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# The CIO: A constant amidst the storm

Who is the Chief Information Officer today? An analysis of the current state and emerging trends in the career profiles of today's leading CIOs.

The past three years have witnessed breakneck technological change, and the pace is not stopping. AI's capabilities are evolving quickly, first from chatbots to agents and now from agents to agentic systems. Physical-world AI is also starting to emerge, while quantum computing moves from theory to near-term possibility and risk. As a result, the role of the CIO has moved from important to decisive. Boards and executive teams are relying on their CIOs to lead the enterprise to effective and efficient use of technology even as technology, much like Heraclitus's famous river, is always changing.

To understand how these changes affect who boards are appointing to fill the CIO seat, we built a statistical profile of every CIO in the S&P 500 across more than 20 attributes and 5,000 data points, including everything from prior role and career path to education and tenure.

What did we find? Surprisingly, the type of CIO that boards have been hiring since these changes started in 2023 is quite similar to the type they were hiring in 2022 and before.[1] The first part of the paper examines this baseline stability. In the second part of the paper, we focus on the differences between CIOs appointed in 2022 and prior and those appointed in 2023 and after. Although the changes are small individually, they point in a consistent direction. Recent hires are less MBA credentialed, more seasoned, more often female, and drawn from a wider pipeline. The role may not be undergoing structural change, but the profile is starting to shift at the edges. The third part of the paper turns to broader tenure patterns and cross-industry experiences, to give a fuller picture of the career arcs of today's CIOs. We close with action items for board members, sitting CIOs, and aspiring CIOs.

This paper's insights are intended to help:

1. **Boards** understand the market and hiring patterns, over time and by industry
2. **Sitting CIOs** grasp how larger trends are shaping board expectations
3. **Aspiring CIOs** as they seek to position themselves for the C-suite

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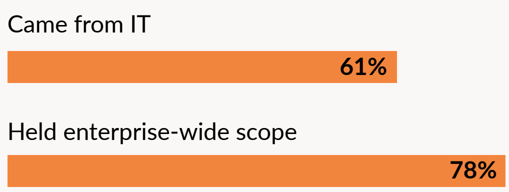
[1] We use December 2022 as the cutoff between cohorts to align with the start of the current wave of AI adoption. December 2022 and earlier are treated as "before," and January 2023 and later as "after." We use these two cohorts for comparative analysis throughout this report. Data was collected between March 2026 and May 2026.

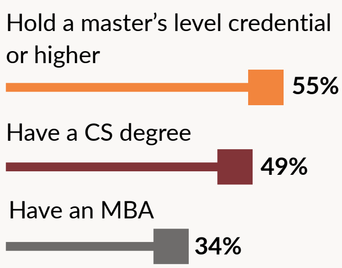
# Who is the CIO?

### Most first-time CIOs came from somewhere in IT and had enterprise reach

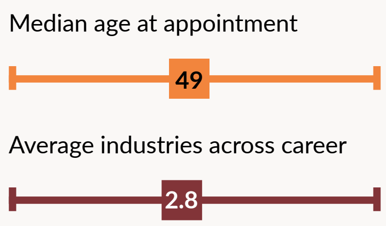



### The first-time/repeat split is nearly even, and boards hire externally more often than not

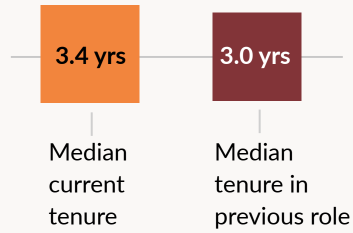

### More than half hold a master's or higher; CS degrees outnumber MBAs




### Most reach the chair in their late 40s, after careers across multiple sectors



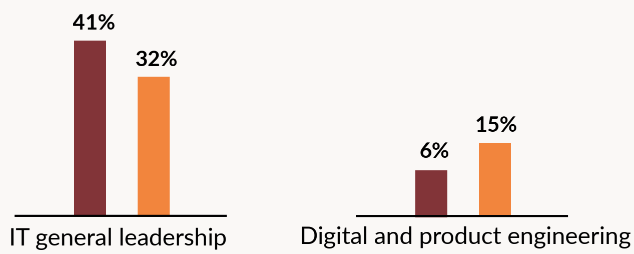

### Most have held the chair for a few years, with a similar tenure in their previous role



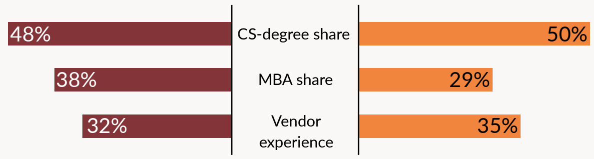

# What's changed since 2022?

Before 2023 | 2023 and after

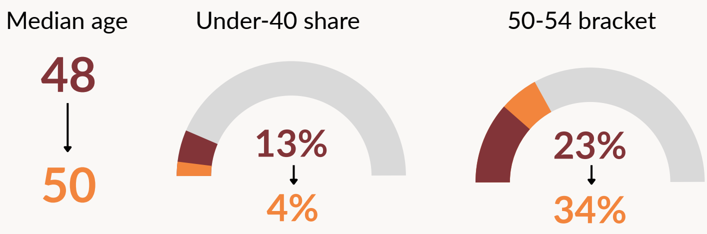
### Fewer first-time CIOs are coming from IT leadership roles, but more from digital and product engineering



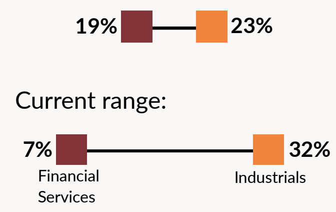

### The share of CIOs with MBAs is dropping




### CIOs are reaching the chair later than they used to




### Female appointments are rising, with sharp differences by industry



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# A profile that has held

Across several major hiring variables the aggregate picture is one of stability. The CIOs that boards have been choosing since 2023 look very similar to the ones they were selecting in 2022 and prior, including how often they're turning to internal or external candidates or selecting first-time CIOs or candidates who already hold the position.

This stability is interesting in itself. Boards either see no reason to change what they're looking for, or they don't yet know what to change.

In what follows, we take a detailed look at the paths first-time CIOs took to the chair, the scope of their previous roles, and the patterns in internal versus external and first-time versus repeat hiring. We break these numbers down by industry and compare the 2022-and-prior cohort with the 2023-and-after cohort.

## The path to the chair[2]

What roles did current CIOs have immediately prior to appointment? Setting aside CIOs who previously held a CIO position, CIOs most often, but not overwhelmingly, come from IT general leadership positions (36.7%) and very often from holding enterprise-wide levels of responsibility (78.1%).

These ratios have been relatively stable, but there are some signs of change. The percentage of CIOs coming directly from IT general leadership positions has softened (from 40.9% before 2023 to 31.5% in 2023 and after), while the number of CIOs coming directly from digital and product engineering has more than doubled (from 6.1% to 14.8%).

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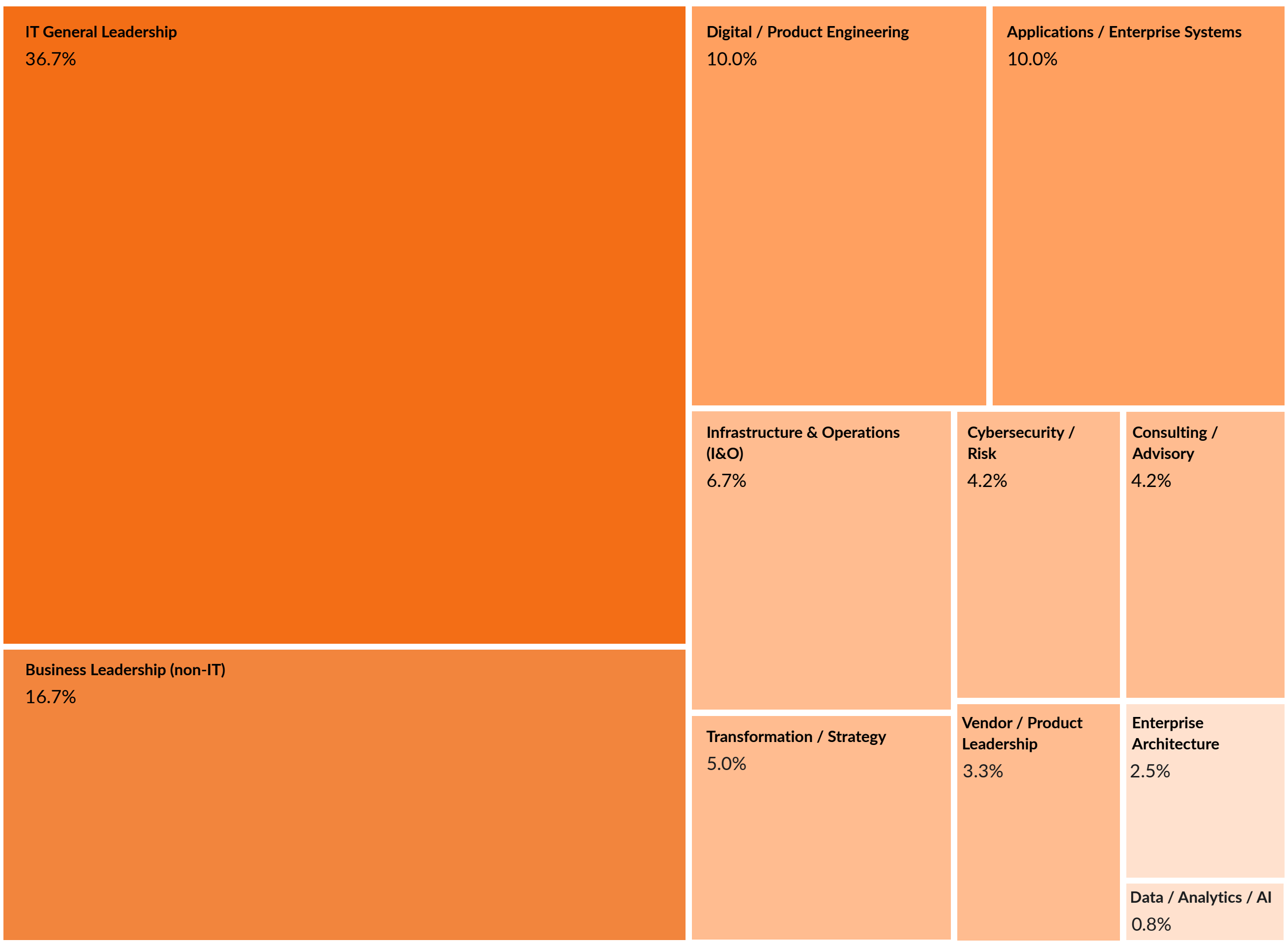
[2] All path-to-chair and prior-role-scope figures in this section cover first-time CIOs only (n=120). We exclude repeat CIOs because a prior CIO seat is the dominant immediate predecessor within that group. Including that data would cloud the answer to our question: how did candidates reach the chair for the first time?

