CIO
STATE OF THE CIO

Rebalancing Act: CIOs Operationalize Pandemic-Era Innovation

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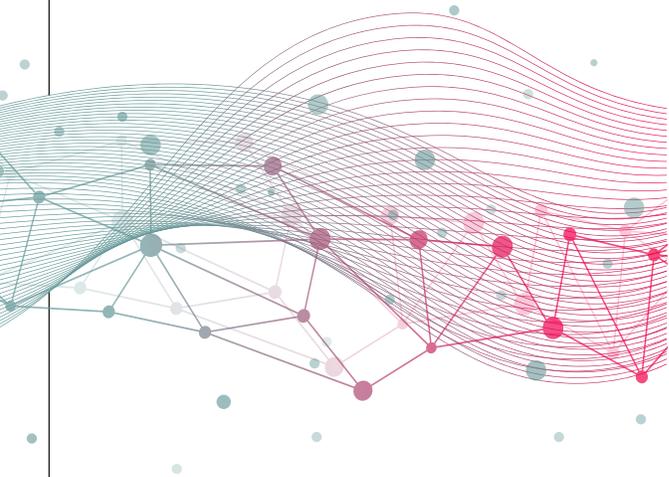
Fresh off the pandemic wave of digital innovation and elevated status, CIOs are swinging back to the fundamentals, with a heightened focus on security and improving IT operations.

While CIOs were the surprise pandemic hero and the force behind digital innovation, IT leaders spent the better part of the last year focused on the fundamentals, from modernizing enterprise architecture to ensuring operations are agile, resilient, and secure.

The global pandemic sent companies scrambling to recalibrate operations in support of remote work and new contact-less digital customer and employee experiences. In doing so, technology and IT leadership stood front and center--the driving force behind transformation and orchestration of new digital strategies. Now, with companies settled into new business models and ways of working, IT organizations have moved into a governance phase. They are actively making operational excellence a priority and working to ensure the fast-paced cycle of digital investments made over the course of the pandemic is delivering for the intended business outcomes.

The 2022 State of the CIO, which surveyed 985 IT leaders and 250 line of business (LOB) participants, confirmed the shift in IT priorities. Eighty-five percent of IT leaders responding to the research are currently spending time on transformational activities, most significantly, modernizing infrastructure and applications (40%) followed by aligning IT initiatives with business goals (38%) and cultivating the IT/business partnership (30%).

Functional tasks also consumed a lot of CIO bandwidth this year, as 84% of respondents are currently focusing their time on functional activities, compared to only 81% in the 2021 State of the CIO research. As part of their functional duties, security management took top billing, cited by half (51%) of respondents, up from only 44% last year; next up was improving IT operations and system performance (43%) and controlling costs and

ACTIVITIES CIOs ARE CURRENTLY FOCUSING ON:

51%
Security management

43%
Improving IT operations / systems performance

40%
Modernizing infrastructure and applications

38%
Aligning IT initiatives with business goals
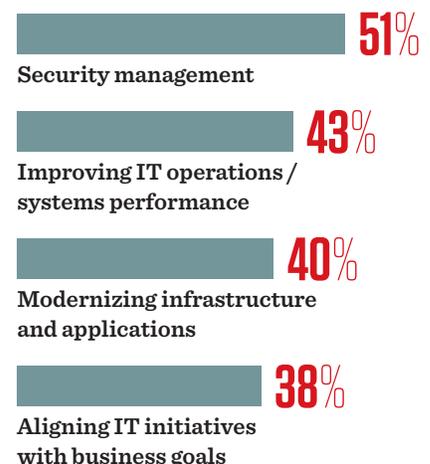
expense management (29%). In comparison with last year, IT leaders were not able to spend as much time on business strategy—only 60% of CIOs are currently focused on strategic activities, including driving business innovation, developing strategy, or identifying opportunities for competitive differentiation, down significantly from 67% in the 2021 research.

When asked to rank the archetype that mostly aligns with their current role, CIO respondents were more closely split among the personas this year, with 38% identifying as transformational, 37% as functional, and a quarter defining their role as business strategist. In comparison, almost half (47%) of CIOs responding to the 2021 State of the CIO research described their role as transformational. CIOs in manufacturing (49%) were far more likely to identify with a transformational role while those in the government and education sector saw their responsibilities more closely aligned with functional activities (44%). As with years past, IT leaders are still finding it a challenge to strike the right balance between business innovation and operational excellence (76%) no matter their CIO persona.

