MIS Quarterly Executive

Volume 23 | Issue 1 Article 7

March 2024

The 2023 SIM IT Issues and Trends Study

Vess Johnson

Chris Maurer

Russell Torres

Katia Guerra

Hossein Mohit

See next page for additional authors

The 2023 SIM IT Issues and Trends Study

Authors

Vess Johnson, Chris Maurer, Russell Torres, Katia Guerra, Hossein Mohit, Smriti Srivastava, and Sourav Chatterjee

MIS Quarterly Executive

The 2023 SIM IT Issues and Trends Study

The Society for Information Management's 43rd Annual IT Issues and Trends Study received responses from 671 IT executives, including 251 CIOs and 436 unique organizations. The average revenue of participating organizations was $5.3 billion (median $500 million). IT spending as a percentage of revenue was 6.8%, up significantly from 2022. However, though 64.2% of organizations reported increasing IT headcount, this is significantly lower than the 74.6% high in 2022 but more consistent with that reported in 2021. Continuing a five-year upward trend, 95.9% of organizations reported increases in average IT salaries. The top five IT management issues for organizations in 2022 were Alignment, Cybersecurity, Daya Analytics, Digital Transformation and Compliance; the top five largest IT investments were Analytics, Cybersecurity, Application Development, Cloud and ERP; while the five most-difficult-to-find technical s were Cybersecurity, Analytics, Business Analyst, Cloud and Functional Area Knowledge. The most common criteria for assessing CIO performance were Internal Customer Satisfaction, Value of IT to the Business, Cost Control/Reduction - IT, Availability/Up-Time and Cybersecurity. The average tenure of CIOs was 6.3 years (median 4.2 years), with 46.9% reporting to the CEO. CIOs continue to come from outside organizations at record levels (81.3%) and 22.4% came from prior non-IT positions.[1]

Vess Johnson*
University of North Texas (U.S.)

Chris Maurer *
University of Virginia (U.S.)

Russell Torres *
University of North Texas (U.S.)

Katia Guerra
Boise State University (U.S.)

Hossein Mohit
University of North Texas (U.S.)

Smriti Srivastava
University of North Texas (U.S.)

Sourav Chatterjee
University of North Texas (U.S.)

*SIM Research Fellow

Introduction

Starting in 1980, the Society for Information Management (SIM) has surveyed its membership to identify important information technology (IT) issues and to better understand the state of IT management. This yearly data has been compiled over the 40-plus years history of the study to identify trends and track changes in the management and use of business technology. The 2023 SIM IT Trends Study represents the 43rd such attempt to better

1 This article is being published as a SIM Sponsored report.

DOI: 10.17705/2msqe.00091

understand the challenges faced by organizations and the IT leaders they employ. Over time, the SIM IT Trends Study has grown to explore new technologies, business challenges and facets of IT management to become one of the most comprehensive investigations of its kind.

Founded in 1968, SIM is the oldest and largest not-for-profit professional organization in the U.S. for CIOs, senior IT executives, prominent academicians, advisors and other IT leaders. SIM is both a national organization and a network of local chapters. SIM members, who comprise a broad cross-section of IT leaders, meet regularly to share, learn and network. SIM succeeds because it provides value to its members, their organizations and their communities. SIM co-founded both *MIS Quarterly* and *MIS Quarterly Executive*.

Shaped by SIM Research Fellows, the IT Trends Study's questionnaire is updated annually to improve its quality and to investigate emerging topics in the fast-paced world of IT. Alterations to the questionnaire are kept to a minimum to enable meaningful year-to-year comparisons and to facilitate the identification of trends. In April 2023 a personal link to the questionnaire was e-mailed to each of SIM's 4,522 members. The survey remained open for nine weeks, during which weekly reminders were sent to those yet to respond. During this process, several e-newsletter articles were published, and members were encouraged to complete the survey to support their SIM chapters in a participation challenge. This year, 671 completed questionnaires were received, representing a response rate of 14.8% (compared to 19.0% in 2022).

As done since 2013, the responses were used to create two intersecting datasets: "The CIOs dataset" composed of the 251 respondents who identified themselves as the "CIO or highest-ranking IT executive;" and "the Unique Organizations dataset" composed of the 436 organizations represented by their CIO or highest-ranking IT executive responding (typically a direct report to the CIO in a large organization).

The findings presented in this report are organized in six main sections: Top IT Management Issues; Investments in Technology; IT Practices of Organizations, including spending, workforce, infrastructure, cybersecurity and digital transformation; IT Performance Measures; CIO Tenure, Reporting, Background and Activities; and Summary and Conclusions.

1. Top IT Management Issues and Concerns

1.1. Organizations Top IT Management Issues

IT leaders representing each of the 436 unique organizations responding selected their five most important IT management issues or concerns by choosing from a list of 30 options. The top ten most frequently cited IT management issues are presented in Table 1.

Consistent with the last six years, IT Alignment, Cybersecurity and Data Analytics were the most commonly cited IT management concerns for organizations, ranking 1st through 3rd respectively in 2023. Compliance, Digital Transformation, Business Continuity and Cloud Computing also retained their positions in the top ten, with minor shifts from prior year rankings. However, several IT management issues identified as priorities in 2022 fell out of the top ten list this year. IT Talent reached an all-time high in 2022 (6th) but fell this year to 11th. This decline in perceived importance may be related to more organizational certainty about return-to-work policies and similar post-Covid-19 recovery practices. Business Velocity of Change fell from 9th in 2022 to 14th in 2023, with similar changes for Innovation and Business Strategic Planning, which were tied for 10th in 2022 and fell to 15th and 13th respectively this year.

There were dramatic upward changes in the rankings of two items. Likely fueled by media buzz about tools such as ChatGPT,[2] AI showed the most dramatic change, moving from the 22nd most pressing IT management concern in 2022 to 6th this year. This increased prioritization signals that organizations are interested in harnessing the power of AI-driven generative and predictive capabilities to facilitate increased productivity. IT Cost Reduction moved up 10 places from 17th in 2022 to 7th in 2023. Though this is a dramatic increase in rank, its current position is more

2 Dilmegani, C. *In-Depth Guide to Future of AI in 2024*, According to Top Experts, AIMultiple, January 11, 2004, available at https://research.aimultiple.com/future-of-ai/.

Table 1: Organizations' Most Important IT Management Issues, 2013-2023

Organizational IT Issue	2023 (n= 436)	2022 (n= 540)	2021 (n= 454)	2020 (n= 624)	2019 (n= 618)	2018 (n= 793)	2017 (n= 769)	2016 (n= 801)	2015 (n= 785)	2014 (n= 717)	2013 (n= 483)
Alignment of IT with the Business	1 (44.7%)	2 (33.9%)	2 (33.3%)	2 (35.1%)	2 (33.2%)	2 (32.8%)	2 (37.3%)	1 (41.7%)	1 (42.4%)	1 (26.2%)	1 (43.7%)
Security/ Cybersecurity/ Privacy	2 (41.7%)	1 (51.1%)	1 (42.5%)	1 (36.1%)	1 (35.9%)	1 (38.3%)	1 (41.9%)	2 (36.0%)	2 (31.5%)	2 (17.6%)	7 (11.2%)
Data Analytics/ Data Management	3 (27.1%)	3 (28.7%)	3 (24.7%)	3 (25.3%)	3 (25.7%)	3 (26.9%)	3 (23.4%)				
Digital Transformation	4 (25.9%)	5 (22.2%)	4 (24.4%)	4 (24.4%)	4 (22.2%)	7 (19.5%)	8 (18.7%)				
Compliance and Regulations (e.g., HIPAA, SarBox, SAS70, PCI etc.)	5 (21.8%)	4 (28.3%)	5 (23.6%)	4 (24.4%)	5 (20.6%)	6 (19.9%)	4 (20.7%)	12 (13.5%)	11 (16.2%)	12 (9.1%)	16 (6.0%)
AI/Expert Systems/Machine Learning	6 (20.4%)	22 (9.6%)	23 (7.5%)	16 (10.1%)	13 (12.8%)	16 (11.6%)					
Cost Reduction/ Control - IT	7 (19.0%)	17 (11.5%)	10 (15.6%)	6 (23.7%)	8 (18.6%)	9 (17.8%)	5 (20.0%)	7 (19.0%)	8 (17.3%)	17 (8.2%)	5 (16.8%)
Business Continuity	8 (18.3%)	7 (17.8%)	7 (19.2%)	7 (22.8%)	16 (12.0%)	12 (14.0%)	18 (10.8%)	11 (13.7%)	15 (12.4%)	22 (5.0%)	
Cost Reduction/ Control - Business	9 (17.7%)	14 (13.7%)	13 (13.2%)	8 (19.4%)	10 (16.7%)	10 (14.5%)	6 (19.9%)	6 (19.7%)	10 (16.3%)	9 (12.3%)	4 (18.6%)
Cloud/Cloud Computing	10 (15.8%)	8 (16.9%)	6 (19.4%)	9 (18.3%)	6 (19.7%)	13 (13.7%)	14 (12.2%)				

consistent with the historical importance of this IT management concern.

Business Cost Reduction exhibited a similar, albeit less dramatic, return to the top ten, moving from 14th in 2022 to 9th in 2023. Cost reduction through increased productivity has long been a goal of IT, and the reduced focus on this concern observed in 2022 may have simply been a ripple effect from the disruption caused by the Covid-19 pandemic. As noted last year, many organizations shifted focus from the tactical decisions necessary to survive the pandemic to less cost-constrained strategic objectives as it waned. As these initiatives reach completion, organizations may be refocusing on cost reduction, so its reemergence in the top ten may simply be a return to more routine organizational expectations for IT.

1.2. IT Leadership's Top IT Management Issues and Concerns

Each IT leader representing a unique organization was asked to select up to five IT management issues that they perceive to be most personally important or worrisome from a list of 30 items. Table 2 presents these selections for the most-senior IT leader in each of the 436 unique organizations responding.

Cybersecurity, IT Talent and Alignment of IT and/with the Business remain top of mind for IT leaders, maintaining their positions as the 1st through 3rd most personally worrisome IT management concerns in 2023. IT Credibility, Compliance, Business Continuity and Analytics remained in the top ten, with minor changes in the frequency IT leaders identified these items as personal concerns. Three items entered the top ten in 2023. Consistent with the pattern seen

Table 2: IT Leaders' Most Important or Worrisome IT Management Issues, 2013-2023

Organizational IT Issue	2023 (n= 436)	2022 (n= 540)	2021 (n= 454)	2020 (n= 624)	2019 (n= 618)	2018 (n= 793)	2017 (n= 769)	2016 (n= 801)	2015 (n= 785)	2014 (n= 717)	2013 (n= 480)
Security/ Cybersecurity/ Privacy	1 (44.5%)	1 (55.2%)	1 (46.9%)	1 (40.9%)	1 (46.3%)	1 (46.4%)	1 (47.7%)	1 (46.4%)	1 (36.8%)	1 (25.5%)	2 (19.8%)
IT Talent/Skill Shortage/Retention	2 (27.1%)	2 (38.1%)	3 (22.2%)	5 (18.4%)	3 (21.5%)	2 (25.6%)	3 (23.5%)	2 (28.3%)	3 (28.3%)	2 (20.9%)	3 (19.6%)
Alignment of IT and/with the Business	3 (26.8%)	3 (25.2%)	2 (24.4%)	2 (23.4%)	2 (25.1%)	4 (19.8%)	4 (21.8%)	3 (24.0%)	2 (29.7%)	3 (19.9%)	1 (32.5%)
AI/Expert Systems/ Machine Learning	4 (24.3%)	27 (6.5%)	32 (5.3%)	27 (7.7%)	31 (6.3%)	26 (7.3%)					
Credibility of IT/ Perception of IT Leadership	5 (20.9%)	6 (17.8%)	4 (21.6%)	4 (20.4%)	4 (20.4%)	3 (22.1%)	2 (24.4%)	4 (20.3%)	6 (16.4%)	18 (7.1%)	
Compliance and Regulations (e.g., HIPAA, SarBox, SAS70, PCI etc.)	6 (19.3%)	4 (19.4%)	6 (16.5%)	7 (15.9%)	5 (15.7%)	6 (16.3%)	5 (16.9%)	11 (12.1%)	13 (12.2%)	14 (7.5%)	16 (7.5%)
Business Continuity	7 (17.7%)	5 (19.3%)	5 (17.4%)	3 (21.8%)	8 (14.1%)	5 (17.4%)	8 (14.0%)	5 (17.4%)	7 (16.2%)	13 (7.8%)	
Improving IT Communications and Relationships with the Business	8 (15.8%)	11 (13.7%)	11 (11.7%)	14 (11.7%)	6 (15.2%)	11 (12.4%)	9 (13.4%)	10 (12.6%)			
Cost Reduction/ Control - IT	9 (15.6%)	25 (8.3%)	16 (10.4%)	9 (14.4%)	17 (10.2%)	15 (11.3%)	20 (10.1%)	13 (11.1%)	21 (9.0%)	30 (3.9%)	13 (8.3%)
Data Analytics/Data Management	10 (15.4%)	7 (15.2%)	9 (14.1%)	12 (12.3%)	7 (14.2%)	8 (14.1%)	7 (14.2%)				

with organizational concerns (Table 1), AI made a noteworthy entrance into the top ten, moving from 27th in 2022 to 4th in 2023. Similarly, IT Cost Reduction was cited much more frequently as a personal concern, ranking 9th this year after moving up from 25th in 2022. Communications and Relationships with the Business made a more modest reappearance in the top ten, moving up three places from 11th in 2022 to 8th in 2023.

The most surprising departure from the top ten IT management issues about which IT leaders worry is IT Agility, which fell precipitously from 7th in 2022 to 19th in 2023, its lowest ranking on record. IT Agility historically occupies a position toward the bottom of the top ten and this year's dip in personal concern is likely temporary. Given the rise in organizational and personal concern related to cost reduction, IT leaders may be less focused on the implementation of agility-fostering IT solutions and more focused on operational efficiency. Digital Transformation (down from 9th in 2022 to 12th in 2023) and Disaster Recovery (10th in 2022 to 15th in 2023) also exited the list of top ten personally worrisome IT issues, though Digital Transformation and Business Continuity, an issue closely related to disaster recovery, remain organizational concerns (Table 1).

Table 3: Top Ten Organizational and Personal IT Management Issues, 2023 vs. 2022

	Most Important to their Organizations		Most Important or Worrisome to IT Leaders	
Issue	2023 (n=436)	2022 (n=540)	2023 (n=436)	2022 (n=540)
Alignment of IT and/with the Business	1 (44.7%)	2 (33.9%)	3 (26.8%)	3 (25.2%)
Security/Cybersecurity/Privacy	2 (41.7%)	1 (51.1%)	1 (44.5%)	1 (55.2%)
Data Analytics/Data Management	3 (27.1%)	3 (28.7%)	10 (15.4%)	7 (15.2%)
Digital Transformation	4 (25.9%)	5 (22.2%)	12 (12.6%)	9 (14.4%)
Compliance and Regulations (e.g., HIPAA, SarBox, SAS70, PCI etc.)	5 (21.8%)	4 (28.3%)	6 (19.3%)	4 (19.4%)
AI/Expert Systems/Machine Learning	6 (20.4%)	22 (9.6%)	4 (24.3%)	27 (6.5%)
Cost Reduction/Control - IT	7 (19.0%)	17 (11.5%)	9 (15.6%)	25 (8.3%)
Business Continuity	8 (18.3%)	7 (17.8%)	7 (17.7%)	5 (19.3%)
Cost Reduction/Control - Business	9 (17.7%)	14 (13.7%)	29 (6.4%)	29 (5.7%)
Cloud/Cloud Computing	10 (15.8%)	8 (16.9%)	20 (9.4%)	21 (9.4%)
IT Talent/Skill Shortage/Retention	11 (15.6%)	6 (20.6%)	2 (27.1%)	2 (38.1%)
Improving IT Communications and Relationships with the Business	21 (9.4%)	16 (12.4%)	8 (15.8%)	11 (13.7%)
Credibility of IT/Perception of IT Leadership	24 (6.9%)	19 (11.1%)	5 (20.9%)	6 (17.8%)

Table 3 contrasts the top ten organizational concerns and the top ten items cited by IT leaders as significant personal concerns.