## IT general leadership leads the path, with several smaller pipelines feeding the chair

The pipeline is anchored in IT-traditional functions but is not IT-exclusive, splitting roughly 60/40 in favor of traditional IT.[3] IT general leadership is the largest single pathway at 36.7%, with applications/enterprise systems (10.0%), infrastructure & operations (6.7%), cybersecurity/risk (4.2%), enterprise architecture (2.5%), and data/analytics/AI (0.8%) rounding out the IT-traditional side. On the non-IT side, business leadership (non-IT) is the largest pathway at 16.7%, followed by digital/product engineering (10.0%), transformation/strategy (5.0%), consulting/advisory (4.2%), and vendor/product leadership (3.3%).

### Share of first-time CIOs by prior role family



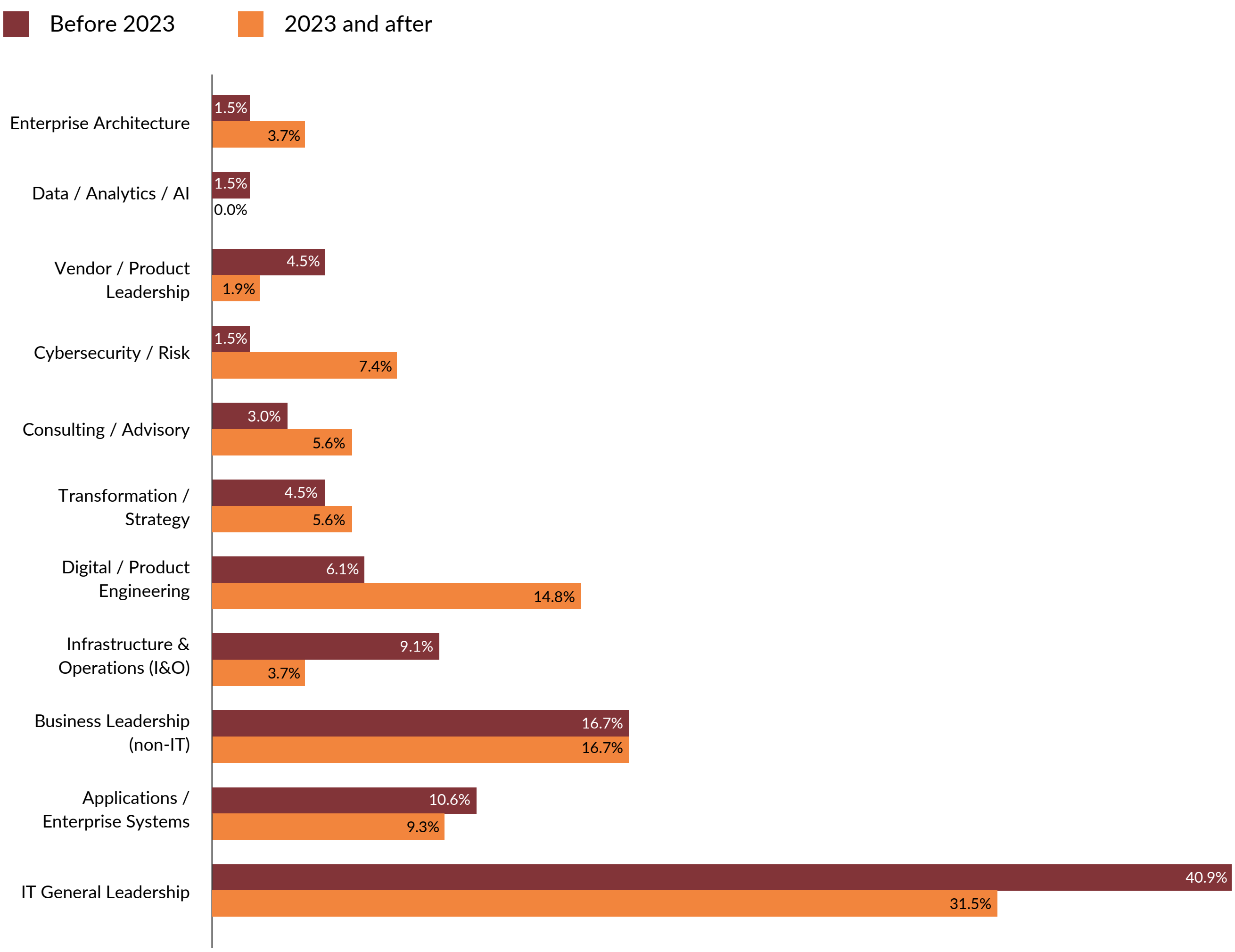

Prior role family is the function each CIO held immediately before stepping into the chair.

[3] We define IT-traditional pathways as IT general leadership, applications/enterprise systems, infrastructure & operations, enterprise architecture, data/analytics/AI, and cybersecurity/risk. Digital and product engineering is excluded from this grouping because, although technical, it represents a different kind of leadership track focused on building and shipping software products rather than running IT functions.

## The IT-centric path is softening as digital and product engineering rises

As previously mentioned, among first-time CIOs, IT general leadership remains the top entry point in both cohorts, although its share has dropped roughly 9 points (40.9% before 2023 vs. 31.5% since 2023). The share coming from infrastructure & operations also fell over the same period (9.1% to 3.7%). Meanwhile, digital and product engineering rose (6.1% to 14.8%), more than doubling its share and becoming the third-largest pathway among hires since 2023. The shifts point in the same direction. Boards are drawing first-time CIOs from a less IT-traditional and more product-oriented pool than they did three years ago, even if IT still leads the way.

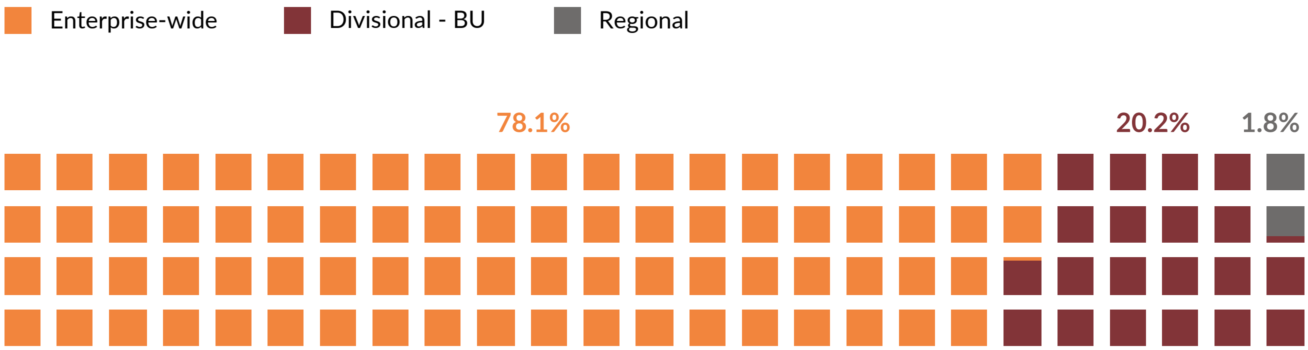
**Prior role family, first-time CIOs, before 2023 and 2023 and after**




## Most first-time CIOs come to the chair from enterprise-wide roles

Among first-time CIOs, enterprise-wide scope is the clear default at 78.1%. Divisional/BU experience accounts for 20.2%, and regional roles for just 1.8%. Boards clearly value candidates who have had responsibility across a full company rather than just across a single unit or geography.

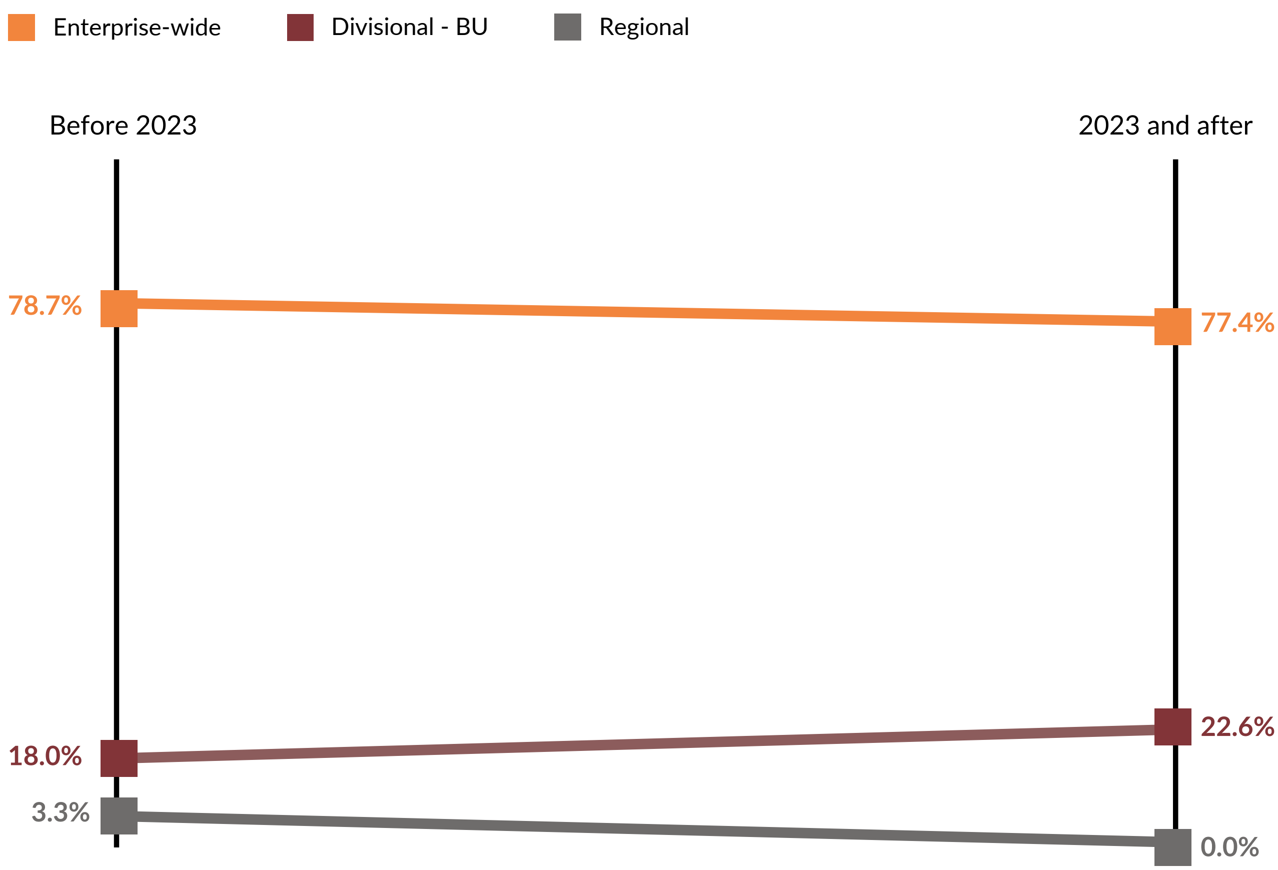
**Prior role scope, first-time CIOs**




## Divisional experience is rising modestly among recent hires

Enterprise-wide scope leads in both cohorts and barely moves (78.7% before 2023 vs. 77.4% since 2023). The directional change is at the divisional/BU level, which rose from 18.0% to 22.6% among recent hires, a 4.6-point shift. Regional roles, already rare in the cohort hired before 2023, disappear entirely from the 2023 and after cohort.