76%

of CIOs say it's challenging to find the right balance between business innovation and operational excellence.

Looking out over the next three years, CIOs anticipate yet another shift on the horizon. Almost three-quarters of respondents (73%) expect to ramp up business strategist activities such as driving business innovation, developing business strategy, and identifying opportunities for competitive differentiation, although that's down slightly from 77% cited by respondents to the 2021 State of the CIO. Transformational activities such as modernizing infrastructure and applications and leading change efforts are expected to remain an important part of CIO mandate moving forward for 73% of respondents with 63% anticipating they will be spending a fair amount of time on functional duties, from security management to improving IT operations and performance.

ACTIVITIES CIOs PLAN TO SPEND MORE TIME ON:

32%
Driving business innovation

30%
Security management

29%
Developing and refining business strategy
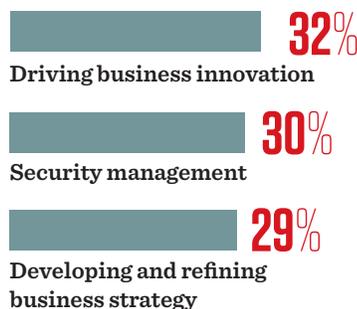
Even this year's top CEO priorities reflect the mandate for CIOs to align the years-long spate of technology investments with operational excellence and intended business outcomes. Specifically, upgrading IT and data security to reduce corporate risk was the No. 1 CEO priority, cited by a third of overall respondents, and even higher among $1 billion-plus companies (42%). CEOs' desire for CIOs to strengthen IT/business collaboration was cited by 28% of respondents. Leading digital business transformation, a key CEO priority for 42% of respondents last year and 39% in the 2020 State of the CIO, ranked among the top three CEO objectives for only 28% of respondents in the 2022 State of the CIO research.

Innovation Leadership Still a Mandate

While the pandemic luster may have faded just a little, CIOs are maintaining a prominent leadership profile and still command a vital role in defining and spearheading innovation. Nearly three-quarters of responding CIOs (74%) believe the heightened visibility of the CIO role, sparked by their pandemic efforts, will persist, and LOB is firmly in that camp, with 78% expecting CIOs' elevated status to continue regardless of shifts in focus. Half (49%) of CIO respondents now report directly to the CEO, with a higher number among strategic CIOs (54%) and smaller companies with less than $100 million in annual revenue (59%).

74%

of heads of IT say that the CIO role was elevated due to the pandemic and this visibility within the organization is expected to continue

→ **78%** **of their LOB counterparts agree**

84%

of heads of IT say that the CIO is becoming a changemaker, increasingly leading business and technology initiatives

→ **76%** **of their LOB counterparts agree**

Even with the emphasis on governance and operational excellence, CIOs are still considered digital innovation leaders. Eighty-six percent of CIOs say their role is more digital and innovation focused, down slightly from 92% last year, while 85% say they are more involved in leading digital transformation initiatives compared to their business counterparts, again a little lower than the 89% who said so in the 2021 State of the CIO. Even more revealing is that CIOs are increasingly seen as a changemaker, the lead on business and technology initiatives—a view shared by the lion's share of CIOs (84%) and LOB (76%).

CIOs also continue to have strong ties with other influencers in the company. Seventy-nine percent of those surveyed report the CIO has a strong educational partnership with the CEO and board of directors, and 85% point to the increasing reliance on trusted advisors to help navigate new technologies, processes, and methodologies as evidence that IT leadership is now inextricably tied to business strategy.

BUSINESS INITIATIVES DRIVING IT INVESTMENTS IN 2022:

#1   **Increasing cybersecurity protections**

#2   **Increasing operational efficiency**

#3   **Improving customer experience**

#4   **Transforming existing business processes**

#5   **Improving employee productivity**

Cybersecurity Leads Initiatives and Investments

Given the cascade of ransomware and high-profile data breaches, it's no surprise that IT organizations are ramping up cybersecurity activity and responding to the CEO mandate to increase protections to minimize corporate risk. Almost half of respondents to this year's survey (49%) cited increasing cybersecurity protections as the top business initiative driving IT investments this year, up dramatically from 34% last year. Prioritization of cybersecurity initiatives was even higher among companies in the government/ education (59%), manufacturing (56%), and the healthcare sectors (55%), and 65% of all respondents say that the improvement of cybersecurity protections increased in priority due to current socioeconomic factors.