Table 3 provides insight into the complexities of IT management by highlighting that IT leaders must balance the needs of the organization against the needs of the IT function. For instance, Digital Transformation ranks high on the list of organizational concerns, but is perceived as less personally worrisome than many other issues. This suggests that IT leaders both recognize the organizational importance of such capabilities and remain relatively confident in their ability to enact such changes. A similar relationship can be observed with Cloud Computing, which ranks 10th in the organizational top ten list and 20th on the list of personal concerns. Though several cloud innovations remain on the horizon,[3] it appears that transformational adoption of cloud services may have slowed and IT leaders largely view cloud as the *de facto* standard for service delivery.

As noted above, there appears to be a significant shift in organizational focus related to cost reduction strategies. This is evident in significant increases in the rank of IT Cost Reduction (7th) and Business Cost Reduction (9th) in the list of organizational concerns. As might be expected, IT leaders appear to be less worried about Business Cost Reduction (29th) than about IT Cost Reduction (9th), an issue for which they have much more direct responsibility and that is a regular factor in their performance evaluations (Tables 15 and 16). Similarly,

3 Rimol, M. *Gartner Hype Cycle for Cloud Platform Services 2022 Positions Two Technologies to Reach the Plateau of Productivity in Less Than Two Years*, Gartner, Inc. Press Release, August 4, 2022, available at https://www.gartner.com/en/newsroom/press-releases/2022-08-04-cloud-platform-hc-press-release.

Table 4: Top Ten Largest IT Investments of Organizations, 2013-2023

IT Investment Area	2023 (n= 436)	2022 (n= 540)	2021 (n= 454)	2020 (n= 624)	2019 (n= 618)	2018 (n= 793)	2017 (n= 769)	2016 (n= 801)	2015 (n= 785)	2014 (n= 717)	2013 (n= 482)
Analytics/Business Intelligence/ Data Mining/ Forecasting/Big Data	1 (39.4%)	1 (40.0%)	3 (34.1%)	2 (35.6%)	1 (37.9%)	1 (37.7%)	1 (41.6%)	1 (39.5%)	1 (38.0%)	1 (30.1%)	1 (42.1%)
Security/ Cybersecurity	2 (39.0%)	2 (37.2%)	2 (38.8%)	3 (33.0%)	3 (33.3%)	2 (37.1%)	2 (36.2%)	3 (29.5%)	3 (28.9%)	7 (11.9%)	14 (7.5%)
Application Software Development/ Maintenance	3 (35.8%)	4 (29.3%)	4 (28.6%)	4 (27.6%)	4 (28.3%)	4 (30.6%)	4 (30.6%)	2 (34.1%)	4 (28.8%)	4 (18.4%)	6 (11.8%)
Cloud Computing (e.g., SaaS, PaaS, IaaS etc.)	4 (34.2%)	3 (36.9%)	1 (43.0%)	1 (38.1%)	2 (36.1%)	3 (33.9%)	3 (31.1%)	4 (27.8%)	7 (22.9%)	5 (15.6%)	3 (18.7%)
ERP (Enterprise Resource Planning)	5 (23.4%)	5 (23.9%)	5 (23.6%)	6 (22.3%)	6 (22.5%)	5 (26.6%)	5 (28.6%)	6 (25.0%)	2 (32.2%)	3 (18.7%)	4 (16.6%)
CRM (Customer Relationship Management)	6 (20.2%)	6 (21.9%)	6 (21.8%)	5 (22.8%)	5 (24.1%)	5 (23.7%)	6 (24.1%)	5 (26.0%)	5 (24.5%)	6 (13.8%)	2 (19.5%)
Legacy Applications - Replacing/ Replatforming	7 (18.6%)	7 (14.8%)	7 (17.2%)	7 (15.7%)	7 (18.8%)	9 (15.0%)	9 (15.5%)	11 (13.2%)			
AI/Machine Learning/Expert Systems	8 (13.1%)	15 (10.0%)	17 (9.3%)	15 (9.6%)	12 (10.8%)						
Collaboration Tools	9 (11.5%)	17 (9.3%)	10 (12.1%)	8 (14.6%)	16 (7.9%)	18 (7.2%)	20 (7.5%)	15 (7.6%)	13 (10.7%)	15 (5.6%)	12 (8.1%)
Data Center/ Infrastructure	9 (11.5%)	9 (12.2%)	8 (13.0%)	9 (14.3%)	8 (15.4%)	7 (21.9%)	7 (20.9%)	7 (24.7%)	6 (24.2%)	2 (19.1%)	

IT Talent, IT Credibility and Improving IT Communications with the Business are perennial concerns of IT leaders, ranking 2nd, 5th and 8th respectively on the list of personal concerns. These issues directly influence the ability of IT leaders to enact change and drive value. However, with the notable exception of IT Talent in 2022, which ranked 6th on the list of organizational concerns, such issues rarely garner significant interest at the organizational level.

2. Technology Investments and Worrisome Technologies

Each participant was asked to identify up to five areas that represent their organization's largest current or near-term IT investments, those that should get more investment and those of greatest personal concern ("i.e., they keep you up at night") from a list of 28 different investment areas.

Table 5: Organizational vs. Personal Investment Priorities, 2022 and 2021

Information Technologies	Largest IT Investments		Those that Should Get More Investment		Those Most Personally Worrisome	
IT Investment Area	**2023 (n=436)**	**2022 (n=540)**	**2023 (n=436)**	**2022 (n=540)**	**2023 (n=436)**	**2022 (n=540)**
Analytics/Business Intelligence/Data Mining/ Forecasting/Big Data	1 (39.4%)	1 (40.0%)	2 (35.1%)	1 (36.3%)	7 (13.1%)	4 (16.3%)
Security/Cybersecurity	2 (39.0%)	2 (37.2%)	3 (29.1%)	2 (32.2%)	1 (46.3%)	1 (51.5%)
Application Software Development/Maintenance	3 (35.8%)	4 (29.3%)	10 (14.4%)	10 (12.4%)	6 (14.7%)	9 (11.1%)
Cloud Computing (e.g., SaaS, PaaS, IaaS etc.)	4 (34.2%)	3 (36.9%)	7 (15.8%)	6 (17.4%)	11 (11.9%)	5 (14.6%)
ERP (Enterprise Resource Planning)	5 (23.4%)	5 (23.9%)	20 (7.6%)	18 (8.5%)	19 (7.3%)	18 (7.0%)
CRM (Customer Relationship Management)	6 (20.2%)	6 (21.9%)	15 (10.3%)	13 (11.9%)	24 (4.4%)	22 (5.9%)
Legacy Applications - Replacing/Replatforming	7 (18.6%)	7 (14.8%)	8 (15.6%)	10 (12.4%)	5 (16.5%)	6 (12.8%)
AI/Machine Learning/Expert Systems	8 (13.1%)	15 (10.0%)	1 (38.8%)	3 (22.6%)	2 (25.2%)	18 (7.0%)
Collaboration Tools	9 (11.5%)	17 (9.3%)	18 (8.3%)	20 (8.0%)	22 (4.8%)	25 (4.8%)
Data Center/Infrastructure	9 (11.5%)	9 (12.2%)	24 (6.2%)	29 (3.5%)	20 (7.1%)	18 (7.0%)
Disaster Recovery/IT Continuity Planning	11 (11.2%)	8 (13.0%)	5 (18.3%)	8 (15.9%)	3 (23.9%)	2 (28.5%)
Legacy Applications - Maintaining (updating/ consolidation)	12 (10.8%)	9 (12.2%)	20 (7.6%)	28 (4.6%)	8 (12.8%)	13 (9.1%)
Data Integration/Data Quality	14 (10.6%)	12 (11.5%)	6 (17.9%)	9 (15.4%)	12 (11.2%)	10 (10.9%)
Innovation/Disruptive Technologies	17 (9.4%)	19 (8.3%)	9 (14.7%)	5 (17.8%)	9 (12.2%)	11 (9.6%)
Staff Development/Training/ Retention/H1B[a]	18 (9.2%)	22 (8.0%)	4 (20.0%)	4 (18.7%)	4 (23.4%)	3 (24.1%)
Integration/Application Integration/Data Integration	19 (8.9%)	11 (11.7%)	10 (14.4%)	17 (11.3%)	17 (8.5%)	17 (7.8%)
IT Management Applications/ IT for IT	22 (7.6%)	18 (8.5%)	17 (9.2%)	16 (11.7%)	9 (12.2%)	15 (8.0%)

[a] H1B is a visa that allows U.S. employers to employ foreign workers in specialty occupations.

Table 6: Top Ten Most-Difficult-to-Find and Most-Important Technical S, 2023 vs. 2022

Technical Skill	Most Important to the Organization		Most Difficult to Find	
	2023 (n=436)	2021 (n=454)	2023 (n=436)	2021 (n=454)
Security/Cybersecurity	1 (47.7%)	1 (50.2%)	1 (45.4%)	1 (46.0%)
Analytics/Business Intelligence/Big Data/Data Scientist	2 (31.2%)	2 (31.5%)	2 (33.9%)	2 (36.8%)
Analyst - Business	3 (27.1%)	3 (30.8%)	5 (20.2%)	6 (18.9%)
Cloud	4 (23.2%)	4 (22.7%)	5 (20.2%)	5 (20.3%)
Functional Area Knowledge	5 (22.0%)	5 (20.9%)	4 (24.1%)	4 (20.5%)
Software Development/ Programming Languages (e.g., C#, .NET, Java, CMMI, TSP, PSP, SQL etc.)	6 (19.7%)	10 (15.9%)	7 (18.3%)	10 (16.1%)
ERP (Enterprise Resource Planning)	7 (18.6%)	8 (16.3%)	11 (14.9%)	13 (15.2%)
Architecture - Application/Solution	8 (18.3%)	6 (19.2%)	8 (17.0%)	7 (17.0%)
AI/Machine Learning/Expert Systems	9 (18.1%)	14 (12.1%)	3 (33.5%)	3 (23.8%)
Analyst - Technical	10 (15.6%)	9 (16.1%)	9 (16.7%)	11 (15.4%)
Architecture - Data/Information	12 (14.0%)	7 (16.7%)	10 (16.1%)	8 (16.7%)

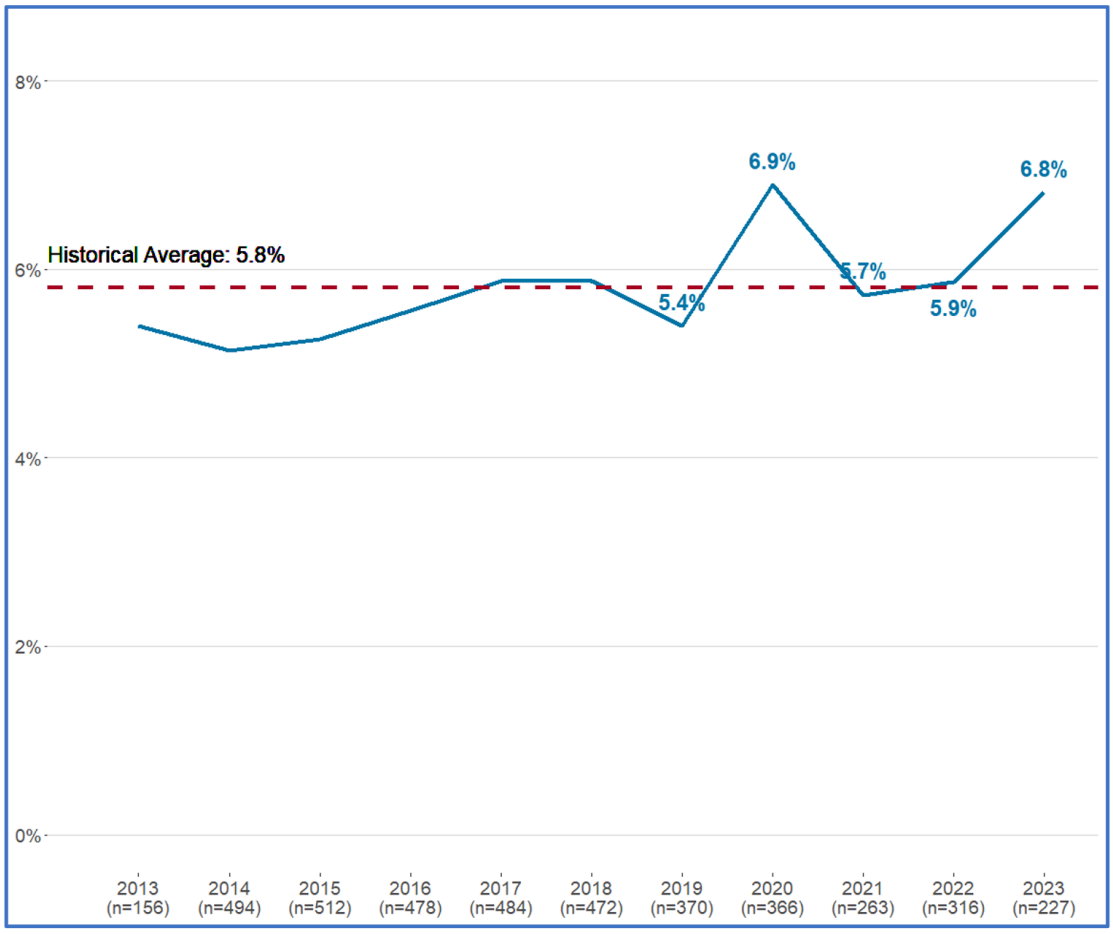
2.1. Organizations' Largest IT Investments

Table 4 presents the items selected by IT leaders as their organization's largest current or near-term IT investments.

Historically, the IT investments rankings reported by participating organizations have been relatively stable, with periodic disturbances related to the emergence of disruptive technologies (e.g., Cloud Computing) or environmental factors (e.g., Covid-19). This pattern is evident in 2023, where we see stability around established technology needs, new spending allocated to emerging technologies and changes in investment patterns likely linked to the ripple effects of the pandemic. Analytics and Cybersecurity continue to be ranked as the 1st and 2nd investments cited by organizations, while Application Software Development and Cloud Computing swapped positions from 2022 to occupy the 3rd and 4th positions in 2023 respectively. The ERP, CRM and Legacy Application Replatforming rankings remained unchanged at 5th, 6th and 7th respectively in 2023. Consistent with the increased organizational concern related to the emergence of AI (Table 1), AI moved from 15th on the list of top investments in 2022 to 8th in 2023. Interestingly, Collaboration Tools also moved up significantly in importance from 17th in 2022 to tie for 9th in 2023. Interest in these technologies increased significantly in 2020 and 2021 during the pandemic and then seemed to decline in 2022 as organizations satisfied their immediate needs. The higher ranking in 2023 may be due to: a resurgence of interest in these technologies; organizations deciding to continue or expand remote working models; or simply a rebound to a more "normal" level of investment. Data Center investments rounds out the top ten, unchanged in its position tied for 9th as in 2022.