**Prior role scope, before 2023 and 2023 and after**



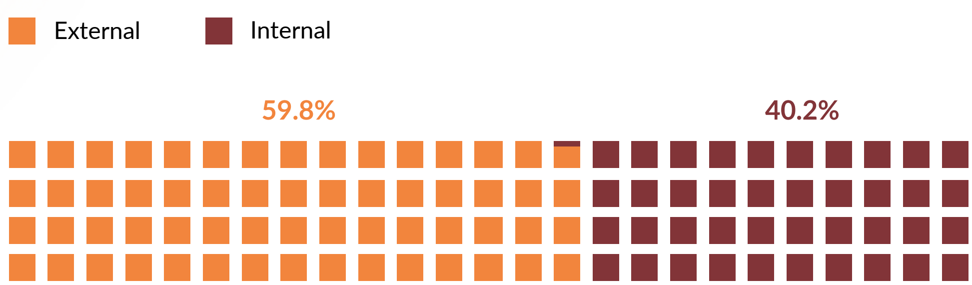
# Internal and external hiring

In the aggregate, firms moderately favor external candidates, a preference that has held steady over recent years. Industry variation is sharp, though no industry favors internal candidates over external candidates. What varies is the degree of that preference, from a near-even split in some sectors to a strong tilt toward outside talent in others.

## Boards hire externally more often than they promote from within

External hires lead at 59.8%; internal promotions account for the remaining 40.2%.

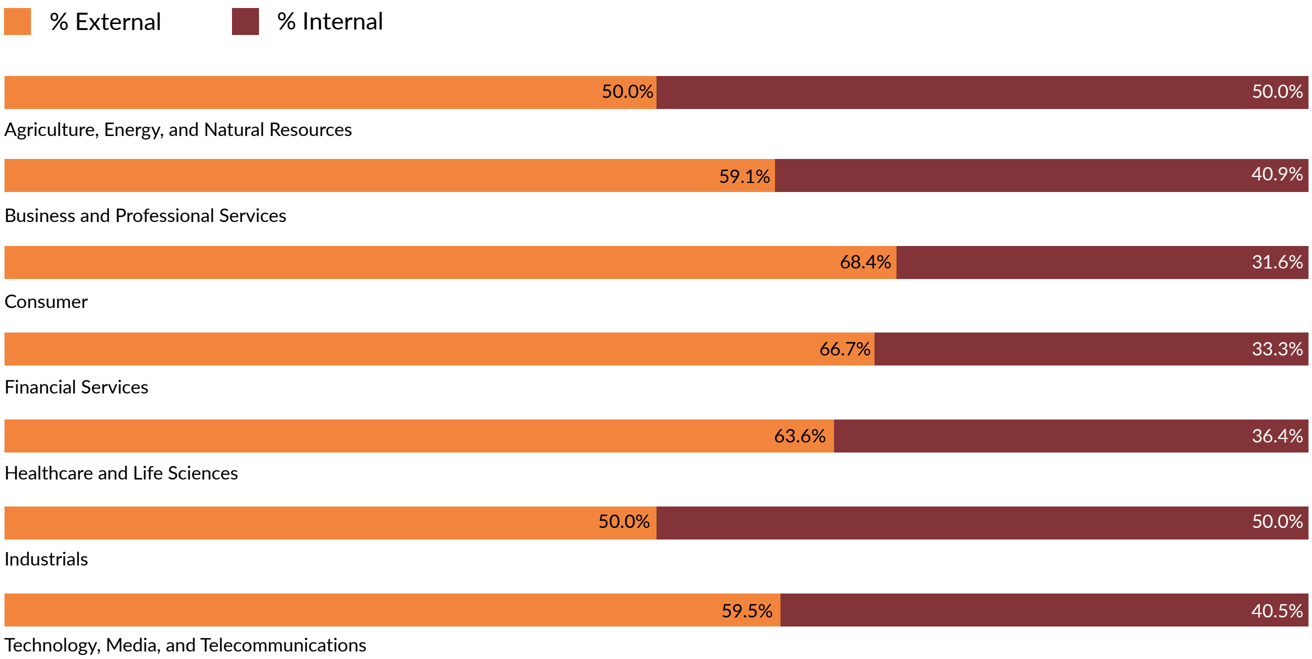
**Internal vs. external hires**




## External hiring runs highest in Consumer and Financial Services

External hiring is most common in Consumer (68.4%) and Financial Services (66.7%). Agriculture, Energy, and Natural Resources, and Industrials, on the other hand, have the highest internal-hire rates, though both still split evenly between internal and external hires.

### Internal vs. external hires, by industry

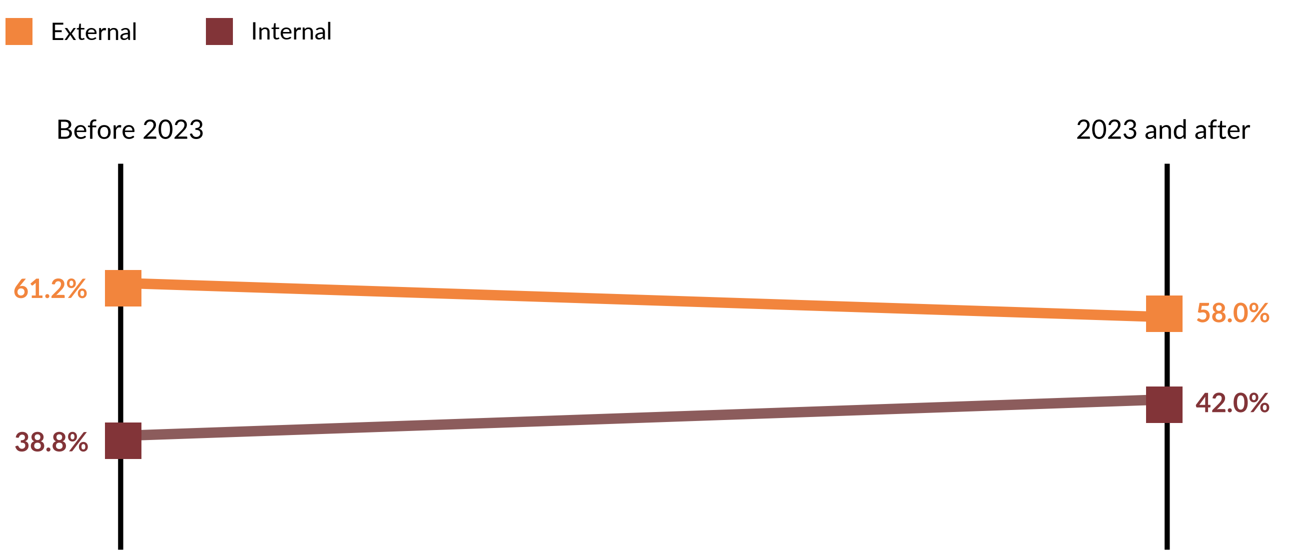



Agriculture, Energy, and Natural Resources (n=14) and Consumer (n=19) are small subsets and should be interpreted with caution.

## Boards have not moved toward more internal or more external hiring

External hires dropped from 61.2% of hires before 2023 to 58.0% of hires since 2023, a 3-point drift toward internal promotion that is small enough that it should be read as within sampling noise.

### Internal vs. external hires, before 2023 and 2023 and after

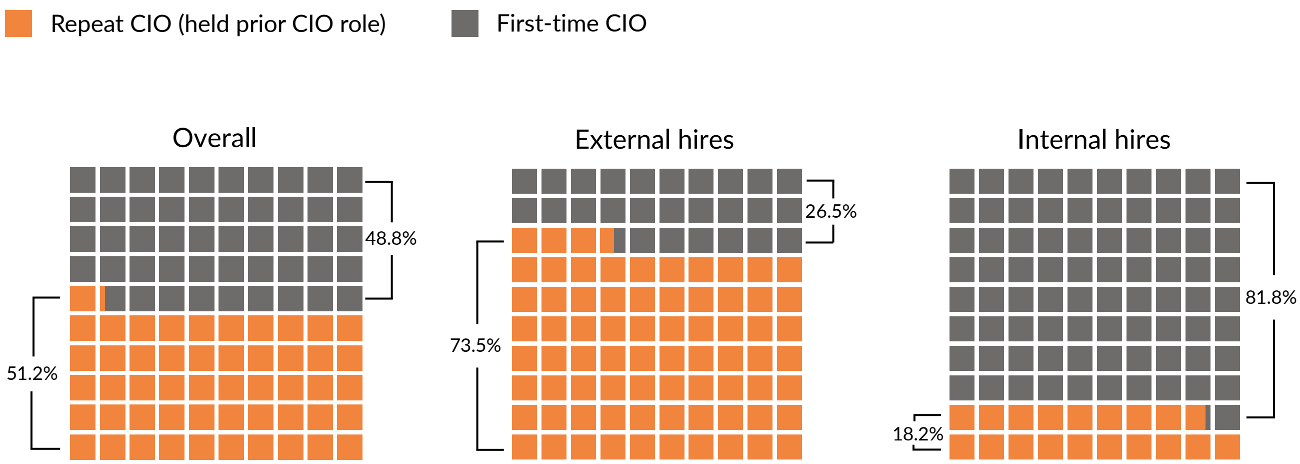


# First-time and repeat CIOs

While boards split nearly evenly between selecting first-time or repeat CIOs (48.8% first-time and 51.2% repeat), those numbers vary significantly depending on whether the hire is internal (18.2% are repeat) or external (73.5% are repeat). These ratios may seem natural. Most internal appointees won't already be CIOs, after all, but it is noteworthy that such a high percentage of external appointments are repeat appointments. Other C-suite roles don't always have such high rates of selecting for candidates that already hold the given chair. Externally appointed CHROs, for example, are first-time CHROs 46% of the time.[4]

## Boards split the chair roughly evenly overall, but external hires are overwhelmingly repeat CIOs and internal hires are overwhelmingly first-timers

**First-time vs. repeat CIOs**

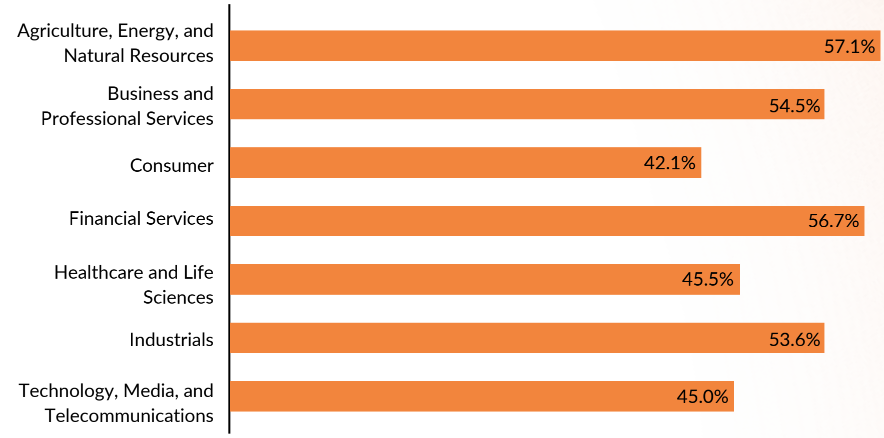



## Agriculture, Energy, and Natural Resources and Financial Services boards are most willing to take a first-time CIO; Consumer boards are least

Agriculture, Energy, and Natural Resources (57.1%) and Financial Services (56.7%) appoint first-time CIOs most often; Consumer (42.1%) least often.

