and empowered, finance operations are more resilient, cybersecurity threats are mitigated before they result in losses or damage.

In such cases, the solution is often to take a “reasonableness approach” to value attribution. For example, when a marketing or sales organization is equipped with better data and a platform that uses prescriptive analytics to provide customer insights, impact may be demonstrated by examining patterns in utilization, adoption, support ticket resolution, and downtime—and then comparing those results to patterns in revenue generation during the same period. If milestones and goals were achieved and outcomes improved, it's reasonable to believe that the investment was smart and well managed.

When embraced and made real, this value-focused approach serves as a foundational cornerstone in *repositioning* the CIO as a leader who plays a pivotal role in driving the strategic agenda.



Speaking
the common
language of
business



The challenge

A key challenge to the CIO's ability to initiate and lead value-driving efforts through data and AI is that many technology leaders have not been steeped in the business language of value. Their fluency may be strong in topics such as application uptime, outages, and incidents—and perhaps even around incremental value-driving concepts like the number of enhancements or releases deployed. But strategies, metrics, and goals that ladder directly to enterprise value are often not well understood or articulated.

At the same time, many board members and C-suite leaders lack a clear understanding of how data and AI deliver direct and indirect value to the enterprise.



The solution

The evergreen CIO speaks the language of value, profitability, and growth. Tech leaders who have successfully *repositioned* their roles as a business co-creator and change agent possess a strong commercial acumen and vocabulary around value and money. For example, they can speak clearly and expertly about how targeted, AI-driven customer engagement and experience personalization drive revenue lift by growing the value and frequency of purchases. Or, they can explain how historical transaction analysis helps drive better merchandising decisions that improve profitability.

This starts by developing a nuanced fluency in the drivers of revenue and profitability in the enterprise. You should understand not just what you sell, but the entire life cycle of how those products and services are manufactured and distributed, marketed and merchandised, delivered, and serviced. You should understand how back-end functions such as finance and human resources produce enterprise value—for example, by predicting customer segments at risk of nonrenewal or by reducing employee churn through improved engagement. And you should have a clear understanding of the ways that technology, data, and AI play (or could play) important roles in all of those areas.

An important underpinning of this shift for many is to become more mathematically curious. Business leaders know their numbers. The credibility of the CIO as

a change agent demands an aligned understanding of the numbers that matter to those leaders.

This isn't just about improving the CIO's business fluency. The knowledge and expectations of directors and fellow C-suite leaders also need to be enhanced regarding the relationship between technology, analytics, data, and value. Toward that end, you need to be good at crafting narratives that explicitly tie *what you do* to *what they need*—and imagining and communicating new ways of serving those needs through predictive analytics, intelligent automations, agile process improvements, and other capabilities that amplify the potential of humans working with machines. The entire leadership team needs to be on board with your data and AI strategies.



Driving adoption



The challenge

Many enterprises have invested heavily in developing new AI and data analytics capabilities only to find those tools and resources underutilized by the teams they are intended to serve. The result? New initiatives intended to drive evergreen value end up withering on the vine due to poor adoption or misuse.

AI and data have no value if they're not used. But many leaders fail to plan and implement the training and operational support that is necessary to build trust and transform legacy ways of working when new capabilities are deployed.

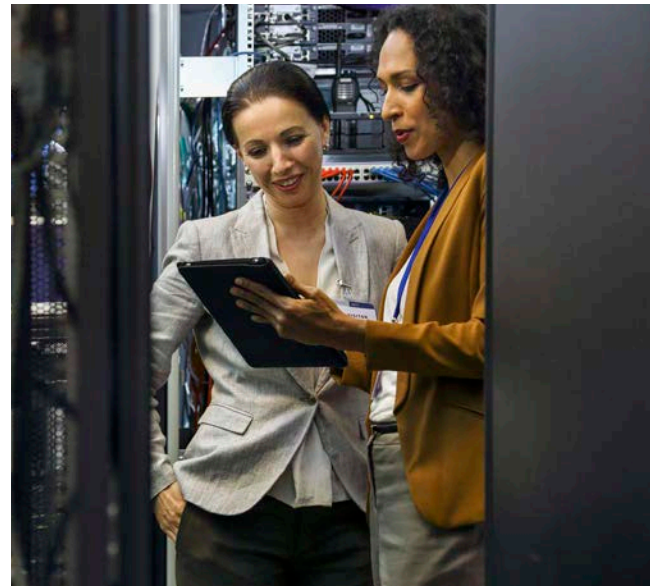
The solution

The evergreen CIO knows the importance of not only planting transformative data and AI capabilities, but cultivating their value through adoption.