Two items—Disaster Recovery and Maintaining Legacy Applications—exited the top ten list of largest current or near-term investments. While both remain important concerns for organizations, decreased spending on disaster recovery (down from 8th in 2022 to 11th in 2023) and on maintaining legacy

Figure 1: Average IT Spending as a Percentage of Organization Revenue, 2013-2023



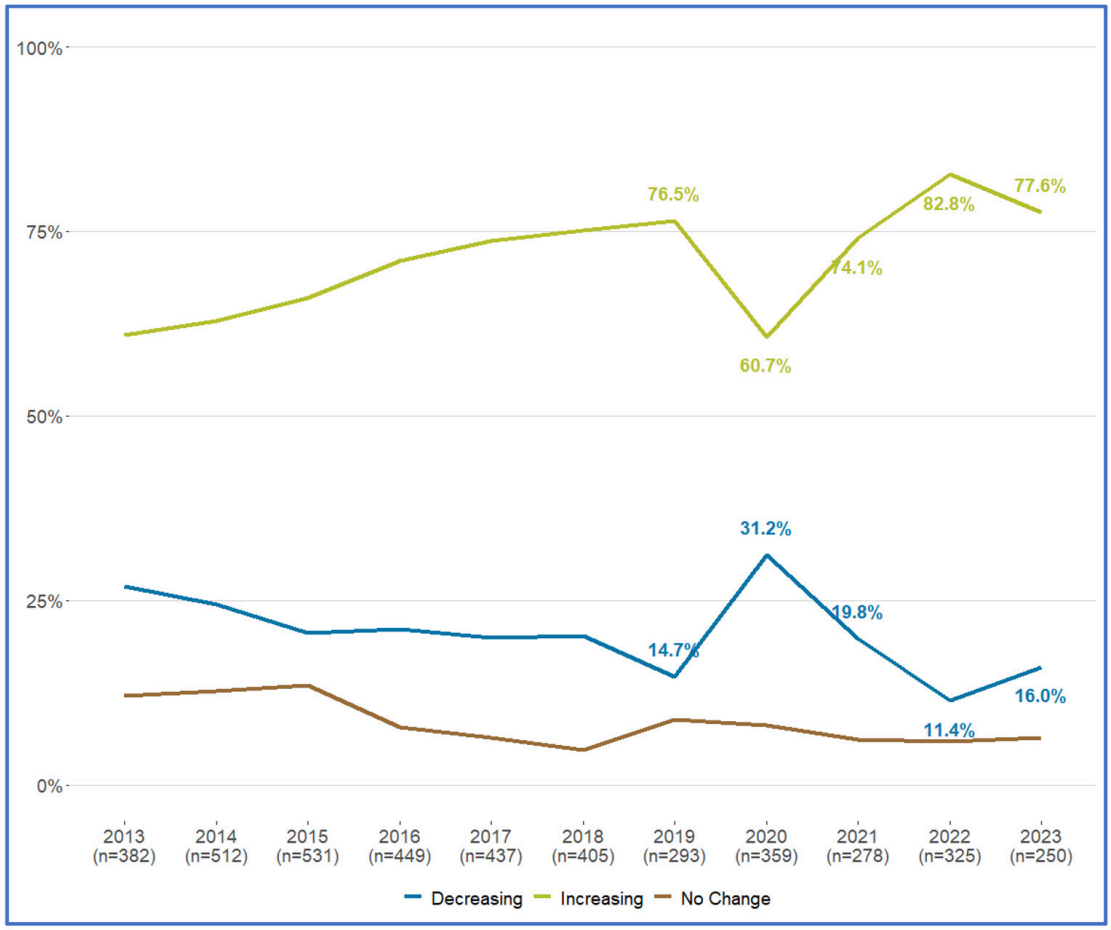
applications (9th in 2022 to 12th in 2023) suggests a return to more normal investment patterns, as both items typically occupy a position just outside of the top ten largest investments.

2.2. Technologies that Should Get More Investment and those Most Personally Worrisome

In addition to identifying the largest current or near-term IT investments, IT Leaders selected up to five investment areas that they believed should receive additional investment, as well as those they find most personally worrisome. Table 5 contrasts the top ten selections in each of these categories with the top ten IT largest investments.

The patterns of investment illustrated in Table 5 vs. the investment perceptions of IT leaders remains consistent with prior years. Generally, IT leaders perceive that more investment should be allocated to those technologies they find most personally worrisome, and these items only partially align to actual investment areas. When large investments correspond with low IT leader concerns, it is likely that the value of the technology investment is well established and the technology itself is well understood. ERP, CRM, Collaboration Tools and Data Center investments follow this pattern, being in the top ten list of investments and out of the top ten lists for technologies that need more investment and those that IT leaders find most worrisome.

Figure 2: Changes in IT Budgets, 2013-2023



There are also several technologies that exhibit the opposite relationship, where there is low organizational investment but high concern among IT Leaders. Staff Development, Innovation and Disruptive Technologies, and, to a lesser extent, Disaster Recovery, represent immediate concerns for IT service provision and value, but have secondary impacts on the organization as a whole. Underinvestment in these areas reduces the ability of the IT organization to effectively operate and serve the business needs, and may represent unintended misalignments in need of correction.

Several areas of technology investments appear to be top of mind for both IT leaders and their organizations, including Analytics, Cybersecurity, Software Development, replacement of Legacy Applications and AI, which all appear in the top ten for each list. Changes in these lists related to AI stand out as particularly interesting in 2023. Since its introduction to the list in 2019, IT Leaders have consistently indicated that AI should receive more investment (3rd from 2019 to 2022). However, they have suggested they had minimal personal concern related to AI investments (ranked no higher than 11th from 2019 to 2022). As noted in previous IT Trends reports, this was likely due to a perception among IT leaders that additional future investments may unlock significant organizational benefits, while also indicting that AI was largely unrealized by most organizations and, thus, not a particularly worrisome technology. This year, IT leaders continue to

suggest additional investment in AI is warranted (3rd in 2022 to 1st in 2023), while also indicating much more personal concern (18th in 2022 to 2nd in 2023). Taken together, these changes are highly indicative that AI has moved from a largely academic concern among IT leaders to real-world, tangible assets that IT organizations are now responsible for managing.

A few other technology investment areas also warrant discussion. Maintaining Legacy Applications moved up on the list of personally worrisome IT issues from 13th in 2022 to 8th in 2023, indicating that, while this investment area should receive increased spending, the actual level of investment has decreased. Given the continued interest in Replatforming Legacy Applications (Table 4), IT leaders may be concerned about organizational transitions away from long-running systems.

IT Leaders also expressed increased concern related to IT Management Applications, which broke into the top ten of the personally worrisome IT issues for the first time since its introduction in 2014 (15th in 2022 to 9th in 2023). Given the complexity of managing IT service delivery, such applications are critical in large enterprises, though exactly what is driving this increased concern remains unclear. Finally, an increased number of IT Leaders suggested that more money should be directed to Integration, which rose from 17th in 2022 to 10th this year. However, given that investment in Integration was ranked 10th in 2020 and 2021, this change is a reversion back to more normal perceptions about this investment area.

2.3. The Most-Difficult-to-Find and Most-Important IT Workforce S

For the first time since 2021, IT leaders were asked to provide their insights related to technical s in two categories: most difficult to find and most important to the organization. They selected up to five technical s in each category from a list of 21 options.

Attracting and retaining skilled workers consistently ranks among the most significant personal concerns of IT leaders (Table 2). Given the complexities of the modern IT organization, IT leaders need a workforce with a broad range of technical s. As shown in Table 6, the technical s viewed by IT leaders as most important to the organization and those identified as most difficult to find are highly correlated. Of the 11 items contained in Table 6, only two (ERP 7th and 11th

Table 7: IT Spending as Percentage of Organization Revenue, by Business Sector

Sector[a]	Number of Organizations	Average % of Revenue Spent on IT
Business or Professional Services/Consulting	20	15.6%
Not-for-Profit	27	12.6%
Education	32	12.1%
IT Services/Consulting	19	11.8%
Healthcare/Medical/Medical Technology/BioMedical	70	8.7%
Financial Services/Insurance/Banking	51	8.1%
Retail/Wholesale	24	4.3%
Food Services/Hospitality/Leisure/Tourism	10	2.6%
Government	21	2.0%
Energy	12	1.9%
Consumer Goods/Services	16	1.8%
Manufacturing	35	1.5%
Transportation/Distribution/Logistics	13	1.2%

[a] Only sectors with at least 10 reporting organizations are included in this table.

Table 8: IT Budget Allocations, 2019-2023

Budget Category	2023 (n=216)	2022 (n=297)	2021 (n=225)	2020 (n=337)	2019 (n=307)
Employees	33.7%	33.8%	35%	33.9%	36.3%
Cloud Services (SaaS, PaaS, IaaS, PraaS)	19.4%	18.7%	18.2%	16%	14.7%
Software	15.5%	17.2%	15.2%	17.2%	14.8%
Consultants & Contractors[a]	13.4%	12.4%	14.2%	13.9%	13.9%
Hardware	9.8%	10.8%	10.8%	11.5%	11.5%
Facilities (including Supplies and Consumables)	3.9%	3.7%	3.6%	3.7%	5%
Other		3.4%	3%	3.8%	4%

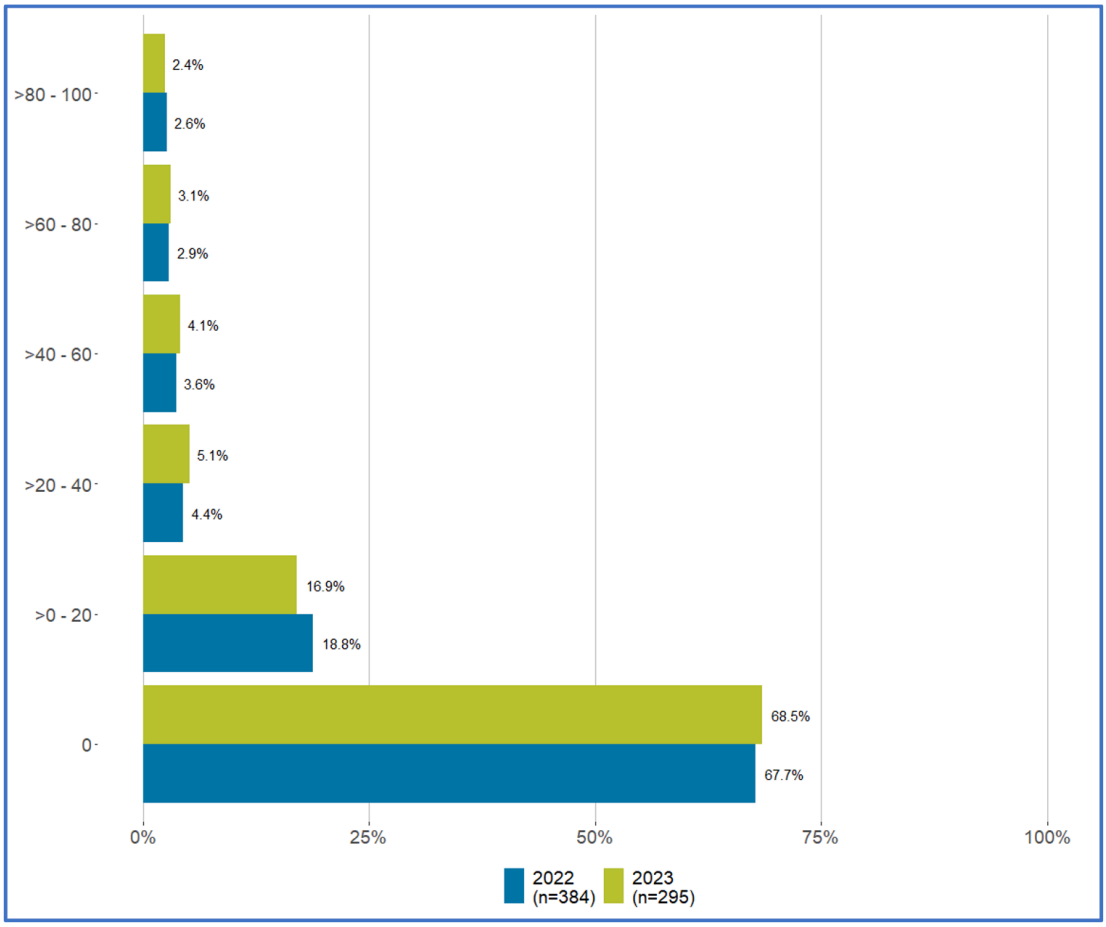
[a] Prior to 2022, Consultants and Contractors were two separate categories. Reported numbers are the sum of both categories prior to 2022.

Table 9: IT Budget Allocations to Non-Mutually Exclusive Categories, 2019-2023

Functional Budget Category	2023 (n=221)	2022 (n=309)	2021 (n=246)	2020 (n=349)	2019 (n=379)
Keeping the Lights On (i.e., IT Day-to-Day Operations Including Upgrading and Replacement)	38.1%	36.8%	38.6%	39.1%	39.7%
Software Development, Maintenance and/or Integration	14.2%	16.6%	14.8%	16.8%	18.5%
New IT-Related Capital Investments	13.5%	13.0%	13.5%	15.1%	14.8%
IT Outsourcing (Both Domestic and Offshore)	12.3%	11.5%	10.2%	9.6%	8.3%
Cybersecurity	12.2%	12.6%	10.0%	8.6%	7%
Analytics/Business Intelligence/Big Data	9.2%	8.1%	6.5%	6.9%	6%
IT Related R&D and Innovation	8.5%	8.2%	5.5%	5.4%	4.7%
Offshore IT	6.3%	6.2%	5.5%	4.5%	4.5%
Managerial And Leadership Training, Development and/or Education	3.2%	3.0%	2.4%	2.7%	2%
Technical Training, Development and/or Education	3.0%	3.1%	2.7%	2.8%	2.2%

Totals do not sum to 100% because categories are overlapping and not mutually exclusive

Figure 3: Percentage of IT FTEs Located outside Employer's Home Country, 2023 vs. 2022



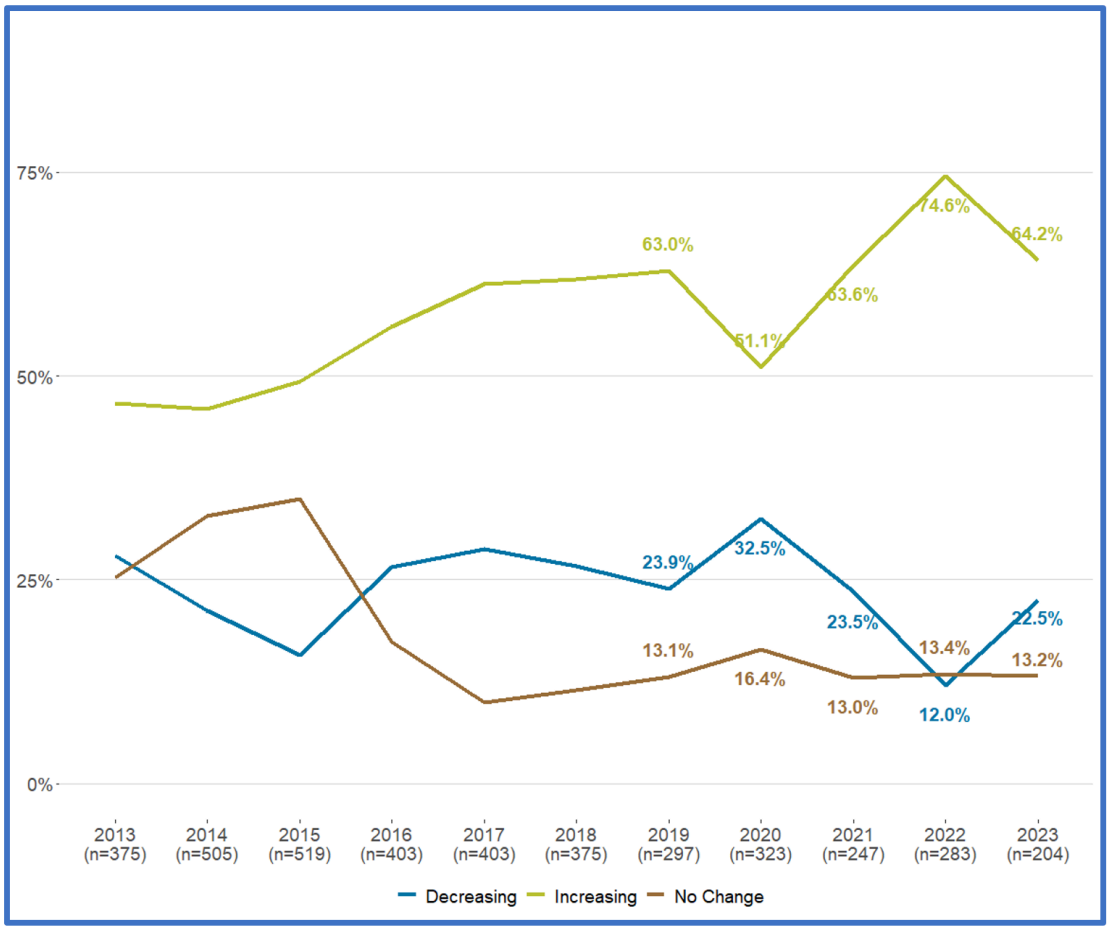
respectively and Data Architecture 12th and 10th respectively) are not present in the top ten of both lists.