[4] S&P 500 CHROs. N2Growth analysis.

## First-time CIO rate, by industry

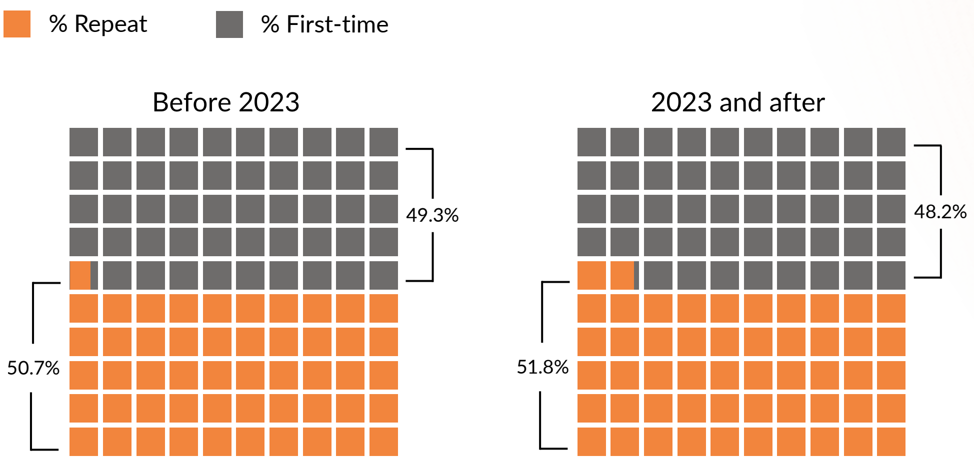



Agriculture, Energy, and Natural Resources (n=14) and Consumer (n=19) are small subsets and should be interpreted with caution.

## Boards are not currently moving toward more first-time or more repeat hires

The split barely moves: 49.3% first-time among hires prior to 2023 and 48.2% in hires since 2023.

## First-time and repeat CIOs, before 2023 vs. 2023 and after



**Statistically speaking, the hiring profile for CIOs has remained relatively stable between the pre-2023 and post-2023 cohorts, a significant finding in itself given the turbulence of the past three years.**

**There is movement at the edges, however. We've already noted shifts in the hiring pipeline, where the demand for general IT leadership is softening and openness to candidates coming directly from digital and product engineering is increasing.**

**Now, we turn to further examine where the hiring profile is showing signs of movement.**

# Recent shifts in the profile

Each of the shifts in the hiring profile is moderate in itself. Taken together, however, they form a consistent pattern. Boards are drawing first-time CIOs from a less IT-traditional and more product-oriented pool than they did three years ago. Technical credentialing remains valued, while the share of MBAs is dropping. They are appointing CIOs later in their careers. And female appointments have risen modestly. The role is not undergoing structural change. What's happening is a turn toward wider pools of candidates, where seasoned judgment and technical proficiency are valued as much as the traditional measures of readiness for the chair.

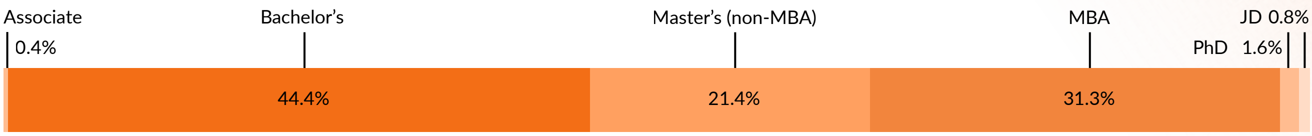
## Credentials and vendor experience

The aggregate CIO credential profile is graduate-level. More than half (55.1%) hold a master's-level credential or higher. CS degrees (any level) outnumber MBAs 49.3% to 33.9%, while a third of CIOs have prior vendor experience. While technical credentialing has stayed high since 2022, business credentialing has noticeably dropped.

### More than half of CIOs hold a graduate-level credential

55.1% of CIOs hold a master's-level credential or higher; for 31.3%, an MBA is their highest degree (a few MBAs also hold a higher degree, which is why the total MBA share cited elsewhere is slightly higher). The rest hold other types of master's degrees, JDs, or even PhDs as their highest degrees.

**Distribution by highest degree earned**



# Madhuri Andrews

## EVP and Chief Information Officer at MKS Inc., and Board Director, Applied Industrial Technologies, Inc.

We sat down with Madhuri Andrews to discuss what it takes to be a successful CIO today.

**Boards are appointing more CIOs with CS degrees and deep technical backgrounds and fewer with traditional MBA profiles. Is that the right move, or are boards potentially making a mistake?**

I have thought about this quite a bit, including from my own experience on boards at both public and private companies. And to me, it is not really a choice.

Yes, a CIO needs technical depth. They need fluency in cybersecurity, data architecture, platform strategy, where emerging technology is headed. Those are all table stakes. But technical fluency alone does not earn a CIO a seat at the executive table or in the boardroom. You also have to be a business leader. You have to speak the language of the business, and you have to be able to translate, to make the connection between what you are doing technically and what it means for the organization.

The frame I keep coming back to is the T-shaped leader. The vertical is your technical discipline, and yes, the CIO needs real depth there. But for a CIO, the horizontal, the ability to work across the organization and connect technology to enterprise value, is the larger and more demanding part of the role. If you only have the vertical, you are going to struggle to be effective at the level this role demands. You have to be bilingual. Technical and business. And if you do not have both, I think it is going to be very hard to have the impact the role calls for.

**Read the full interview with Madhuri Andrews by clicking here.**

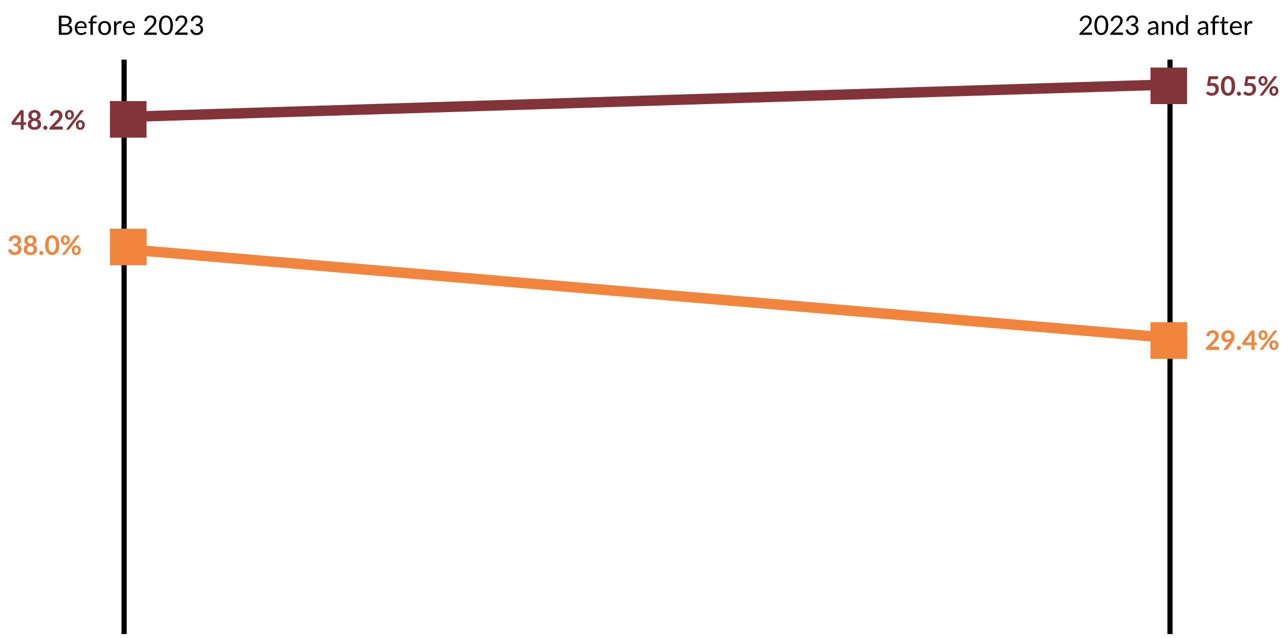
Madhuri Andrews is EVP and CIO at MKS Inc. She also serves as a board director at Applied Industrial Technologies, Inc. (AIT). She has been recognized as a Global CIO 100 winner, inducted into the CIO Hall of Fame, BostonCIO ORBIE Global Award recipient, and named among the Asian American Top 100 Hall of Fame, among other industry honors.

## CIOs appointed since 2023 are less business-credentialed than CIOs appointed in 2022 and prior

MBA share fell from 38.0% among CIOs appointed before 2023 to 29.4% among those appointed since. CS-degree share has remained relatively stable, at 48.2% before 2023 and 50.5% since.

**CS and MBA share, before 2023 vs. 2023 and after**

% with a CS degree    % with MBA



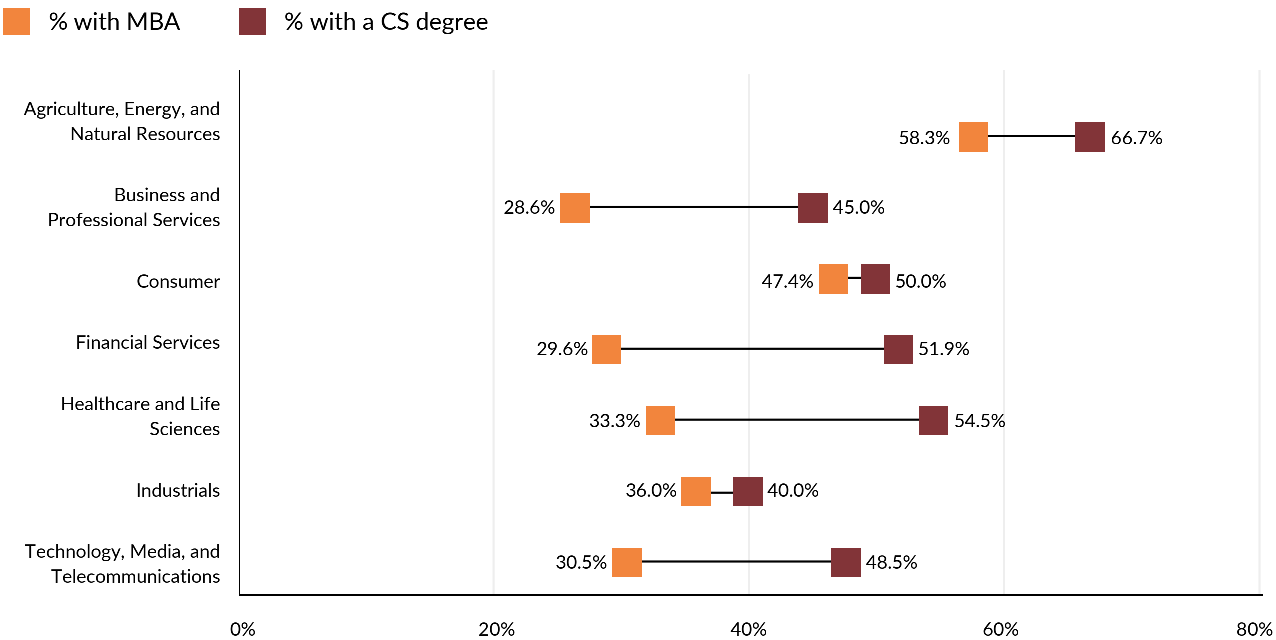

CS share counts any CIO with a CS degree at any level. A CIO holding both a CS degree and an MBA is counted in both.