Security and risk management is also the top technology initiative commanding IT investment this year, cited by 45% of respondents, and again higher in those same industry segments: 59% for government/education and 51% for manufacturing and healthcare. Improving cybersecurity protections was an imperative for 46% of respondents to this year's State of the CIO as part of their technology plans to address hybrid work. Moreover, the security budget represents close to 15% of the total IT budget, on average, at responding organizations.

Outside of security initiatives, 2022 State of the CIO respondents are advancing efforts to increase operational efficiency, cited by 46% of IT leaders compared to only 34% in the prior year's survey. Transformation of existing business processes, including automation and integration, was a top imperative for 41% of respondents while improving customer experience (42%) as well as employee productivity (27%) ranked high on the CIO agenda.

With pandemic-enabled workplace changes still in place, organizations had a less-than-expected focus on enhancing hybrid work technologies, cited by 21% of respondents, and optimizing the employee experience, cited by 17% of respondents. In fact, 8% of respondents said socioeconomic factors had actually decreased any efforts to enhance hybrid work technology—an indicator, perhaps, that much of that investment came last year during the critical wave of the pandemic. New product development and the introduction of new digital revenue streams were also less important this year.

TECH INITIATIVES DRIVING IT INVESTMENTS IN 2022:

#1   **Security/risk management**

#2   **Data/business analytics**

#3   **Application/legacy systems modernization**

#4   **Customer experience technologies**

#5   **Cloud migration**

In addition to investments in security and risk management technologies, organizations ponied up for data/business analytics technology (35%) and capabilities for modernizing applications and legacy systems (29%). Collaboration tools, a major investment last year, hit the budgets of only 21% of this year's respondents. Cloud investments, including cloud management, migration, and infrastructure tools, were also much further down on the list of technology investments. Edge computing, highly touted in many industry circles, was only cited by 8% of responding CIOs, although significantly higher among IT leaders in manufacturing (11%) and high-tech (16%) sectors.

The majority of respondents (59%) reported overall IT budget increases, a significantly higher number than last year, at 37%. The median budget hike was 15%, albeit significantly lower in government and education, at 10%. Those planning a budget increase in 2022 cited the need for security improvements (57%) followed by the need to upgrade outdated IT infrastructure (48%) and product innovation (38%) as key drivers. Making technology investments to support remote and hybrid workers drove budget increases for nearly a third (30%) of CIO respondents.

Those companies grappling with decreased IT spend attributed the shortfalls to economic uncertainty (43%) as well as catching up to one-time investments made in 2021 (35%). Companies in manufacturing and retail were more likely to attribute IT budget cuts to investments made last year, at 46% and 50% respectively.

IT still retains direct control over a good portion of the IT budget at most companies—on average, around 48% this year compared to 45.7% in 2021, and expected to increase to 57% over the next three years. Even so, 86% of responding companies to this year's research said other groups or functions outside of IT organizations have their own technology budgets now and for the foreseeable future. In most cases, the department creates the short list and confirms with IT prior to purchase with the exception of executive-level administration, which makes the final selection based on a short list compiled by the IT organization.

90%

of CIOs expect their organization's overall IT budget to either increase or remain the same over the next 12 months.

#1 **reason for tech budget increase— need for security improvements**

CIO'S EXPECT THEIR INVOLVEMENT TO INCREASE IN THESE AREAS:
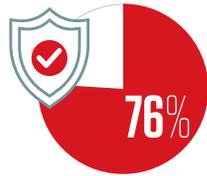
76% — Cybersecurity

71% — Data privacy/compliance
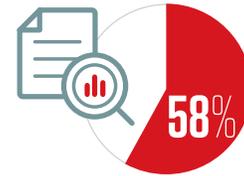
58% — Data analysis

Over the next year, CIOs expect to increase their involvement in cybersecurity (76%), data privacy/compliance (71%), and data analysis (58%) initiatives while stepping back a bit in physical security (14%), multi-cloud management (11%), supply chain (10%), and cloud migration (10%). CIOs in government (87%), healthcare (82%), and manufacturing (80%) are more likely to increase their role in cybersecurity efforts over the upcoming year.

Strategic Advisor and Partner

Regardless of focus, CIOs remain the go-to resource for navigating technology decisions. More than half of line of business respondents (58%) categorized CIOs as a strategic advisor who proactively identifies business opportunities and makes recommendations. This is significantly up from 28% in the 2021 State of the CIO. Twenty-one percent of LOB respondents viewed the CIO as a consultant, providing advice and guidance on technology selection while only 4% saw the CIO as an autonomous player, primarily doing their own thing in technology procurement.