When compared against the responses of IT leaders two years ago, both lists exhibit a high degree of stability. In 2023, however, there are some interesting developments related to IT technical s. First, consistent with changes in organizational concerns and investments related to AI, technical s in this area have moved up significantly since 2021, from 14th to 9th. Though IT leaders have consistently viewed AI s as difficult to find, its upward movement on the list of technical s most important to the organization provides yet another signal that organizations are actively working to integrate AI capabilities.

Second, Software Development/Programming moved from 10th in 2021 to 6th in 2023 on the list of s most important to the organization and from 10th to 7th in the list of s most difficult to find. This increase in prominence may be due to more normal software development goals in 2023 compared to those in place in 2021 as the Covid-19 pandemic waned.

Finally, Data Architecture s fell slightly in both lists, moving from 7th to 12th in the list of s most important to the organization and from 8th to 10th in the list of s most difficult to find. This downward movement is consistent with the overall trend for data architecture s in both lists, which suggests that IT leaders have successfully identified candidates with appropriate s and integrated them into the IT organization.

Figure 4: Changes in Internal IT FTEs, 2013-2023



3. Participating Organizations and their IT Practices

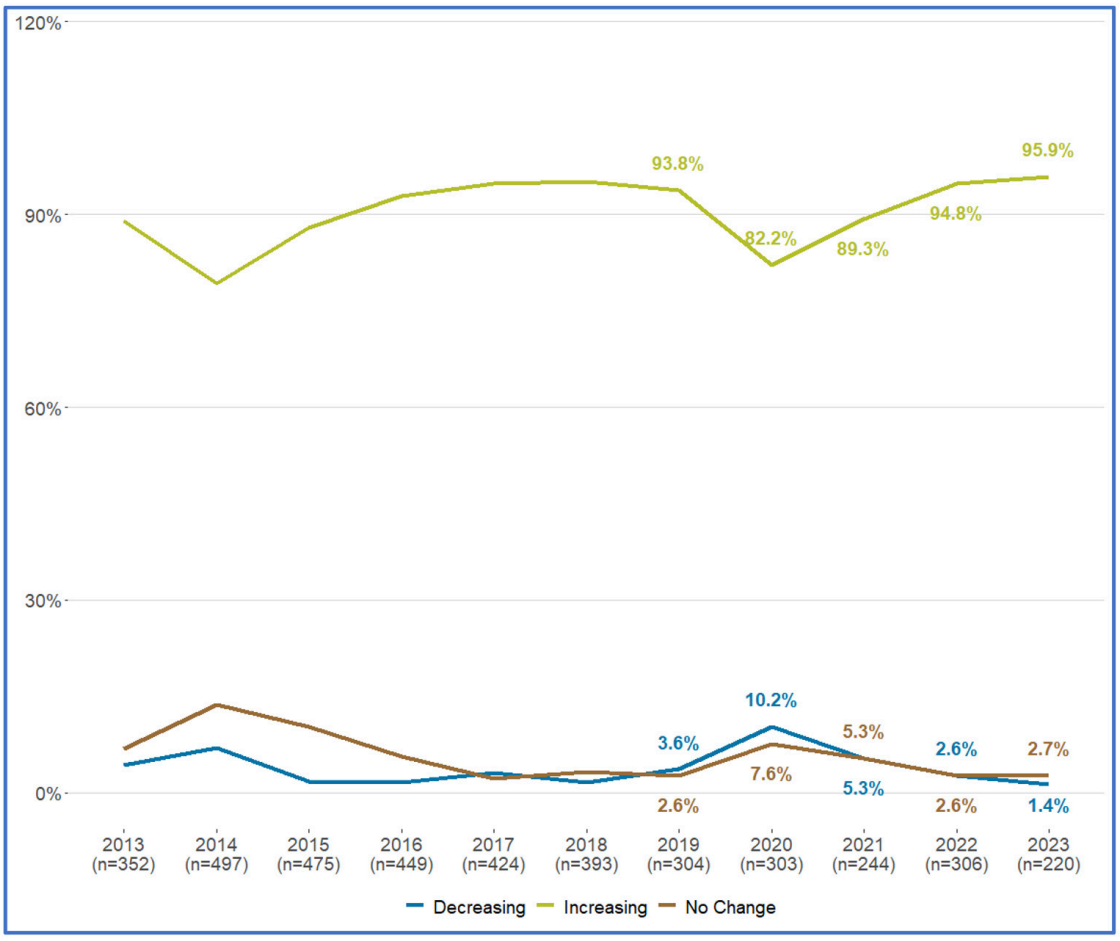
3.1. Location, Industry, Revenue and IT Spending of Participating Organizations

Of the 436 unique organizations responding to the 2023 survey, 96.3% are located in the United States. Though the sample comprised 29 different economic sectors, just six accounted for more than 55% of all respondents: Healthcare/Medical (16.1%), Finance/Insurance (11.8%), Manufacturing (8.1%), Education (7.4%), Not-For-Profit (6.2 %) and Retail/Wholesale (5.5%). Continuing the trend from last year, the percentage of publicly traded companies in the sample continues to rise (30.9% compared to 27% in 2022). The average revenue of responding organizations in 2023 is $5.3 billion with a median of $500 million, which is similar to 2022 ($6.1 billion and $400 million).

3.2. IT Budget and Spending Trends

The average 2023 annual IT budget for the 247 organizations that provided data was $95.2 million. This is a considerable decrease from 2022 ($148 million) but on par with 2021 ($81.2 million). The median IT budget was $9 million, mid-way between the 2022 value ($8 million) and 2021 value ($10 million). Given the distribution of company sizes, it is important to evaluate IT budgets as a percentage of total revenue. For 2023, this value was 6.8%, well above the 10-year average and the second-highest value recorded since 2013 (Figure 1).

Figure 5: Changes in Average IT Salary, 2013-2023



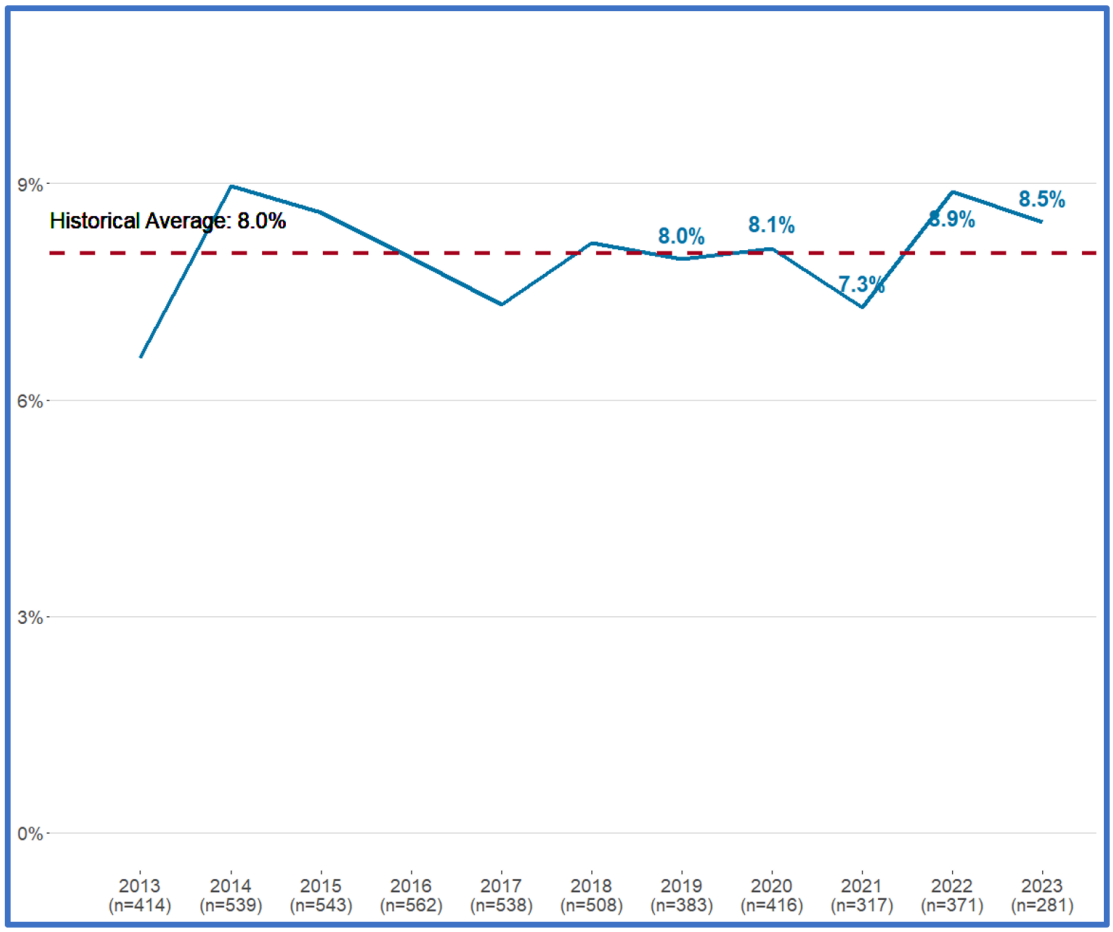
As in previous years, IT spending as a percentage of revenue varies considerably across industry sectors, with some sectors spending nearly three times the overall sample average and others less than 25% the sample average (Table 7).

Respondents were asked whether their organizations' IT budgets had increased, decreased or stayed the same compared to 2022. Though a large percentage continue to report an increase in budget, the proportion of organizations reporting an increase in IT budgets for 2023 is down, reversing a three-year upward trend (Figure 2). On average, organizations' IT budgets increase by 6.76%, down from the all-time high of 10.1% in 2022. Collectively, it seems that IT budgets have experienced a high degree of variation over the past few years. However, these variations may be leveling out and returning to pre-pandemic trend patterns.

In looking at how IT budgets were allocated, there were few changes in 2023. Cloud and Contractor/Consultant spending both increased slightly, offset by minor decreases in Software and Hardware (Table 8).

Respondents were asked to break down their budgets by functional areas. Table 9 summarizes the budget allocations to each functional area over the past five years. Relatively little has changed over this period, but it is interesting to note that Cybersecurity spending may have plateaued after four consecutive years of increases. IT Outsourcing, Analytics, IT R&D and Offshore IT all continued to experience modest growth into 2023.

Figure 6: Turnover Rate for Full-time IT Employees, 2013-2023



3.4. IT Workforce and Salary Trends

3.4.1. IT Employees and their Salaries. In 2023, the average number of "full-time IT employees (IT FTEs, not including contractors or consultants)" who "report to or under the top IT person" was 267 (n = 322). The median number of IT FTEs in 2023 was 30. The equivalent numbers in 2022 were 281 and 24 respectively.

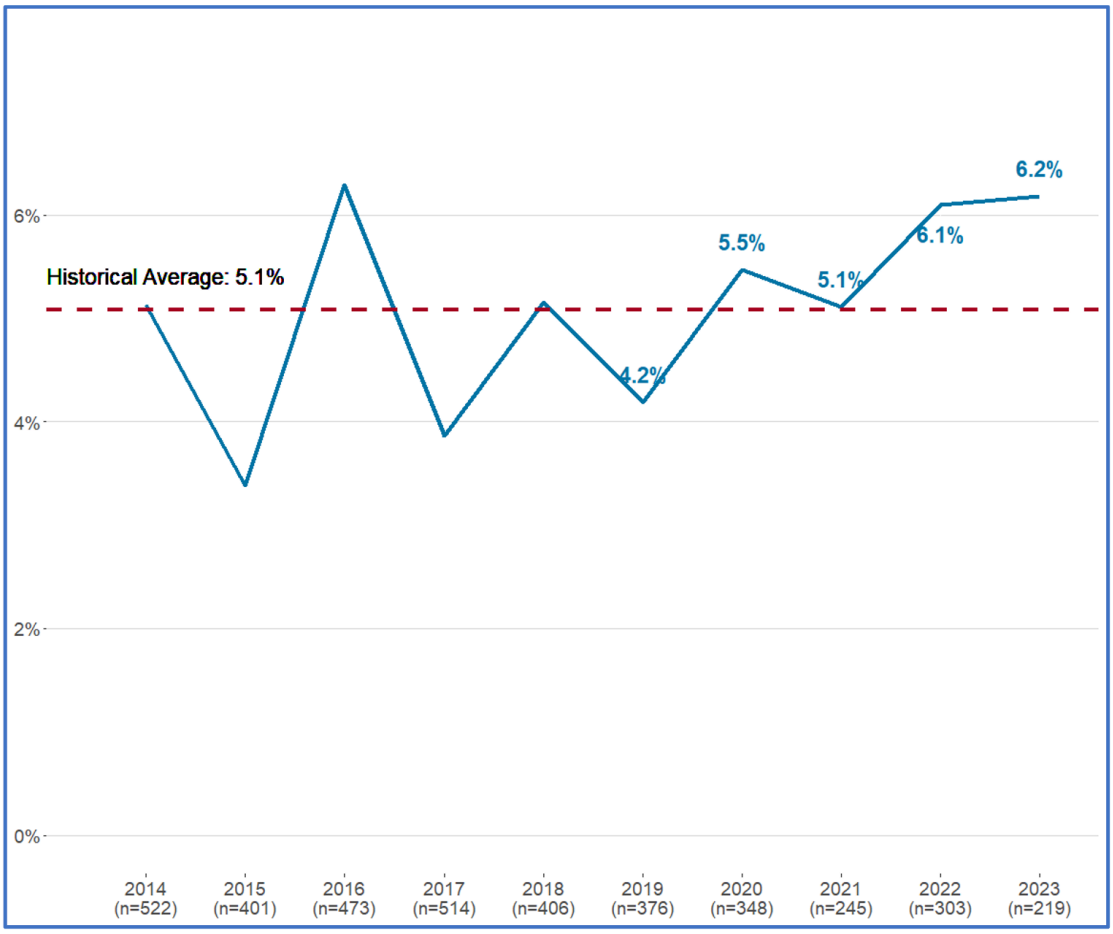
xOn average, 10% of IT FTEs in 2023 were "located outside their home country (i.e., offshore)" (n=295), similar to 2022. However, 68.5% of organizations reported having no IT employees outside of their home country, up slightly from 67.7% in 2022 (Figure 3).

In 2023, 64.2% of 204 responding organizations reported an increase in the number of internal IT employees (Figure 4), down significantly from 74.6% in 2022 but closer to 2020 and 2021 levels (61.1% and 63.6% respectively). The percentage reporting no change remained relatively flat at 13.2%. However, organizations reporting decreasing headcounts almost doubled from 12% in 2022 to 22.5% in 2023.