## CS degrees outnumber MBAs in every industry, but the gap varies widely

CS degrees and MBAs both run high among Agriculture, Energy, and Natural Resources CIOs (66.7% and 58.3% respectively), the highest combined credentialing of any sector. The subset is small (n=14), so the magnitudes should be treated with caution, but the pattern is consistent with what is expected in a technical, regulated industry.

Healthcare and Life Sciences CIOs hold the second highest industry proportion of CS degrees (54.5%). MBAs are second most common in Consumer (47.4%).

## CS and MBA share, by industry

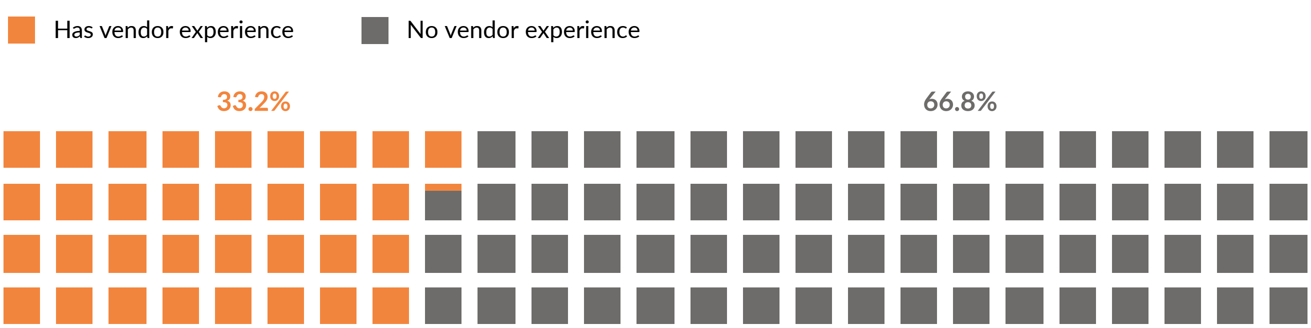



Agriculture, Energy, and Natural Resources (n=14) and Consumer (n=19) are small subsets and should be interpreted with caution.
A CIO holding both a CS degree and an MBA is counted in both.

# A third of CIOs spent part of their career at a technology vendor

33.2% of CIOs have prior vendor experience.

## Prior vendor experience




Vendor experience counts any CIO who held at least one prior role at a technology vendor or services provider.

## The proportion of CIOs with vendor experience has remained relatively constant

Vendor experience has only risen slightly, from 32.1% among CIOs appointed in 2022 and before to 34.5% among those appointed in 2023 and after.

**Vendor experience, before 2023 vs. 2023 and after**

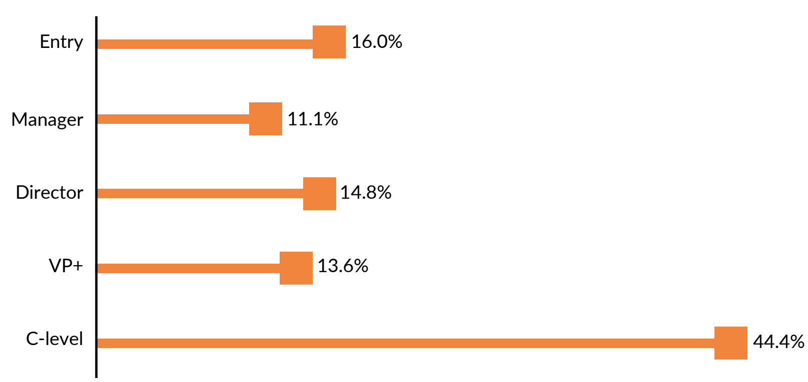

% with vendor experience before 2023

% with vendor experience 2023 and after

## Among CIOs with vendor experience, the C-suite is the most common exit point

Among the 33.2% with vendor experience, 44.4% rose to C-level before their current CIO appointment. The remainder are distributed across earlier career stages, with entry-level the next-largest group at 16.0%. The middle ranks (manager through VP+) each account for 11.1 to 14.8% of the group.

**Seniority reached at a vendor, among CIOs with vendor experience**



# Age at appointment

The CIO chair is being filled by modestly older candidates than it used to be. Median age at appointment is 49, with 36.3% of CIOs appointed between 45 and 49. Hires in 2023 and after skew about two years older at the median (50 vs. 48) than those hired before 2023, with sharply fewer appointments under 44 and more in the 50–54 bracket. For aspiring CIOs, the data reads as a shift in typical timing: boards may be appointing more seasoned candidates, but they are still open to younger ones.

## Most CIOs reach the chair in their late 40s or early 50s

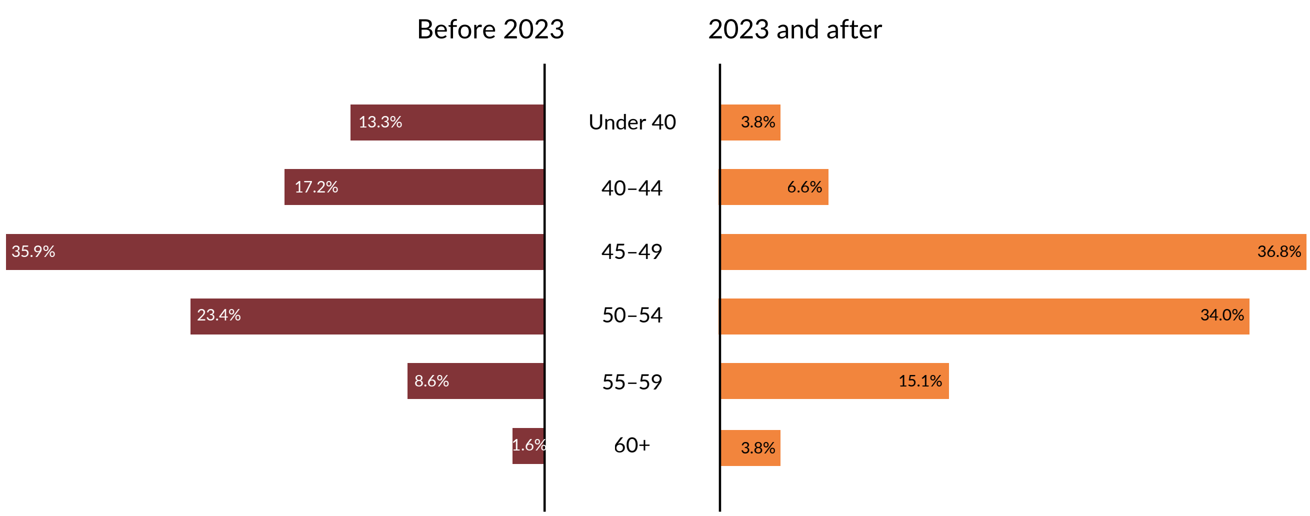
The 45–49 bracket accounts for 36.3% of appointments and 50–54 for another 28.2%; appointments under 40 (9.0%) and at 60 or older (2.6%) are rare.

**Age at appointment**


## Boards are appointing older CIOs than they used to, with fewer young appointments and more in their early 50s

Median appointment age rose from 48 to 50 between cohorts; the under-40 share fell from 13.3% among hires before 2023 to 3.8% among hires in 2023 and after, while the 50–54 bracket climbed from 23.4% to 34.0%.

**Age at appointment, before 2023 vs. 2023 and after**



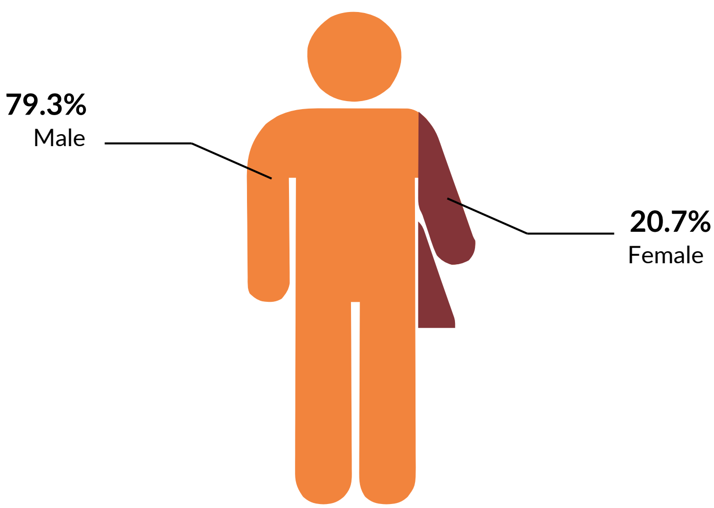
# Gender mix

The gender mix in the CIO chair varies sharply by industry, with female appointments rising modestly among recent hires. The role is 20.7% female overall, with the share moving from 18.7% to 23.2% between cohorts. The industry range is wide (32.1% in Industrials to 6.7% in Financial Services). In aggregate, female CIOs differ from male CIOs on the credential path to the chair, which is explored in more detail below.

## One in five CIOs is female

Female CIOs hold 20.7% of S&P 500 chairs; male CIOs hold the remaining 79.3%.

**Gender breakdown**

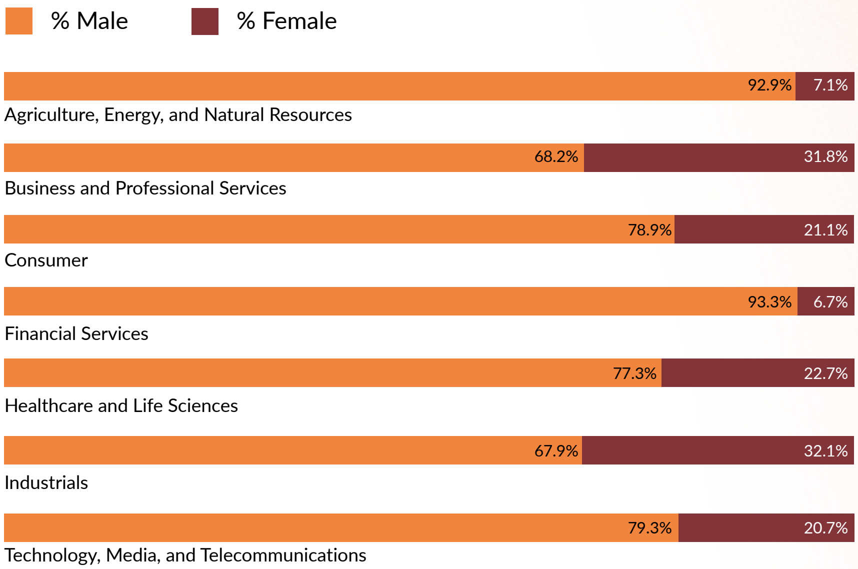



## Female share runs highest in Industrials and Business and Professional Services and lowest in Financial Services and Agriculture, Energy, and Natural Resources

Female appointments range from 32.1% in Industrials and 31.8% in Business and Professional Services down to 6.7% in Financial Services and 7.1% in Agriculture, Energy, and Natural Resources.