A “field of dreams” approach—build it and they will adopt—is hardly enough and risks frustrating or alienating rather than engaging workers who can benefit from new tools, automations, and insights.

Successfully *repositioning* yourself as a change agent means actually *driving change* by planning and implementing programs for training and/or hiring, helping to establish standards for governance and risk mitigation, and working with business leaders to develop incentives and timelines for operating model transformation and adoption.

This can be a thorny challenge when it comes to achieving the potential of AI. In many enterprises, mistrust of how AI and other touchless technologies will impact employee experiences can contribute to poor adoption. Some employees may fear that automation will result in an elimination of their jobs. Sales teams may feel that digital commerce or other self-service capabilities will impact their compensation or traditional ways of nurturing client relationships.



In a similar vein, business and function leaders who are hesitant to cede control of data management to the CIO may question the trustworthiness of analytics and reports that are generated in new ways by a different organization. Getting leaders aligned around a single source of truth that is shared across the enterprise will be important in building and maintaining that trust. Beyond that, the CIO should work shoulder to shoulder with business and function leaders to ensure that reports not only meet their expectations but are enhanced by AI- and ML-powered data observability capabilities that can automatically identify and proactively address any issues that may emerge over time as data is extracted, transformed, and loaded into reports. The result? Analytics and insights that are even more trustworthy. And a more trusted CIO.

These are important steps. But technology and process solutions alone will not solve challenges of adoption and trust. Great leaders balance empathetic listening and collaboration, clear vision, and trustworthy action. You need to demonstrate steady confidence backed by credibility, transparency, and openness as new capabilities are implemented, measured, and iteratively improved over time.



Change begins with trust

Adoption challenges can be compounded when the CIO and IT organization are not trusted across the enterprise to deliver the right solutions on the right timelines. This can be difficult to solve in an environment of inflexible legacy systems, rapid technology and regulatory change, limited budgets, and ongoing tech talent shortages. As a result, three-quarters of CIOs globally say they struggle to balance responsibilities for operational excellence and business innovation³ and, in a separate survey, more than half say their digital initiatives lag the expectations of the CEO and other leadership.⁴

Data and AI have an important role to play here as well by enabling you to build AI- and ML-powered self-monitoring, alerts, predictive maintenance, and self-healing capabilities into the core technologies that power the enterprise.



Light the path to evergreen value

“Never before have the questions of economy and efficiency in production been of such importance as now in the industrial life of the country. This is true in the large plant as well as in the small shop.”

That quote rings true today, but it’s actually from a 1920 advertisement in the *New York Tribune*, touting the benefits of electricity.⁵ Back then, companies across industries had already begun finding new ways of using electricity to gain efficiency and competitive advantage—from the incandescent lights of the late 1800s that enabled safer and more pleasant nighttime working conditions, to powerful electromagnets and conveyor belts that could lift and move loads that previously required massive human and mechanical effort to handle.

Today, of course, electricity is a baseline enabler of business operations, as are other inventions that transformed business over the past 100 years—automobiles and airplanes, radios and televisions, computers and the internet ... the list goes on.

Much like those technological watersheds of previous generations, data and AI are now coming into their own as essential enablers of competitive advantage—not just for driving efficiency, but also for illuminating transformational insights, supercharging human potential, and powering evergreen growth.

As a result, there has never been a more important and exciting time for CIOs to help guide and support enterprise strategy. Across industries, technology leaders are repositioning themselves—and, in the process, their entire IT organizations—to serve as guiding lights for the next era of innovation.

Don’t let yourself get left in the dark. By redefining how you manage data and AI, recalibrating your definition of value and impact, and ultimately repositioning your role, you can help create a brighter future for your entire enterprise.

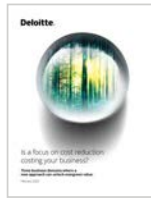
As you move along that path, here are some questions to ask yourself.

- How well do you and your C-suite colleagues understand the interplay between data and technology capabilities and the commercial side of your business?
- How can you better measure and articulate the impact of data and AI on business outcomes in language that resonates with members of your executive team and board of directors?
- How are you staying current with the latest changes in technology and balancing hype with reality for your business?
- What are your biggest obstacles to partnering and building trust with other tech leaders and/or business customers across the enterprise?
- How should you balance your time and responsibilities between maintaining a robust technical infrastructure with the need to imagine and build business initiatives aimed at producing evergreen value?

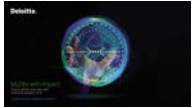
Recommended reading



Grow through every season with evergreen operations



Is a focus on cost reduction costing your business?



MLOps with impact



Breaking through the barriers



When stars align

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Endnotes

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