In 2023, 95.9% of organizations reported that average IT salaries increased or remained flat (Figure 5). This is up from 94.8% in 2022 and represents the fourth year of an upward trend. However, the average increase in IT salaries fell from 6.5% in 2022 to 5.7% in 2023.

3.4.2. IT Contractors and Consultants. The average number of IT contractors and consultants decreased sharply in 2023 to 92 (n=266), down from 158.8 in 2022. However, the median only increased slightly from 4 in 2022 to 5 in 2023, but the standard deviation of 474.8

Figure 7: Percentage of IT Budget Spent on Training, 2014-2023



indicates significant variability in the sample. 62% of respondents reported using less than 50 consultants and contractors, down from 65.9% in 2022. 21.4% reported using no contractors or consultants, down from 21.6% in 2022.

Of the 148 organizations that reported using IT contractors and consultants, 56.8% reported an increase. This is 16.7% lower than 2022's 68.2%. 20.9% reported no change, up from 14.4% in 2022, and 22.3% reported a decrease, up from 17.4% in 2022.

3.4.3. IT Workforce Turnover and Retirements. Turnover rate decreased slightly from 8.9% in 2022 to 8.5% in 2023. (Figure 6). While this remains high, it is slowly inching closer to the historical average of 8%.

Respondents provided estimates of the portion of their IT staff turnover that was "involuntary (i.e., the result of downsizing, layoffs, terminations etc.)" rather than "voluntary (i.e., quitting, retirements etc.)." Voluntary departures, on average, accounted for 73.2%, a decrease from 77.8% reported in 2022. Involuntary departures increased from 22.2% in 2022 to 26.7% in 2023.

3.4.4. IT Workforce Training Expenditures. In 2023, the overall investment in training remained above the 10-year average of 5.1%. IT leaders reported that the percentages of the IT budget allocated to managerial/leadership and technical training in 2023 were 3.2% and 3%, respectively. The total of 6.2% allocated to training in 2023 ranks second within the 10-year period shown in Figure 7. This increase is consistent with efforts to attract, develop and retain talent.

Figure 8: Average Amount of All IT Services Delivered by Organizations via the Cloud, 2013-2023

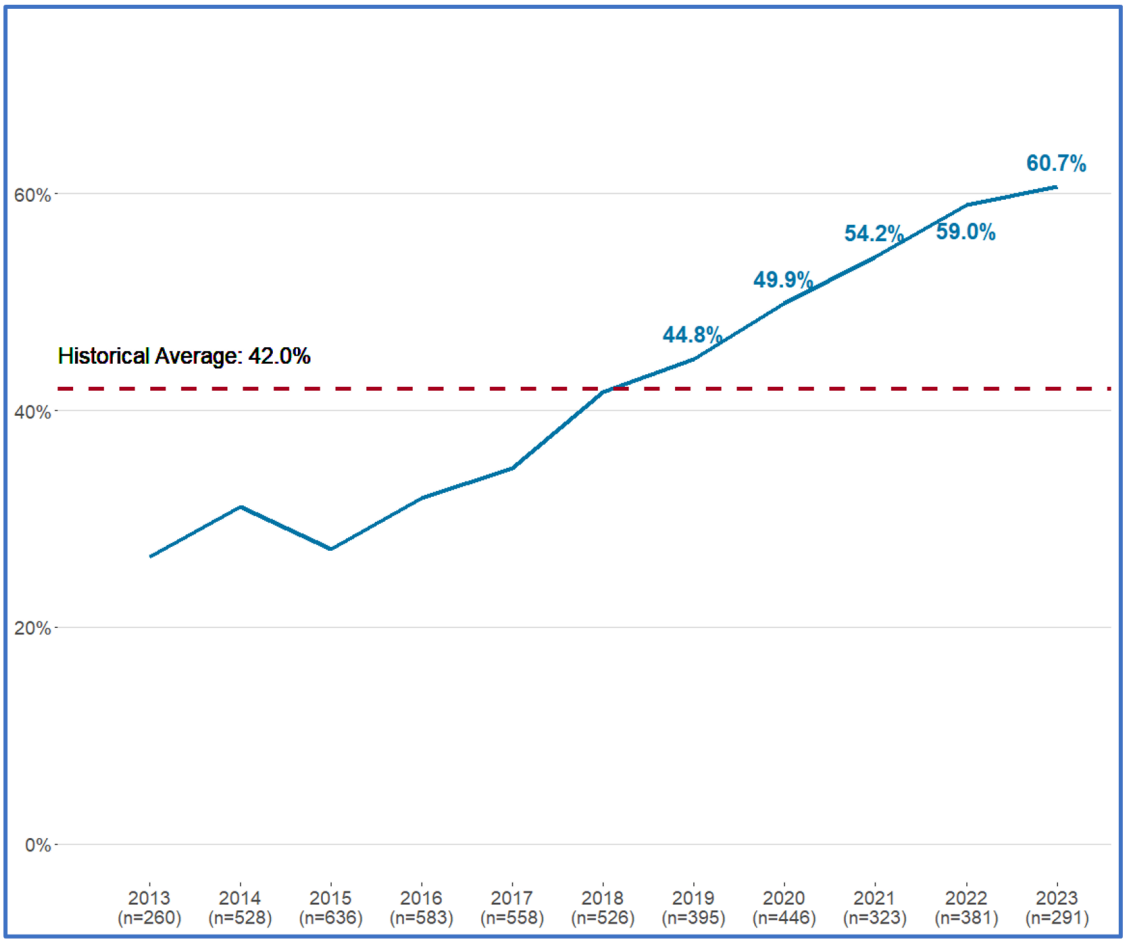


Table 10: Cybersecurity Leadership, 2020-2023

Does your organization have a person with formal authority/responsibility over cybersecurity practices?	2023 (n=387)	2022 (n=479)	2021 (n=403)	2020 (n=550)
Yes, a dedicated person (CISO, VP of Cybersecurity or equivalent)	57.1%	54.7%	51.4%	50.4%
Yes, someone in the IT function who also has non-cybersecurity responsibilities	30.7%	32.4%	33.3%	31.6%
No, there is no one with formal cybersecurity authority/responsibility	8.8%	8.4%	11.7%	13.8%
Yes, someone outside of the IT function that also has non-cybersecurity responsibilities	1.8%	2.9%	2.2%	2.5%
Don't know	1.6%	1.7%	1.5%	1.6%

Figure 9: Percentage of IT Services Delivered via the Cloud, 2013-2023

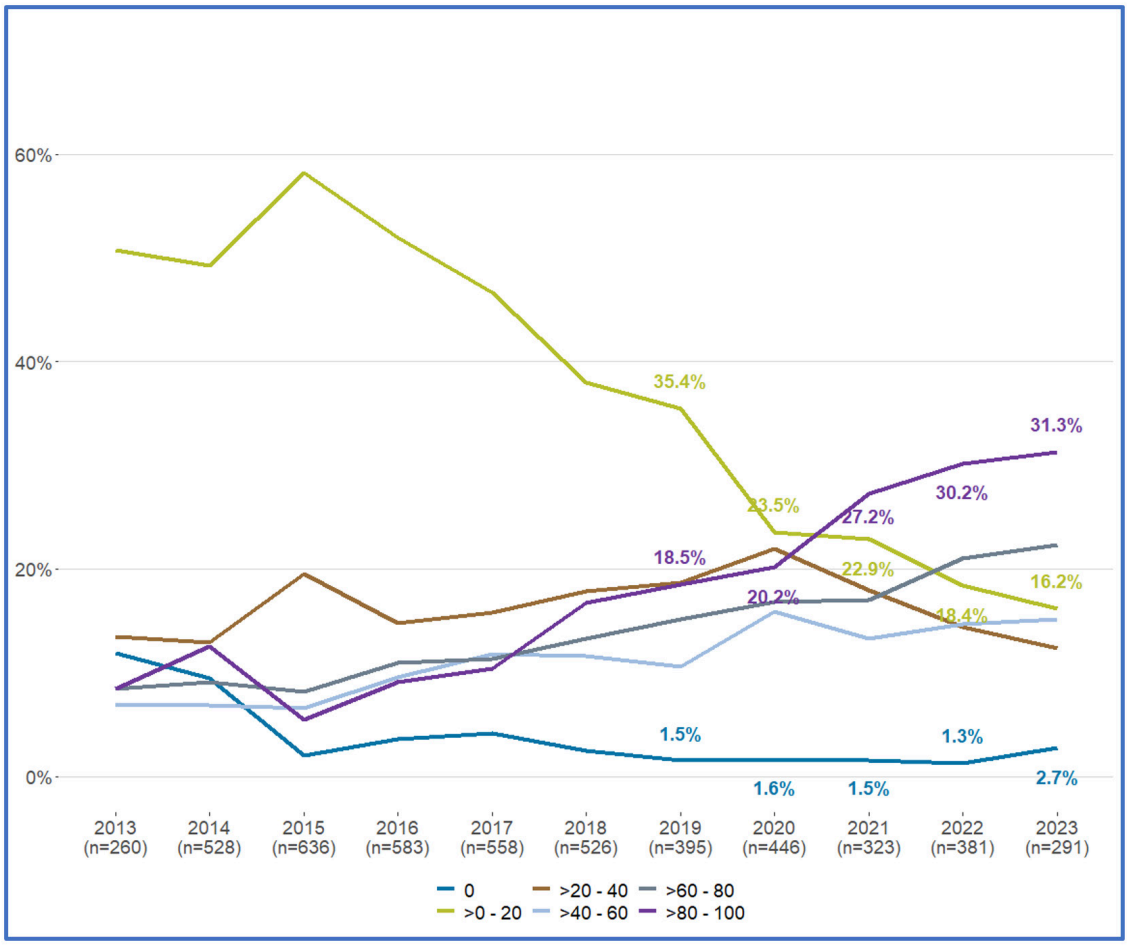


Table 11: To Whom Does the CISO (or Equivalent) Report, 2019-2023?

	2023 (n=213)	2022 (n=261)	2021 (n=206)	2020 (n=273)	2019 (n=256)
CIO (Information)	62.4%	58.6%	67.0%	57.5%	62.9%
CEO/President	10.3%	15.3%	7.8%	11.4%	12.1%
CTO (Technology)	9.4%	10.0%	9.7%	9.9%	9.0%
Other	6.1%	8.8%	7.8%	8.4%	4.3%
CFO/Treasurer/Finance	5.6%	3.4%	1.9%	4.4%	2.0%
COO (Operating)	4.2%	3.4%	4.9%	6.6%	4.7%
Board/Board Member	1.9%	0.4%	1.0%	1.8%	3.5%

Figure 10: Changes in External Cloud Usage, 2016-2023

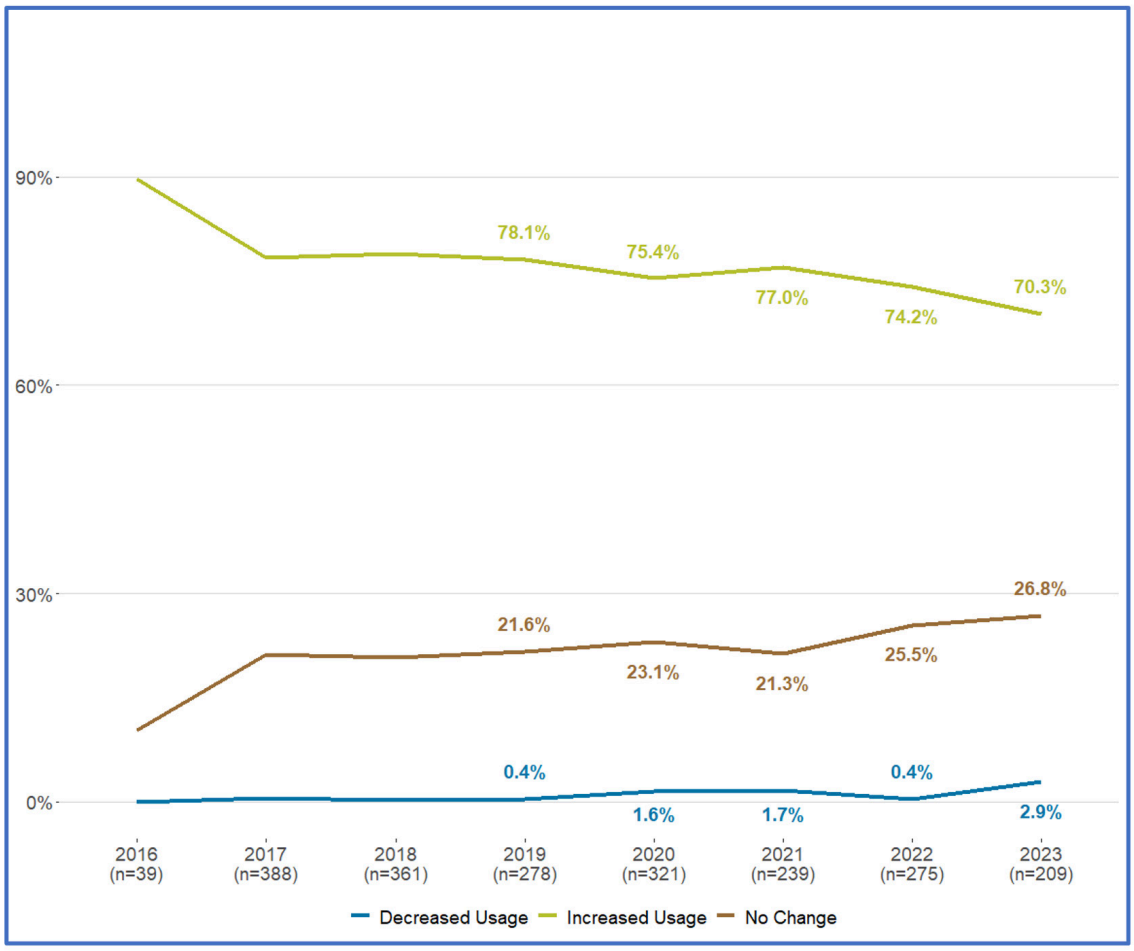


Table 12: Management Approach to Motivating Cybersecurity Compliance

Management Approach	Strongly Disagree	Some-what Disagree	Neither Agree nor Disagree	Some-what Agree	Strongly Agree	Average Score
Requirements Set by Management	2.6%	6.9%	11.5%	44.4%	34.6%	4.0
Leading Through Example	4.9%	7.4%	15.2%	34.7%	37.8%	3.9
Top-Down Initiatives	3.7%	8.4%	17.3%	44.4%	26.2%	3.8
Articulating Compelling Vision	4.3%	11.0%	22.0%	36.2%	26.4%	3.7
Issuing Punishments	17.2%	17.2%	31.3%	25.0%	9.2%	2.9
Offering Rewards	21.7%	20.8%	31.5%	17.6%	8.4%	2.7