58%

of LOB respondents characterize their CIO as a strategic advisor—up from 28% in 2021

The majority of CIOs (53%) spent time collaborating with LOB in operations and product development this year, higher among those identifying as transformational (58%) as well as those in the manufacturing (64%) and high-tech (59%) industries. In addition, finance (44%) and business development (36%) also ranked high among IT's frequent LOB collaborators.

Revenue responsibility is becoming a standard part of the CIO job description. This year, 65% of responding IT leaders said they count some form of revenue-generation initiative as part of their primary charter, down slightly from 68% in 2021. Thirty-nine percent of CIOs responding to this year's research are managing teams tasked with creating new revenue-generating initiatives while 26% are part of team tasked with doing the same. Thirty-five percent of respondents play no part in revenue-generation responsibilities—a much higher number in government and education (66%). IT organizations are doing a number of things to drive revenue or support the creation of new

DRIVING REVENUE THROUGH...

54%
Automating business and/or IT processes

41%
Interacting directly with customers
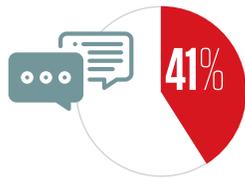
35%
Creating teams focused on innovation

products and services. More than half (54%) are automating business and IT processes, 41% are interacting directly with customers, and 35% are creating teams focused on innovation. While those activities have increased in importance over the last six to 12 months, IT leaders are less likely to partner or engage with startups (13%) or attend monthly meetings with executive leadership to evolve new revenue opportunities.

Empowering the New Workplace

The transition to remote and hybrid working models also had a place on the CIO roadmap this year. Forty-four percent of responding CIOs said socioeconomic factors have escalated efforts to enhance hybrid work with new technologies, and 21% said IT investments will be channeled to those efforts. As organizations put technologies in place and promote process change in support of hybrid work, they are improving cybersecurity (46%), ensuring they have the right collaboration platform in place (32%), and improving network reliability and performance (27%).

Given the more distributed nature of the workforce, nearly three-quarters (73%) of IT leaders say there is a strong push for self-service IT, managed by the IT organization. At the same time, implementing and supporting remote and hybrid work has taken a toll—74% of respondents said the new model has increased the stress on the IT support staff and services.

74%

of CIOs say that remote and hybrid work have increased the stress on IT support staff and services

Customer service efforts have evolved in the pandemic era, in light of more remote and contactless interaction. To enhance customer experience, more than half (52%) of IT organizations are providing alternatives to face-to-face communications while 49% are delivering products and services in new ways and leaning into analytics to explore customer needs and behaviors. Twenty-seven percent of respondents are working to ensure that home-based customer service agents have the requisite technology and support to respond more effectively to customer demands.

The LOB/IT Partnership

LOB continues to rely on IT organizations to identify opportunities for technology initiatives as well as to assist in making technology purchases. In most departments, with the exception of sales and the supply chain, IT creates the short list of products, and the department makes the final selection.

LOB is prioritizing different business initiatives, although increasing operational efficiency remains top of mind for 34% of respondents as does increasing cybersecurity protections, flagged as a heightened priority by 52% of LOB respondents due to socioeconomic factors. Like CIOs, LOB respondents cited security and risk management technologies as the No. 1 area of technology investment in 2022, called out by 29% of respondents. Data analytics (26%), employee experience (25%), and customer experience (24%) technologies were additional targeted investments this year, according to LOB respondents, who seek to direct spending to improve customer experience (33%), increase profitability (32%), and bolster employee productivity (31%).

Over the next year, LOB respondents anticipate increased IT involvement in data privacy and compliance (72%), employee experience (60%), and customer experience (58%). LOB users in financial services were far more likely to expect IT's help with data privacy and compliance, cited by 88% of LOB respondents in that sector.

CIOs' efforts to build credibility among LOB as it relates to their leadership skills and role in innovation seem to paying off. Seventy-nine percent of LOB respondents recognize the CIOs' role as more digital and innovation focused while 78% agree that the CIO plays an outsized role in leading digital transformation—far more than business counterparts. Three quarters of LOB respondents to this year's survey recognize the CIO as a changemaker—a significant endorsement of their leadership abilities—and 78% believe the CIO role, elevated during the pandemic, will remain front and center going forward.