Two patterns are worth flagging. First, the distribution does not track cleanly with the technical-vs-commercial split of the industry. Industrials is technical-heavy and has the highest female share; Agriculture, Energy, and Natural Resources is also technical-heavy and has nearly the lowest. The gender balance across these industries cannot be explained as a story about which sectors hire more technical CIOs. Second, the two sectors with the fewest female CIOs have little else in common. They differ on credential mix, where MBA share runs 58.3% against 29.6%, and on internal hiring, at 50% against 33.3%. No single sector characteristic explains the gap.

### Female and male share, by industry

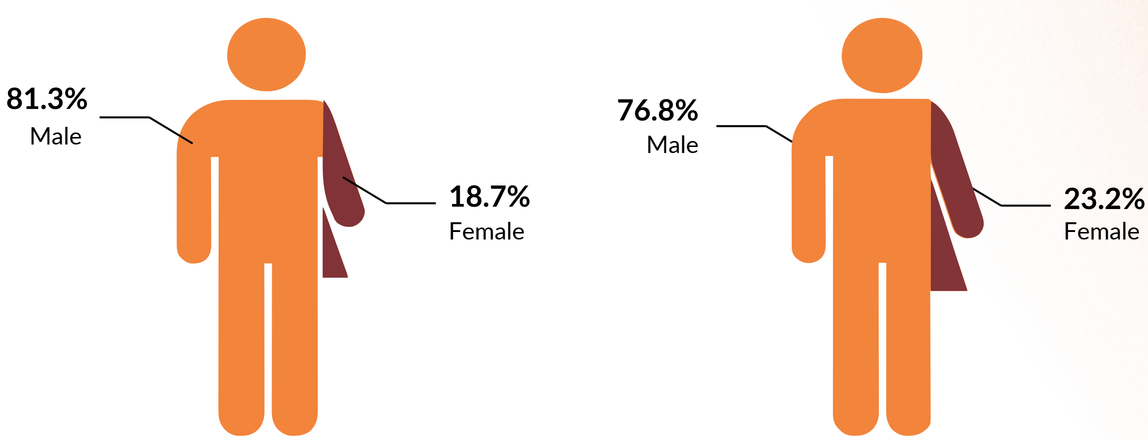



Agriculture, Energy, and Natural Resources (n=14) and Consumer (n=19) are small subsets and should be interpreted with caution.

## Female share is rising in recent hires

Female share rose from 18.7% among hires through 2022 to 23.2% among hires since 2023, a 4.5 percentage-point gain.

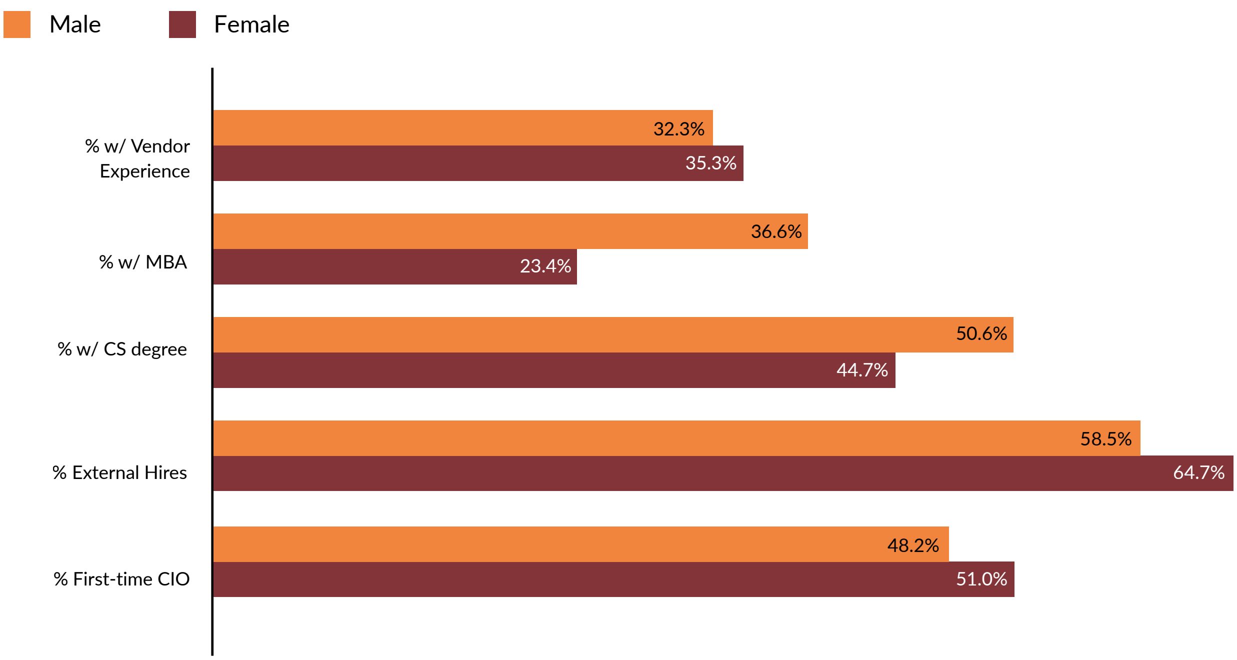
### Gender, before 2023 vs. 2023 and after



## Female and male CIOs differ significantly on the proportion with MBAs, but little else

Female CIOs reach the chair through a different credential mix than male CIOs. The MBA gap is 13 points (23.4% of female CIOs have an MBA vs. 36.6% of male CIOs), the largest credential difference in the dataset. CS-degree rates and median age at appointment are roughly equal across genders, which means the gap is not about women being more technically credentialed or less experienced than men. It is specifically about business credentialing: female CIOs are reaching the chair without an MBA at notably higher rates than their male peers. Female CIOs are also somewhat more often external hires (64.7% vs. 58.5%), a smaller gap that could reflect sampling variation. Given the female subset is n=51, the magnitude of these gaps should be interpreted with caution, even if the directional pattern is suggestive.

### Profile comparison, female and male CIOs




Female subset is small (n=51); figures should be interpreted with caution, particularly for finer comparisons.

**The shifts documented here are real but bounded. Boards continue to value technical depth and raising the bar on the experiential depth they expect from CIOs, but they are not rebuilding the role around those expectations. The profile stability documented in the first section holds, but the movement at the edges is telling and possibly foreshadows larger trajectories. The next section turns to two other dimensions of the CIO picture: how long CIOs hold the role, and the career histories that brought them to it.**

# Tenure and cross-industry careers

The previous sections describe the hiring decision, including whether candidates came from inside or outside the firm, whether they were first-time or repeat CIOs, and the roles they held immediately prior to appointment. This section turns to the shape of the career itself, namely, how long CIOs hold the role, and how broadly their experience ranges before they reach it. Together, they reveal the career arc of today's CIOs.

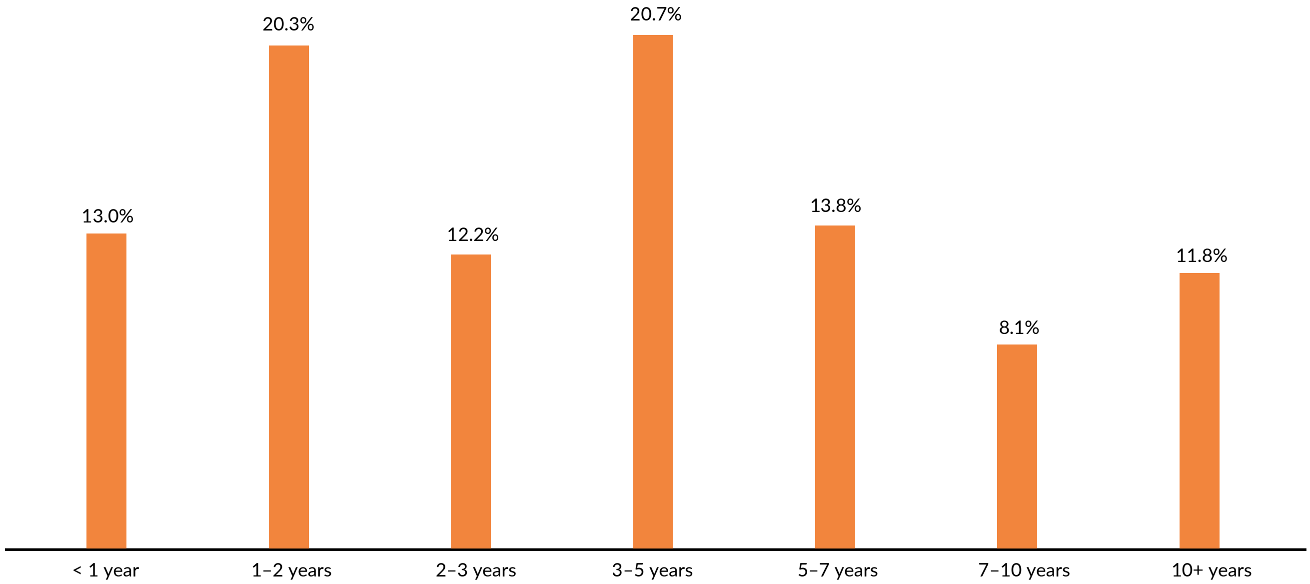
## Tenure

CIO tenure is highly variable, and the median is less informative than the spread. Median tenure is 3.4 years, but 45.5% have held the role for less than three years and 19.9% have held it for seven years or more. Industry differences are wide and the median varies considerably, making industry context an important factor when interpreting tenure expectations. For sitting CIOs, the median is not a useful personal benchmark: the role's expected length varies considerably by industry and by hire type.

### CIO tenure spreads widely, with no single dominant bucket

Tenure spreads widely: the largest buckets are 1–2 years (20.3%) and 3–5 years (20.7%); 13.0% are under one year, and 11.8% have crossed 10 years.