Figure 11: Percentage of Organizations Using Each Cloud Category, 2015-2023

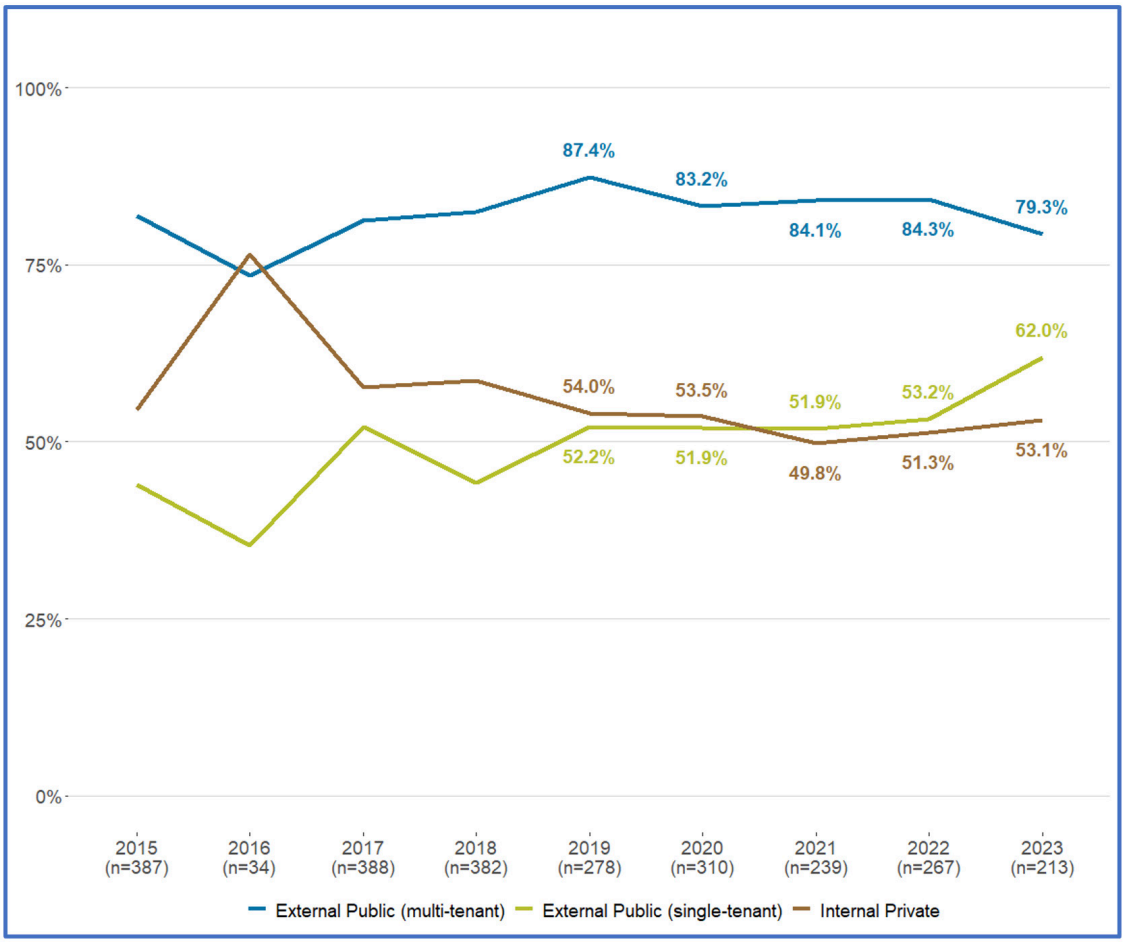


Table 13: Frequency and Severity of Cyber-Disruptions Relative to Rivals

	Significantly Less	Less	About the Same	More	Significantly More
Frequency of Disruptions	20.2%	36.6%	37.5%	4.8%	0.9%
Severity of Disruptions	18.7%	39.9%	39.3%	1.5%	0.6%

Table 14: Frequency of Cyber-Attacks, by Origin

Origin	Never	Rarely	Occasion-ally	Often	Almost Always	Average Score
Direct Attacks from Outside the Organization	9.4%	26.3%	32.6%	18.1%	13.6%	3.0
Direct Attacks from Inside the Organization	43.5%	40.7%	13.3%	1.2%	1.2%	1.8
Indirect Attacks through Trusted Partners	18.5%	31.2%	36.7%	10.5%	3.1%	2.5

Table 15: Digital Transformation Leadership, 2023 vs. 2022

Does your organization have a person with formal authority/responsibility over digital strategy?	2023 (n=278)	2022 (n=479)
Yes, a dedicated CDO (Chief Digital Officer), VP of Digital Transformation or equivalent	24.3%	20.7%
Yes, someone in IT who also has non-digital transformation responsibilities	25.1%	26.7%
Yes, someone outside IT who also has non-digital transformation responsibilities	5.8%	2.9%
No, there is no one with formal responsibility for digital transformation	35.4%	40.1%
Don't Know	9.3%	9.6%

Table 16: To Whom Does the CDO (or Equivalent) Report, 2023 vs. 2022?

	2023 (n=86)	2022 (n=96)
CEO/President	40.7%	37.8%
CIO (Information)	24.4%	34.7%
CTO (Technology)	14.0%	8.2%
CFO/Treasurer/Finance	7.0%	7.1%
COO (Operating)	2.3%	1.0%
Other	11.6%	5.1%

Table 17: Digital Transformation Efforts Are Geared Toward Improving ___?

Origin	None at all	A little	A moderate amount	A lot	A great deal
Customer Experience	5.7%	12.9%	23.7%	30.8%	26.9%
Data Management and Organization	6.6%	12.6%	27.6%	33.0%	20.1%
Analytics/Machine Learning/Ai	18.0%	26.4%	24.6%	18.3%	12.6%
Cloud Utilization	9.9%	17.7%	27.6%	27.9%	16.8%
Business Processes	4.7%	17.8%	30.0%	33.5%	13.9%
Business Strategy/Business Model	8.4%	19.4%	28.4%	30.7%	13.1%
Organizational Culture	13.2%	24.0%	29.1%	24.0%	9.6%

3.5. Use of Cloud and Shared Services

On average, organizations reported delivering 60.7% "of all IT services" via the cloud which continues the strong upward trend that began in 2015 (Figure 8). The median value also increased from 65% in 2022 to 70% in 2023.

3.5.1. Cloud-Based IT Services and Solutions. Figure 9 shows how organizations are moving to deliver more IT shared services via the cloud. Though 2.7% of organizations reported no cloud-based IT services in 2023, up significantly from 1.3% in 2022, 31.3% reported delivering over 80% of their shared IT services via the cloud in 2023.

An increase in external cloud usage was reported by 70.3% of respondents, down from 74.2% in 2022 and 77% in 2021. 26.8% reported

Table 18: Performance Measures for Internal and Outsourced IT, 2023 vs. 2022

Category	Performance Measure	Internal IT		Outsourced IT	
		2023 (n=436)	2022 (n=540)	2023 (n=436)	2022 (n=540)
I	Availability / Up Time	1 (50.9%)	1 (46.7%)	1 (39.6%)	1 (44.1%)
I/B	Customer/User Satisfaction - Internal Users	2 (40.8%)	2 (39.1%)	2 (29.5%)	2 (27.2%)
I/B	Cybersecurity Related	3 (27.8%)	3 (32.4%)	8 (19.5%)	4 (25.3%)
I/B	Cost Control / Reduction --- IT	4 (26.4%)	6 (22.0%)	3 (28.2%)	5 (21.2%)
S	Value of IT to the Business	5 (24.8%)	5 (23.9%)	11 (11.4%)	11 (12.4%)
I	Help Desk Performance	6 (21.6%)	4 (25.4%)	4 (23.5%)	6 (20.4%)
B	Customer Satisfaction - External Users	7 (18.6%)	7 (19.8%)	16 (8.1%)	14 (8.9%)
I/B	IT Service Quality	8 (15.8%)	8 (18.9%)	5 (22.1%)	3 (25.5%)
I/B	Products Delivered - on Time	9 (15.4%)	9 (15.9%)	6 (21.1%)	6 (20.4%)
I/B	IT Spending - as % of Revenue	10 (15.1%)	17 (9.3%)	18 (7.0%)	21 (4.6%)
I/B	IT Budget Compliance	11 (14.4%)	12 (13.9%)	20 (6.4%)	13 (9.9%)
S	IT's Contribution to Strategy	12 (13.1%)	10 (15.6%)	29 (2.3%)	23 (4.0%)
B/S	Innovative New Ideas	12 (13.1%)	13 (12.2%)	21 (5.7%)	18 (6.2%)
B	Productivity Improvement - Business	14 (11.9%)	11 (14.1%)	19 (6.7%)	20 (4.8%)
B	Cost Control/Reduction - Business	15 (10.8%)	19 (7.4%)	12 (11.1%)	19 (5.9%)
B	Improved Decision Making	15 (10.8%)	18 (8.9%)	24 (4.0%)	27 (3.0%)
I/B	Products Delivered - on Budget	17 (10.3%)	14 (11.7%)	7 (20.8%)	6 (20.4%)
I	IT Employee Retention	18 (10.1%)	16 (9.4%)	32 (0.7%)	28 (2.7%)
I/B	Productivity Improvement - IT	19 (8.5%)	20 (7.2%)	10 (13.4%)	14 (8.9%)
S	Increases in New Products or Services	20 (8.0%)	21 (6.5%)	14 (9.1%)	16 (8.3%)
I/B	Headcount Reduction - IT	21 (7.6%)	29 (3.7%)	13 (9.4%)	24 (3.8%)
I	SLA Target Compliance	22 (6.7%)	21 (6.5%)	9 (13.8%)	9 (18.3%)
B	Total Cost of Ownership	22 (6.7%)	15 (9.6%)	16 (8.1%)	12 (12.1%)
B	Project Return on Investment	24 (5.7%)	26 (5.4%)	21 (5.7%)	17 (7.8%)
S	Revenue Growth	25 (4.8%)	24 (5.9%)	27 (2.7%)	31 (1.6%)
I/B	Time to Market - IT	25 (4.8%)	27 (4.6%)	23 (5.0%)	22 (4.3%)
I	Software Quality/Defect Rates in Software	27 (3.4%)	23 (6.1%)	14 (9.1%)	10 (14.5%)
B	Time to Market - Business	27 (3.4%)	28 (3.9%)	25 (3.0%)	28 (2.7%)
B	Headcount Reduction - Business	29 (3.0%)	32 (1.5%)	27 (2.7%)	33 (1.3%)
I/B	IT Spending - per Employee	30 (2.8%)	31 (1.7%)	25 (3.0%)	31 (1.6%)
S	Profit Growth	30 (2.8%)	25 (5.7%)	33 (0.3%)	26 (3.2%)
S	Return on Equity	32 (2.5%)	33 (1.3%)	31 (1.7%)	30 (1.9%)
-	NONE/No Measures are Used	33 (2.1%)	30 (2.8%)	29 (2.3%)	25 (3.5%)
Category: I=IT, B=Business Operations, S=Strategic					

Table 19: CIO Personal Performance Measures, 2023 vs. 2022

Category	Performance Measure	Internal IT		Outsourced IT	
		2023 (n=436)	2022 (n=540)	2023 (n=436)	2022 (n=540)
I	Availability / Up Time	1 (50.9%)	1 (46.7%)	1 (39.6%)	1 (44.1%)
I/B	Customer/User Satisfaction - Internal Users	2 (40.8%)	2 (39.1%)	2 (29.5%)	2 (27.2%)
I/B	Cybersecurity Related	3 (27.8%)	3 (32.4%)	8 (19.5%)	4 (25.3%)
I/B	Cost Control / Reduction --- IT	4 (26.4%)	6 (22.0%)	3 (28.2%)	5 (21.2%)
S	Value of IT to the Business	5 (24.8%)	5 (23.9%)	11 (11.4%)	11 (12.4%)
I	Help Desk Performance	6 (21.6%)	4 (25.4%)	4 (23.5%)	6 (20.4%)
B	Customer Satisfaction - External Users	7 (18.6%)	7 (19.8%)	16 (8.1%)	14 (8.9%)
I/B	IT Service Quality	8 (15.8%)	8 (18.9%)	5 (22.1%)	3 (25.5%)
I/B	Products Delivered - on Time	9 (15.4%)	9 (15.9%)	6 (21.1%)	6 (20.4%)
I/B	IT Spending - as % of Revenue	10 (15.1%)	17 (9.3%)	18 (7.0%)	21 (4.6%)
I/B	IT Budget Compliance	11 (14.4%)	12 (13.9%)	20 (6.4%)	13 (9.9%)
S	IT's Contribution to Strategy	12 (13.1%)	10 (15.6%)	29 (2.3%)	23 (4.0%)
B/S	Innovative New Ideas	12 (13.1%)	13 (12.2%)	21 (5.7%)	18 (6.2%)
B	Productivity Improvement - Business	14 (11.9%)	11 (14.1%)	19 (6.7%)	20 (4.8%)
B	Cost Control/Reduction - Business	15 (10.8%)	19 (7.4%)	12 (11.1%)	19 (5.9%)
B	Improved Decision Making	15 (10.8%)	18 (8.9%)	24 (4.0%)	27 (3.0%)
I/B	Products Delivered - on Budget	17 (10.3%)	14 (11.7%)	7 (20.8%)	6 (20.4%)
I	IT Employee Retention	18 (10.1%)	16 (9.4%)	32 (0.7%)	28 (2.7%)
I/B	Productivity Improvement - IT	19 (8.5%)	20 (7.2%)	10 (13.4%)	14 (8.9%)
S	Increases in New Products or Services	20 (8.0%)	21 (6.5%)	14 (9.1%)	16 (8.3%)
I/B	Headcount Reduction - IT	21 (7.6%)	29 (3.7%)	13 (9.4%)	24 (3.8%)
I	SLA Target Compliance	22 (6.7%)	21 (6.5%)	9 (13.8%)	9 (18.3%)
B	Total Cost of Ownership	22 (6.7%)	15 (9.6%)	16 (8.1%)	12 (12.1%)
B	Project Return on Investment	24 (5.7%)	26 (5.4%)	21 (5.7%)	17 (7.8%)
S	Revenue Growth	25 (4.8%)	24 (5.9%)	27 (2.7%)	31 (1.6%)
I/B	Time to Market - IT	25 (4.8%)	27 (4.6%)	23 (5.0%)	22 (4.3%)
I	Software Quality/Defect Rates in Software	27 (3.4%)	23 (6.1%)	14 (9.1%)	10 (14.5%)
B	Time to Market - Business	27 (3.4%)	28 (3.9%)	25 (3.0%)	28 (2.7%)
B	Headcount Reduction - Business	29 (3.0%)	32 (1.5%)	27 (2.7%)	33 (1.3%)
I/B	IT Spending - per Employee	30 (2.8%)	31 (1.7%)	25 (3.0%)	31 (1.6%)
S	Profit Growth	30 (2.8%)	25 (5.7%)	33 (0.3%)	26 (3.2%)
S	Return on Equity	32 (2.5%)	33 (1.3%)	31 (1.7%)	30 (1.9%)
-	NONE/No Measures are Used	33 (2.1%)	30 (2.8%)	29 (2.3%)	25 (3.5%)
Category: I=IT, B=Business Operations, S=Strategic					

Figure 12: Average Percentage of All Cloud-based IT Provided by Category, 2013-2023