78%

of LOB respondents agree that their CIO is more involved in leading digital transformation initiatives compared to their business counterparts

Still a Struggle to Find Good Talent

Pandemic-triggered employment shifts, including a mass exodus of workers leaving or changing jobs, coupled with an on-going talent crunch, continue to make IT recruitment and staffing a challenge—albeit not as acute as in prior years. Thirty-eight percent of respondents to the 2022 State of the CIO confirmed current socioeconomic factors have escalated the need to improve talent acquisition and retention strategies while 44% said the need remains the same. Of those planning budget increases this year, 48% are earmarking investment towards new talent and

skills. At the same time, improving talent acquisition and retention dropped significantly as a key business imperative for 2022, cited by only 15% of IT leader respondents and pretty steady across industries.

SKILLS IN DEMAND TO SUPPORT DIGITAL INITIATIVES

#1	Security/risk management
#2	Technology integration/implementation
#3	IT architecture

To support on-going digital initiatives, CIOs were on the lookout for talent versed in risk/security management (39%), technology integration and implementation (38%), and IT architecture (34%). There was less demand for strategy skills—27% compared to 34% last year—as well as change management (27%). Organizations anticipated the greatest trouble finding cybersecurity skills (34% compared to only 21% last year) followed by data science/analytics (23%), and artificial intelligence (AI) and machine learning (ML) (19%).

Looking out over the next six to 12 months, the need for cybersecurity skills will remain a constant, cited by 38% of this year's respondents; however, there seems to be a shift back to more innovation-oriented skill sets, including the need for data science/analytics (31%), application development (21%), and AI/ML (21%). Enterprise software skills (18%) and multi-cloud skills (12%) fell lower on the list of in-demand competencies.

In addition to searching and developing key skill sets, IT organizations established some new roles. Twenty-three percent of responding organizations now have a Chief Data Officer role while 22% have a Chief Digital Officer. Chief Innovation Officer was less common, cited by only 16% of respondents.

There's Still D&I Work to Do

Amidst the on-going focus on diversity & inclusion (D&I) issues, there is still work to be done in IT circles. Only 14% of IT leaders surveyed for the 2022 State of the CIO were female, and 71% of responding organizations said their current IT teams had a diverse mix of genders, down from 77% last year. Ethnic and racial diversity on IT teams was also down this year, at 69% of respondents compared to 73% last year.

62%

of CIOs report that their organization has a formal diversity & inclusion training required throughout the year

Sixty-two percent of companies responding to the 2022 State of the CIO reported having formal D&I training throughout the year, down 10 percentage points from last year. One bright spot in the findings: Sixty-seven percent of respondents said creating more diverse and inclusive technology teams has become a bigger priority over the last six to 12 months.

In Summary

As CIOs operationalize new technology investments and deliver on promised business outcomes, this year's swing back to foundational and IT governance work shouldn't be viewed as setback or reversal of status. Rather, the shift is part of the natural cycle of technology-driven business, with CIOs continuing their outsized role in leading business transformation.

ABOUT THE 2022 STATE OF THE CIO

CIO's 21st annual State of the CIO survey was conducted with the objective of understanding how the role of the CIO continues to evolve in today's business climate and to help define the CIO agenda for 2022. This definitive benchmarking survey outlines the tech and business initiatives IT leaders expect to focus on in the coming year, as well as insight into the CIO role when it comes to the pandemic and diversity and inclusion in the workplace. The survey was fielded via email invitations to Foundry's (formerly IDG Communications, Inc.) B2B brand visitors (CIO, Computerworld, CSO, InfoWorld and Network World). The survey has 985 heads of IT respondents—48% of which are from enterprise organizations (1,000+ employees). The top represented industries are manufacturing (14%), high tech (13%), government/non-profits/education (13%), financial services (12%), healthcare (11%), services (legal, consulting, real estate) (10%), retail/wholesale/distribution (8%). Key job titles we see are— CIO (33%), director/managing director (20%), CIO and EVP/SVP/VP (13%). We also survey 250 line of business respondents to make sure we obtain the opinions of CIOs business counterparts whose main functions are finance/accounting (31%), admin/corporate mgmt. (22%), marketing (17%), operations (10%), and sales (8%).

EXAMINING THE MARKETPLACE

Delivering the right message, at the right time, and to the right people is no easy task. However, it's an important one as 72% of tech decision-makers say that if a vendor does not supply them with educational content during the research stage, it negatively impacts their impression. To help tech marketers craft content specific to their customers' needs, we can explore our buyer's journey research by technology products. **If you are interested in seeing these results by different tech buyers, for example cloud, data & analytics, or security, contact us to receive an in-depth, personalized briefing.** FoundryCo.com/contact-us

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