### Current CIO tenure distribution

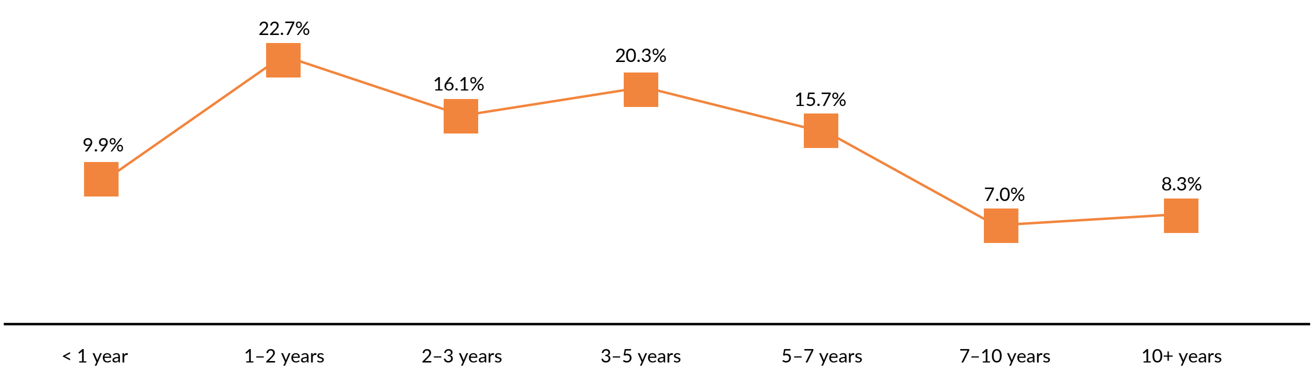



Current tenure is years held in the current CIO role as of the dataset cutoff.

## Most CIOs spent only a few years in the role that preceded their appointment

Just under half (48.7%) of CIOs spent less than 3 years in their prior role; the largest single bucket is 1–2 years (22.7%).

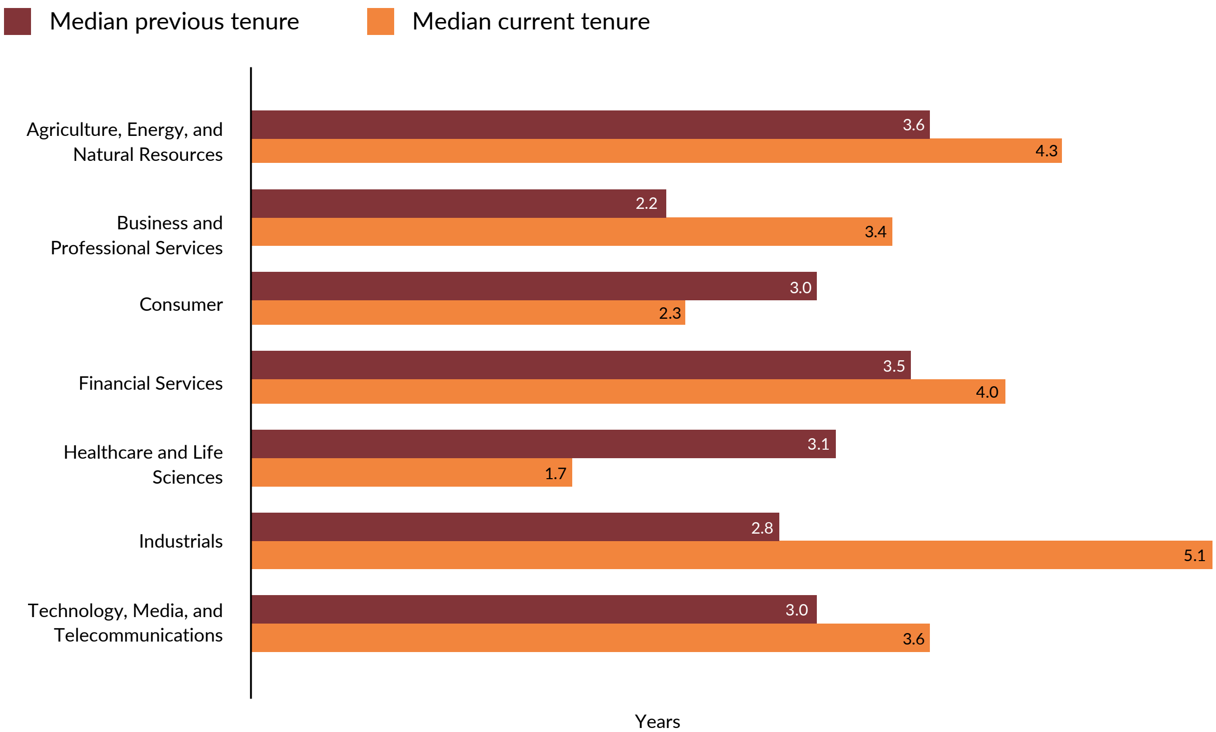
### Prior role tenure distribution




## Current-role tenure varies sharply by industry; prior-role tenure does not

Current-role tenure varies widely by industry, from 1.7 years (Healthcare and Life Sciences) to 5.1 (Industrials); prior-role tenure clusters more tightly between 2.2 and 3.6 years.

### Median tenure, current and prior role, by industry

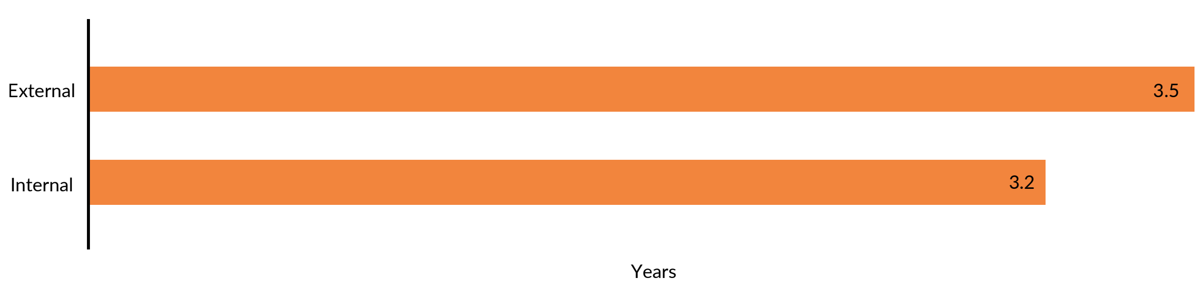



Agriculture, Energy, and Natural Resources (n=14) and Consumer (n=19) are small subsets; the 4.3-year and 2.3-year figures should be interpreted with caution.

## External hires and internal promotions hold the chair for roughly the same length

External hires may hold the role slightly longer at the median (3.5 yrs vs. 3.2 yrs for internal promotions), but the 0.3-year gap is within sampling noise. Boards shouldn't presume one type of appointment will last longer than the other.

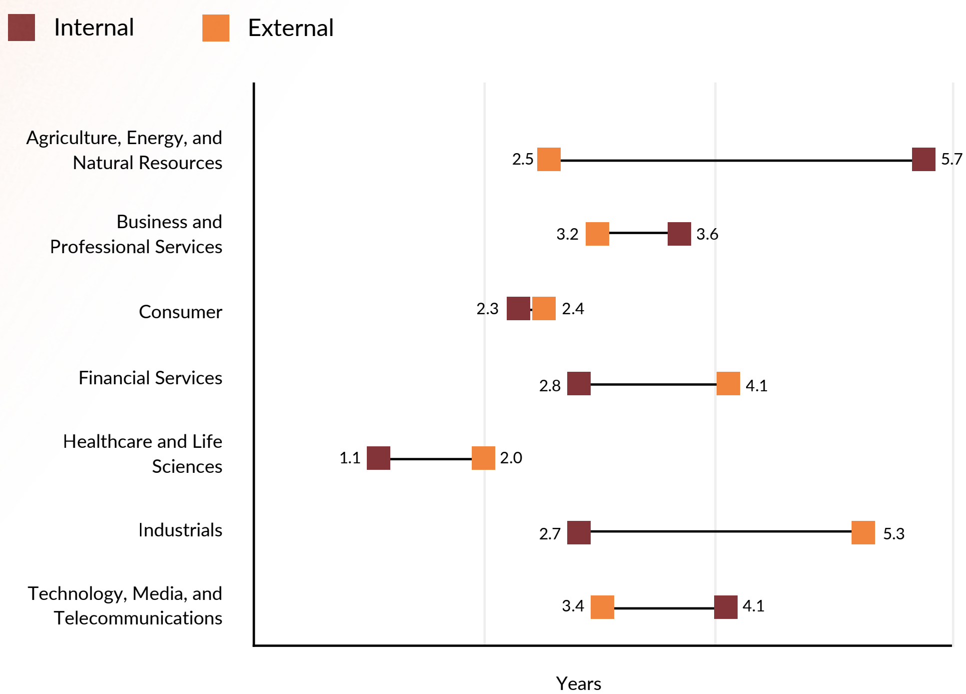
### Median current tenure, internal vs. external hires



## The internal-vs-external tenure pattern flips by industry

The pattern flips by industry: external hires hold the role longer in Industrials (5.3 vs. 2.7 yrs) and Financial Services (4.1 vs. 2.8 yrs), while internal promotions last longer in Agriculture, Energy, and Natural Resources (5.7 vs. 2.5 yrs) and Technology, Media, and Telecommunications (4.1 vs. 3.4 yrs).

### Median current tenure, by industry and hire type




Industry × hire-type subsets are small (n=6 to n=66); figures should be interpreted with caution, particularly for Agriculture, Energy, and Natural Resources, Healthcare and Life Sciences, and Consumer external-hire subsets.

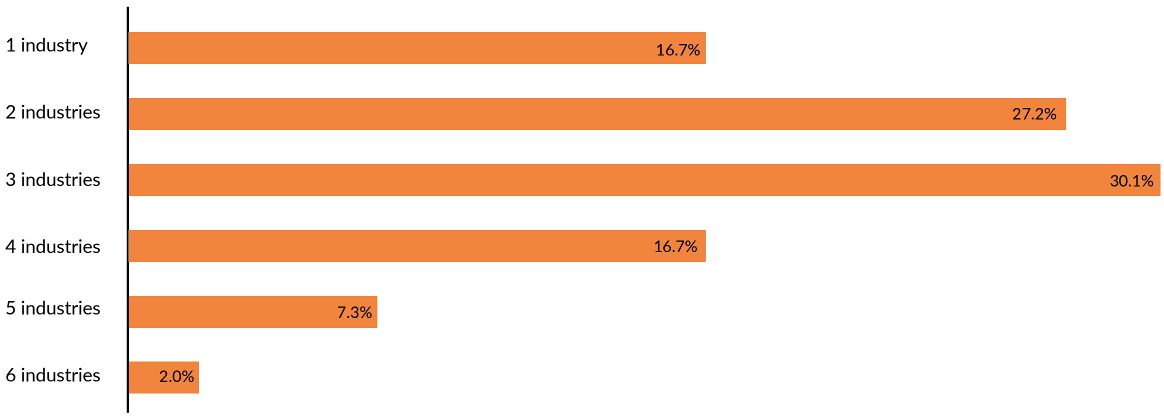
## Cross-industry careers

Cross-industry mobility is the norm in CIO careers, not the exception. 56.1% of CIOs have worked in three or more industries, and only 16.7% have spent their career in a single sector. Among external hires, 67.6% come from a different industry than the hiring company. The pattern suggests boards weigh enterprise-wide leadership experience more heavily than industry familiarity when filling the chair.

## Most CIOs have worked across multiple industries over their careers

The most common count is 3 industries (30.1%); only 16.7% are single-industry, while 26.0% have worked in four or more.