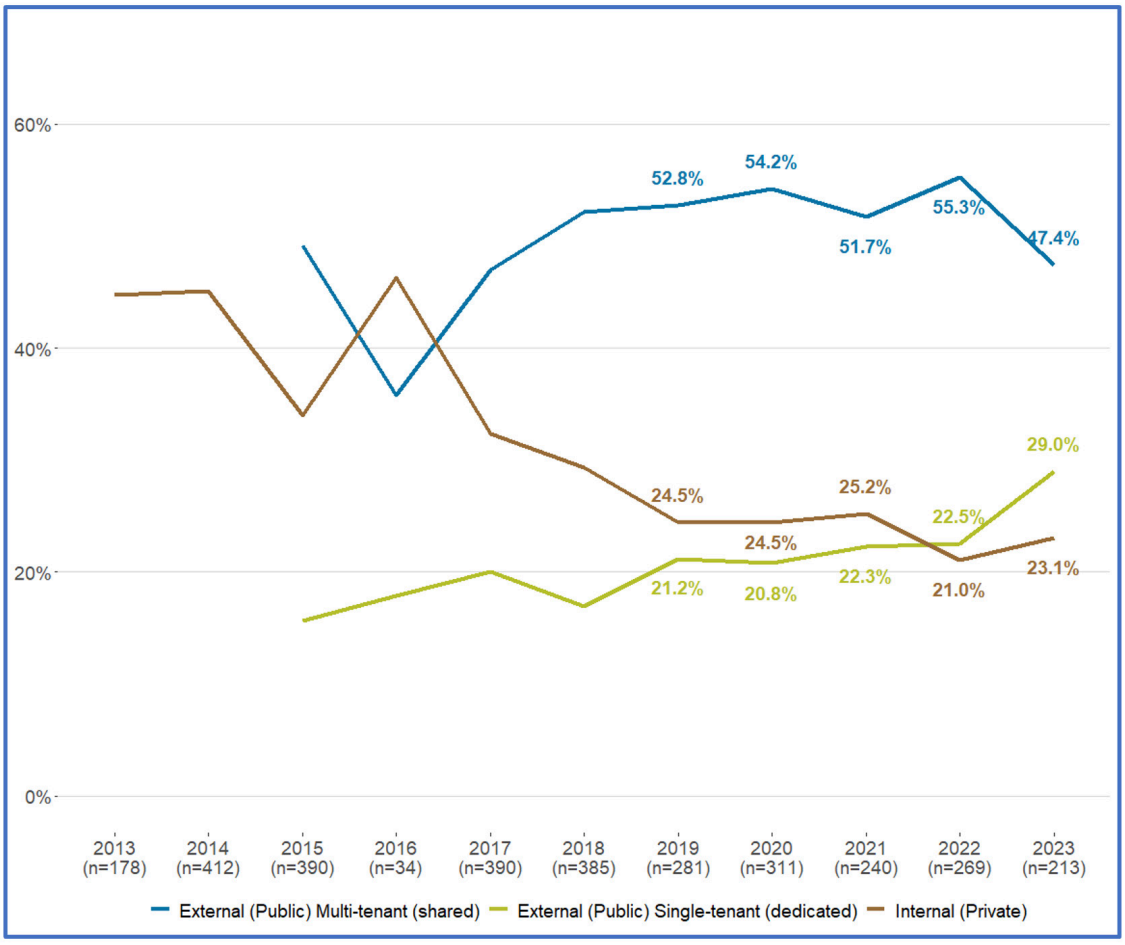
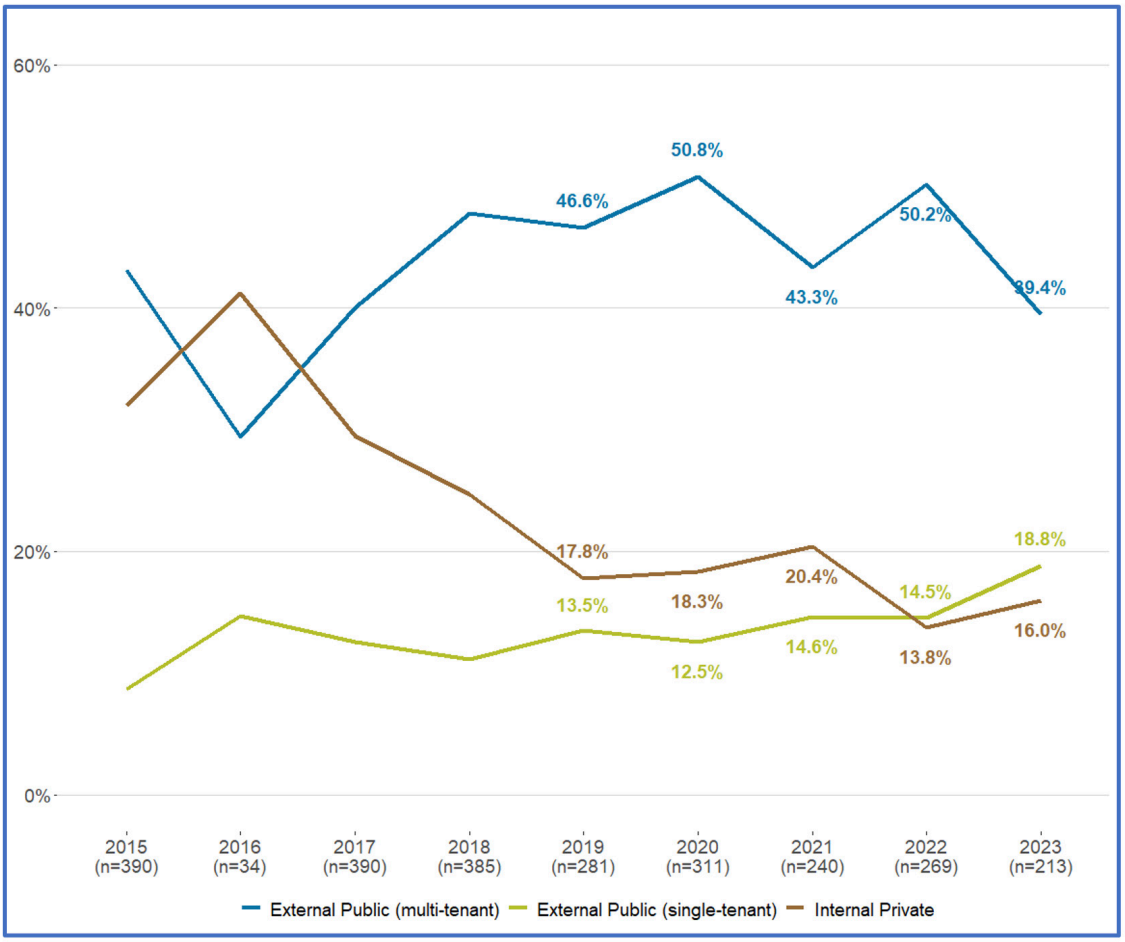


Table 20: To Whom Does the CIO Report, by Percentage of Respondents, 2013-2023

IT Activities	2023 (n=207)	2022 (n=281)	2021 (n=239)	2020 (n=274)	2019 (n=293)	2018 (n=403)	2017 (n=394)	2016 (n=406)	2015 (n=417)	2014 (n=448)	2013 (n=284)
CEO/ President	46.9%	48.0%	46.9%	46.7%	50.2%	45.9%	41.4%	45.6%	42.9%	44.0%	41.9%
CFO	25.1%	24.6%	22.6%	26.3%	24.9%	25.8%	28.4%	27.8%	29.0%	25.2%	26.1%
COO/CAO	17.4%	18.1%	18.0%	17.9%	14.0%	17.9%	19.0%	13.8%	16.8%	15.0%	13.7%
Business Unit Executive	6.3%	5.3%	6.3%	2.2%	6.1%	4.5%	5.6%	4.2%	4.8%	6.2%	6.3%
Other (Non-IT)	3.9%	3.2%	2.5%	3.3%	2.4%	4.2%	3.8%				
Other (IT)	0.5%	0.7%	2.9%	1.8%	1.7%	0.7%	1.3%				
Board/Board Member			0.8%	1.8%	0.7%	1.0%	0.5%	1.0%	1.0%		1.4%
Other								7.6%	5.5%	9.6%	10.6%

Figure 13: Organizations Using Each Category for Over 50% of Cloud-based IT, 2015-2023



no change and 2.9% reported a decrease (Figure 10).

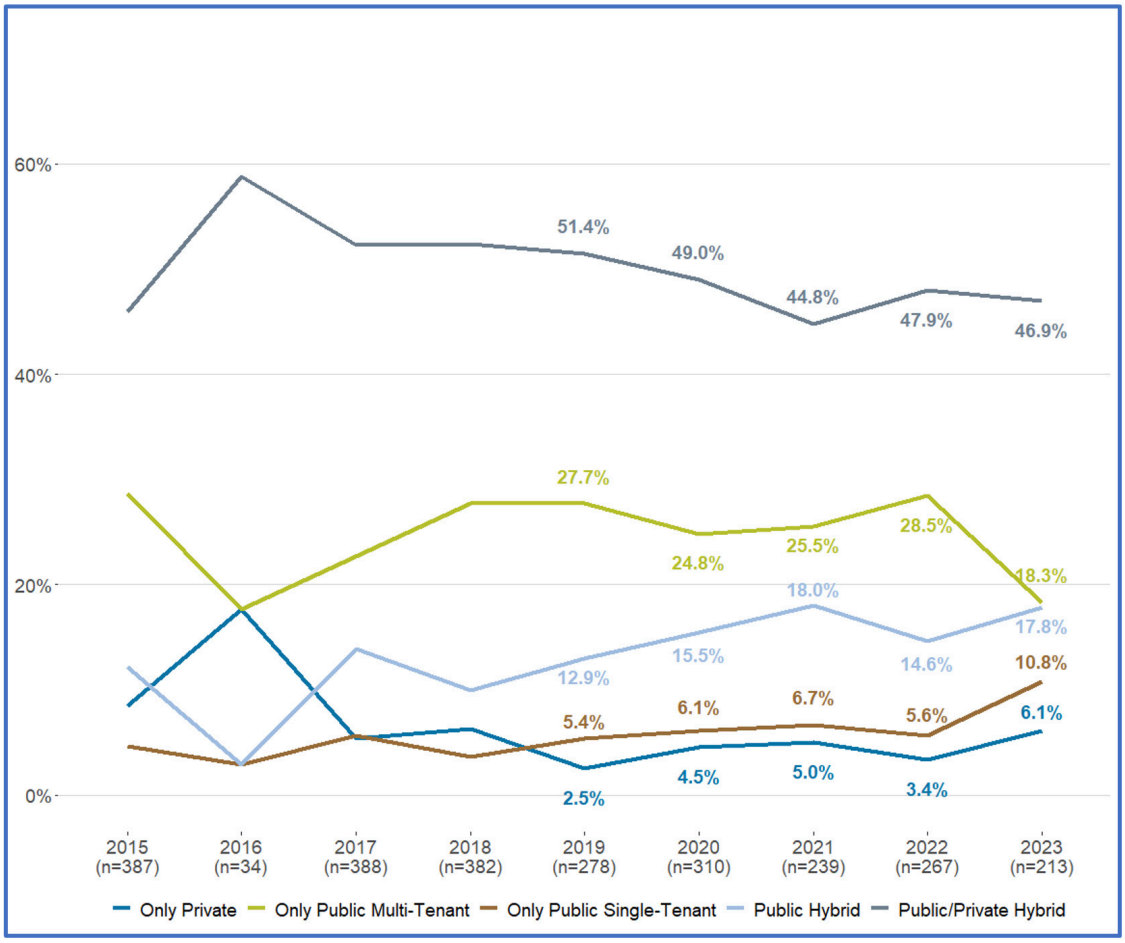
As shown in Figure 11, the percentage of organizations using external public multi-tenant cloud services fell from 84.3% in 2022 to 79.3% in 2023. This is the lowest reported percentage of organizations using this type of cloud service since 2016. However, usage of external public single tenant cloud rose sharply to its highest level, from 53.2% in 2022 to 62% in 2023. In addition, the use of internal private cloud increased from 51.3% to 53.1%.

Consistent with the shift away from using external multi-tenant cloud services highlighted above, IT services provided through external multi-tenant cloud fell sharply from 55.3% in 2022 to 47.4% in 2023. The use of external public single tenant service usage rose to 29% from 22.5% and internal private cloud usage increased slightly from 21% to 23.1% (Figure 12).

The percentage of companies using external public multi-tenant platforms for over 50% of their cloud-based IT decreased sharply from 50.2% in 2022 to 39.4% in 2023, a seven-year low. Meanwhile, the percentage of companies relying on external public single tenant rose to 18.8% in 2023 from 14.5% in 2022, and those using internal platforms increased from 13.8% in 2022 to 16% (Figure 13).

Examining the cloud platform mix shown in Figure 14, companies that reported using exclusively external public multi-tenant

Figure 14: Corporate Cloud Platform Mix, 2015-2023



platforms fell sharply from 28.5% in 2022 to 18.3% in 2023, the lowest level since 2016. Also, companies reporting using public hybrid platforms decreased slightly from 47.9% to 46.9%. Companies using only internal private and only external public single tenant platforms both increased to 6.1% and 10.8% respectively.

Figure 15 shows responses to the question: "What percentage of the external cloud-based IT services are provided in each of the following categories: Software as a Service (SaaS), Platform as a Service (PaaS), Infrastructure as a Service (IaaS) and Process as a Service (PraaS)?" In 2023, SaaS usage decreased from 66.3% to 61.4%, the lowest level since 2016. IaaS increased sharply from 16.1% to 23%, a 10-year high, and PaaS declined to 13.8% from 15.6%. PraaS declined from 2% in 2022 to 1.2% in 2023.

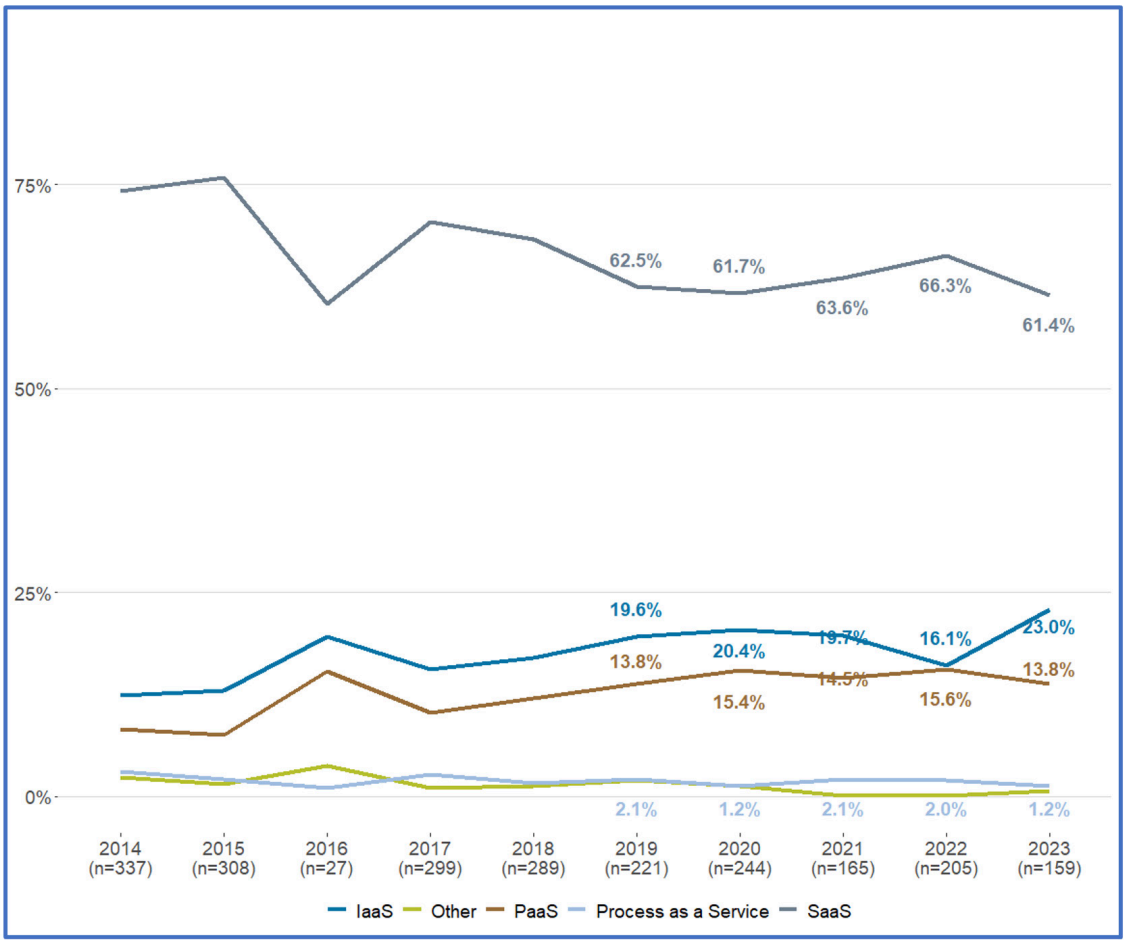
3.5.2. Shared Services for IT Delivery. In 2023, 91% of organizations indicated that they used at least some shared IT services. At 67.8%, the average amount of all IT services delivered as a shared service in 2023 increased by more than 2% compared to 2022 (66.2%) (Figure 16).