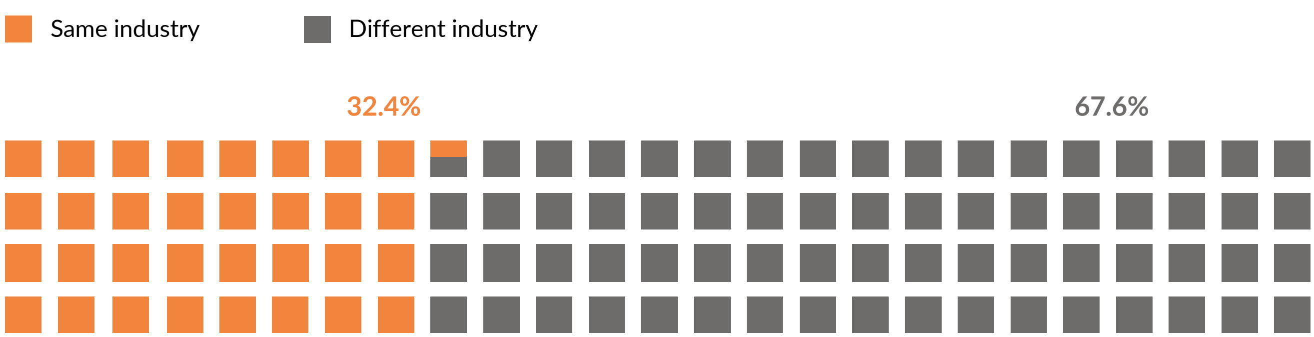
### Industries worked in across career




## When boards hire externally, they look outside their own industry more often than within it

Most external hires (67.6%) come from a different industry than the hiring company; 32.4% are same-industry moves.

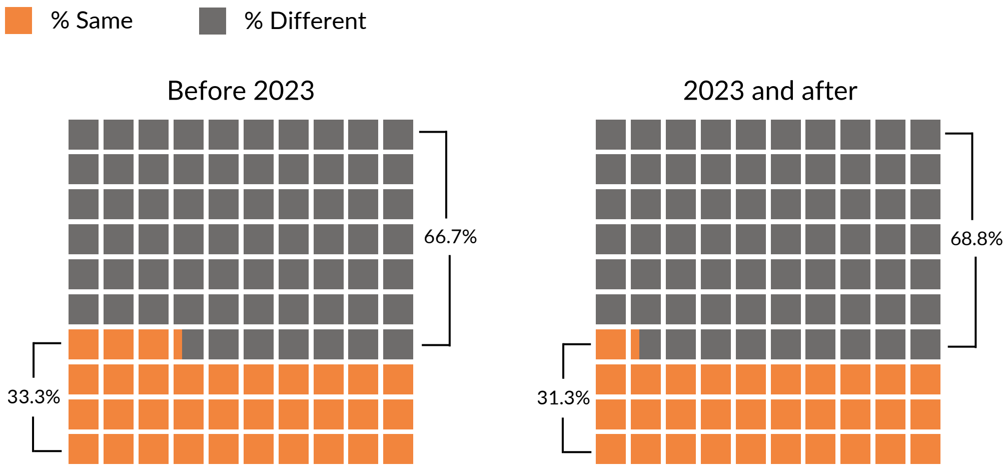
### External hires, same vs. different industry




## Boards have not moved toward more same- or different-industry hires

The pattern barely changes across cohorts: 33.3% same-industry among sampled hires in 2022 and before, 31.3% among hires since 2023.

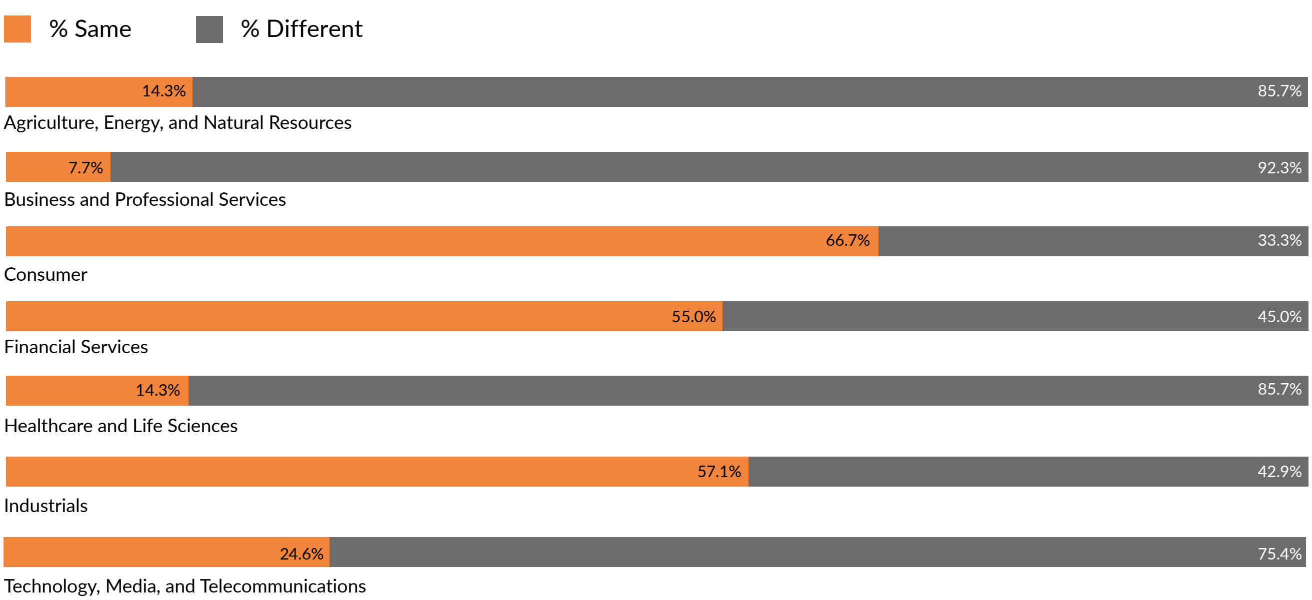
### External hires, same vs. different industry, before 2023 vs. 2023 and after




## Same-industry hiring is common in Consumer and Industrials but rare in Business and Professional Services and Healthcare and Life Sciences

Same-industry hires are common in Consumer (66.7%) and Industrials (57.1%); they are rare in Business and Professional Services (7.7%) and Healthcare and Life Sciences (14.3%).

### External hires, same vs. different industry, by industry of hiring company




Industry external-hire subsets are small, with Technology, Media, and Telecommunications the largest at n=65; figures should be interpreted with caution. Industries with very small subsets, including Agriculture, Energy, and Natural Resources (n=7), should be interpreted with particular caution.

**Tenure and career range show contours of the CIO career that a hiring snapshot alone cannot capture. Tenure varies sharply by industry, and most CIOs have worked across multiple sectors before reaching the chair. For aspiring CIOs in particular, the data offers a clearer picture of the depth and breadth of experience that typically leads to the chair. For boards, it is a reminder that the career behind the candidate matters as much as the role immediately preceding appointment.**

# What's next? Action items for boards, sitting CIOs, and aspiring CIOs

The expectations being placed on the CIO are rising, even as the aggregate hiring profile has remained largely the same. We believe that amidst this storm, boards may not yet have a settled view of what the role now requires, sitting CIOs may not see how their peer group is shifting, and aspiring CIOs may be looking for guidance on how to position themselves.

What follows are action items each group should consider taking to find or become the type of CIO organizations need for the emerging future.

## For boards

1. Reconsider what the CIO role requires in 2026 and beyond. The profile that produced strong CIOs through the cloud and mobile eras may not be the profile that produces strong CIOs through the AI and quantum eras. Separate what the role requires from what the role has historically looked like, and decide what mix you need before writing the next search brief.

2. Audit your last CIO search brief against the data. If it hard-codes industry experience or a traditional IT path as a requirement, your spec may be out of step with how the role is being filled. Two-thirds of external hires come from outside the hiring company's sector, and more than twice as many first-time CIOs come from digital and product engineering backgrounds than they did in 2022 and prior.

3. Develop your internal CIO succession candidates by building their technical depth alongside their P&L and enterprise-leadership fluency. Give them opportunities to lead product-building initiatives, not just IT operations. Expose them externally through boards, peer forums, and cross-industry technical communities.

4. Treat the CIO seat as one of the highest-leverage selection decisions you will make this decade. The executive most responsible for guiding the enterprise through AI, agentic systems, and quantum risk should be selected with the same rigor, breadth, and forward-looking criteria you bring to CEO succession.

## For sitting CIOs

1. Treat technical depth as a continuing investment, not a closed chapter. The CIOs who stay relevant through the next wave of change are likely to be the ones who carry the technical weight themselves rather than delegating it. Spend more time with the AI, agentic, and quantum questions than your current role strictly requires.

2. Deepen your fluency in finance, business strategy, and the operating realities of the functions you support so you can co-lead AI, digital, and transformation initiatives with your C-suite peers rather than simply enabling them. Technical depth gets you to the table. Business fluency determines what you can do once you're there.

3. Delegate operations, not thinking. Build a high-caliber IT leadership team and an increasingly automated technology operating model so that day-to-day execution runs reliably without your direct attention, freeing you to stay close to the strategic and technical questions that matter most.

4. Build relationships outside your company with other CIOs, technology leaders, and the broader vendor and analyst ecosystem. The pace of change makes peer learning more valuable than it used to be, and external perspective is increasingly part of what makes a CIO effective.

## For aspiring CIOs

1. Build leadership experience across multiple technology functions, not just one. The pipeline data shows boards drawing first-time CIOs from a wider set of pathways than they did three years ago. IT general leadership still leads, but digital and product engineering has more than doubled its share. Leaders who can credibly speak to operations, applications, and product engineering will compete well across more of the openings boards are filling.

2. Adjust your timeline. The under-40 share of new CIOs has dropped sharply, and the median appointment age has moved from 48 to 50. If you assumed an appointment in your late 30s, plan for your mid- to late 40s or early 50s, and use the additional time to deepen your enterprise leadership and technical credibility.

3. Invest early in fluency on AI, agentic systems, quantum, and the broader technology landscape, so that when you arrive in the CIO seat you can immediately operate as an externally credible advisor to the board and CEO, not just as an internal technology leader.

4. Prepare for a role that is changing as you climb toward it. Today's CIO manages a technology function. Tomorrow's CIO will likely own enterprise AI strategy and govern how AI agents work alongside human teams. Boards still value technical fluency in the seat, so invest in yours. Aim past today's CIO and toward the role as it will exist in 2027 and beyond.

# Methodology

N2Growth examined over 5,000 individual data points across 21 analytical dimensions, including hiring source, tenure, gender, education, prior experience, and industry background, to analyze and compare the career trajectories and profiles of every CIO in the S&P 500 (N = 246) at the time of the study (March to May 2026). Not every attribute was verifiable for every CIO. Percentages are calculated on the number of CIOs for whom the attribute is known, not on the full 246, so denominators vary by measure: computer science degree (n=221), MBA (n=230), highest degree earned (n=243), age at appointment (n=234), prior role family and vendor experience (n=244), and prior role scope (n=228). Industry and cohort breakdowns use the same known-status bases. Records with unknown values are excluded rather than counted as negative, which means a share such as the 49.3% holding a CS degree describes those we could verify, not the full population. Where applicable, the dataset was split into a pre-2023 cohort (n=134) and a post-2023 cohort (n=112) to identify longitudinal shifts.

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