Organizations where IT is delivered as a shared service through the cloud were asked "What percentage of IT shared services are provided in each of the following categories?" SaaS decreased from 68.4% to 65.8% in 2023. PraaS decreased from 2.6% to 1.3%, PaaS remained steady at 12.4% and IaaS increased from 15% to 16.2% (Figure 17).

3.6. Cybersecurity Practices

Though Cybersecurity dropped to the number two organizational concern in 2023 (Table 1) and

Figure 15: Percentage of External Cloud Services Delivered by Service Category, 2014-2023



cybersecurity spending seems to have leveled off after years of increases, it nonetheless remains a top priority for organizations. Continuing a multi-year trend, the percentage of organizations with a dedicated person in charge of cybersecurity increased to 57.1% in 2023 from 54.7 % a year earlier (Table 10). As in previous years, larger organizations are far more likely to have a dedicated chief information security officer (CISO) or equivalent while smaller organizations are more likely to have someone with joint responsibilities over IT and cybersecurity (Figure 18).

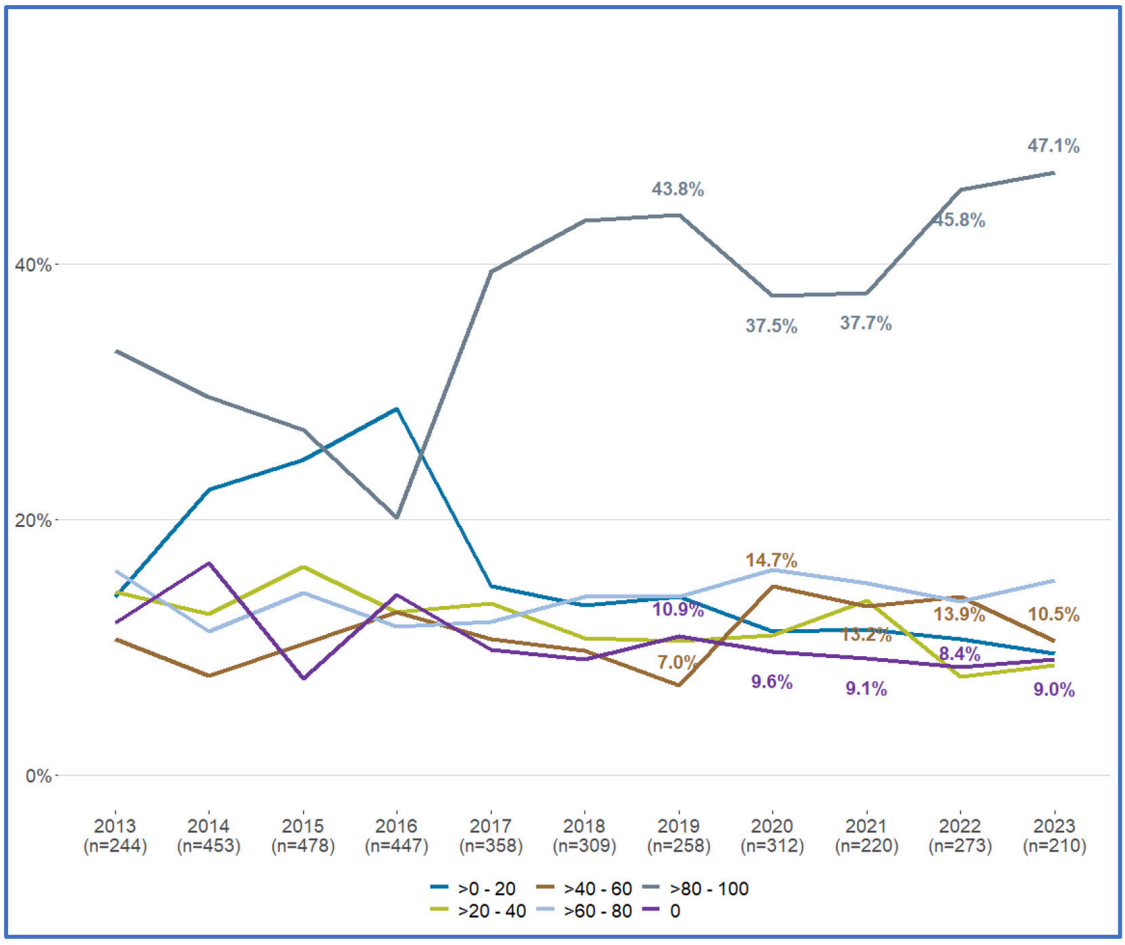
Of the 213 respondents reporting in 2023 that their organization has a dedicated person in charge of cybersecurity, more than 62% of those positions reported to the CIO. This reverses the trend seen last year of a reducing percentage reporting to the CIO. This could indicate that previous reporting suffered from sampling bias, and it will be interesting to see if cybersecurity leadership continues to be consolidated under the IT function (Table 11).

Respondents were asked whether they agree or disagree with several statements about the overall readiness of their organization to handle cybersecurity attacks on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The overall average readiness score was a 3.91 suggesting that, in general, organizations "somewhat agree" that they are ready to handle cyberattacks. At 3.38, the overall readiness score in 2022 was somewhat lower, indicating that organizations are making progress in their overall

Table 21: Percentage of CIOs Interacting with C-level Peers, by Frequency, 2016-2023

	Year	Daily	Weekly	At least	Monthly	Quarterly	Annually	None
CEO (Executive)	2016 (n=404)	25.2%	44.1%	69.3%	19.3%	7.9%	2.2%	1.2%
	2017 (n=398)	24.4%	42.2%	66.6%	20.9%	8.5%	1.5%	2.5%
	2018 (n=386)	25.4%	43.3%	68.7%	21.5%	6%	1.8%	2.1%
	2019 (n=305)	29.8%	45.9%	75.7%	15.4%	6.2%	0.7%	2%
	2020 (n=277)	29.2%	44%	73.2%	18.8%	6.5%	0.4%	1.1%
	2021 (n=225)	22.7%	47.6%	70.3%	18.2%	8%	1.3%	2.2%
	2022 (n=273)	22.7%	44%	66.7%	19.4%	9.2%	2.2%	2.6%
	2023 (n=200)	25.5%	36.5%	62.0%	24.0%	11.0%	2.0%	1.0%
COO (Operating)	2016 (n=318)	31.1%	43.7%	74.8%	12.3%	2.8%	0.3%	9.7%
	2017 (n=350)	31.7%	40%	71.7%	12.9%	4%	0.3%	11.1%
	2018 (n=330)	33.9%	41.8%	75.7%	10.6%	1.5%	0.6%	11.5%
	2019 (n=261)	31.4%	44.8%	76.2%	10.7%	2.7%	0.8%	9.6%
	2020 (n=247)	29.6%	42.9%	72.5%	16.2%	2%	0.8%	8.5%
	2021 (n=192)	28.1%	47.4%	75.5%	12%	1%	0.0%	11.5%
	2022 (n=255)	30.6%	47.1%	77.7%	11%	2.7%	1.2%	7.5%
	2023 (n=167)	33.5%	45.5%	79.0%	9.0%	2.4%	1.8%	7.8%
CFO (Financial)	2016 (n=391)	33.8%	49.6%	83.4%	11.8%	3.1%	0.0%	1.8%
	2017 (n=387)	31.0%	50.9%	81.9%	12.9%	3.1%	0.8%	1.3%
	2018 (n=368)	34.5%	50.0%	84.5%	9.2%	3.5%	1.1%	1.6%
	2019 (n=298)	30.9%	49.7%	80.6%	14.1%	3%	0.7%	1.7%
	2020 (n=269)	32.3%	54.6%	86.9%	10.4%	1.1%	0.0%	1.5%
	2021 (n=222)	23%	57.2%	80.2%	13.5%	3.6%	0.9%	1.8%
	2022 (n=267)	30%	52.1%	82.1%	12.4%	3%	0.7%	1.9%
	2023 (n=198)	28.3%	49.0%	77.3%	14.1%	5.6%	1.0%	2.0%
CTO (Technology)	2017 (n=257)	44.7%	13.2%	57.9%	4.7%	2.3%	0.4%	34.6%
	2018 (n=233)	41.6%	17.6%	59.2%	2.6%	2.1%	1.3%	34.8%
	2019 (n=211)	46%	16.6%	62.6%	8.5%	0.9%	0.9%	27.0%
	2020 (n=195)	42.6%	20.0%	62.6%	5.1%	0.5%	0.0%	31.8%
	2021 (n=150)	49.3%	20.0%	69.3%	4%	3.3%	0.0%	23.3%
	2022 (n=189)	45.5%	19.0%	64.5%	5.3%	3.2%	0.0%	27.0%
	2023 (n=127)	55.9%	13.4%	69.3%	4.7%	3.1%	2.4%	20.5%
Board of Directors	2016 (n=376)	1.1%	3.7%	4.8%	17%	37%	15.4%	25.8%
	2017 (n=369)	2.4%	5.1%	7.5%	14.4%	30.9%	20.9%	26.3%
	2018 (n=350)	2.9%	5.4%	8.3%	12.6%	32.6%	19.7%	26.9%
	2019 (n=302)	6.6%	5.0%	11.6%	16.6%	33.4%	16.2%	22.2%
	2020 (n=265)	1.1%	10.2%	11.3%	14.3%	34.7%	16.2%	23.4%
	2021 (n=215)	2.3%	7.0%	9.3%	16.3%	32.6%	20.0%	21.9%
	2022 (n=255)	3.5%	6.3%	9.8%	16.9%	35.3%	19.6%	18.4%
	2023 (n=192)	2.1%	6.8%	8.9%	17.2%	36.5%	14.6%	22.9%

Figure 16: Percentage of All IT Services Delivered as Shared Services, 2013-2023

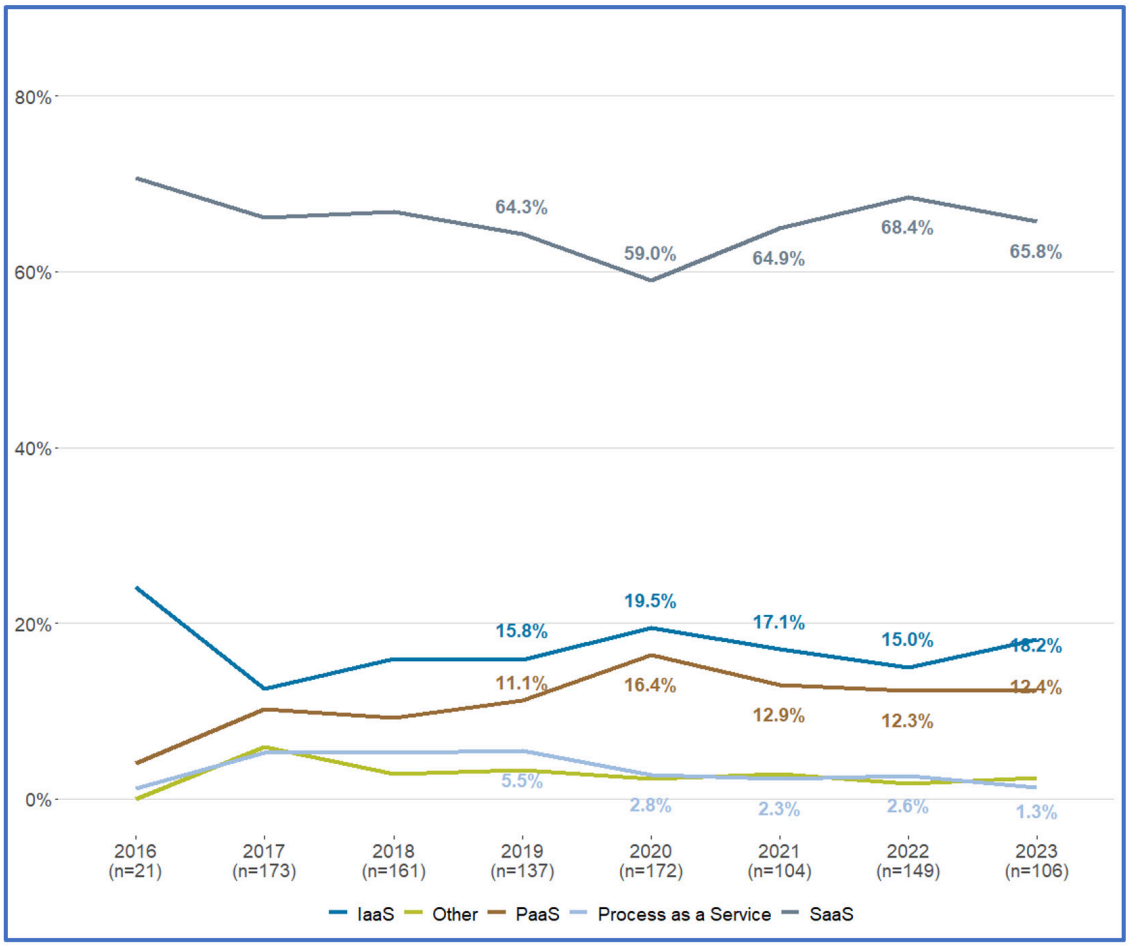


readiness to handle cyberattacks. However, the structure of the questions changed in 2023 so direct comparison with last year's average is not possible. We will monitor this trend in future years.

Several new questions on cybersecurity were added to the 2023 survey to get a more granular view of cybersecurity practices and impacts on operations. Respondents were asked about their management approach to cybersecurity. Though setting requirements and leading by example were the two most commonly used approaches, there was considerable variability across organizations that lead by example. Issuing punishments was slightly more common than offering rewards, but both were the least likely methods for encouraging compliance with cybersecurity practices (Table 12).

To better understand the impact of cybersecurity incidents, respondents were asked to evaluate both the frequency and severity of cyber-related disruptions relative to their competitive rivals (Table 13). Unsurprisingly, the largest percentage of respondents noted they experience about the same number of disruptions as their rivals. However, the largest percentage noted that the severity of these disruptions is less than those their rivals experience. Also, very few respondents noted that they experience more severe disruptions than their rivals. Collectively, these results suggest that organizations tend to feel they are average in terms of how often they experience disruptions and slightly better than the average in terms of the severity of those disruptions.

Figure 17: Percentage of IT Shared Services by Category, 2016-2023



Finally, respondents were asked about the frequency of cyber-attacks that originate outside the organization, inside the organization or through trusted partners. By far, the most common source of attacks is from outside the organization. Almost 85% of respondents noted that they never or rarely experience attacks that originate from within the organization (Table 14).

3.7. Digital Transformation

Digital transformation involves using digital technology to meet changing business and market demands. These changes can often involve using technology to transform services or products to meet evolving customer expectations.

Organizations are increasingly appointing individuals to head up their digital transformations, as shown in Table 15. This upward trend may suggest that organizations are expanding efforts to better leverage digital technologies. Figure 19 shows that large organizations are much more likely to have a chief digital officer (CDO) or equivalent, while smaller organizations are more likely to have no digital transformation leadership at all.

Though digital transformation efforts may impact many areas across the organization, there are many choices as to where digital transformation leadership reports. The overwhelming majority of dedicated CDOs (or equivalents) report to the CEO, with the percentage having increased from 2022 (Table 16). The percentage of CDOs reporting to the CIO dropped considerably in 2023 to 24.4% from 34.7% in 2022. This suggests that more organizations are elevating visibility of digital

Figure 18: Cybersecurity Responsibility by Organization Revenue

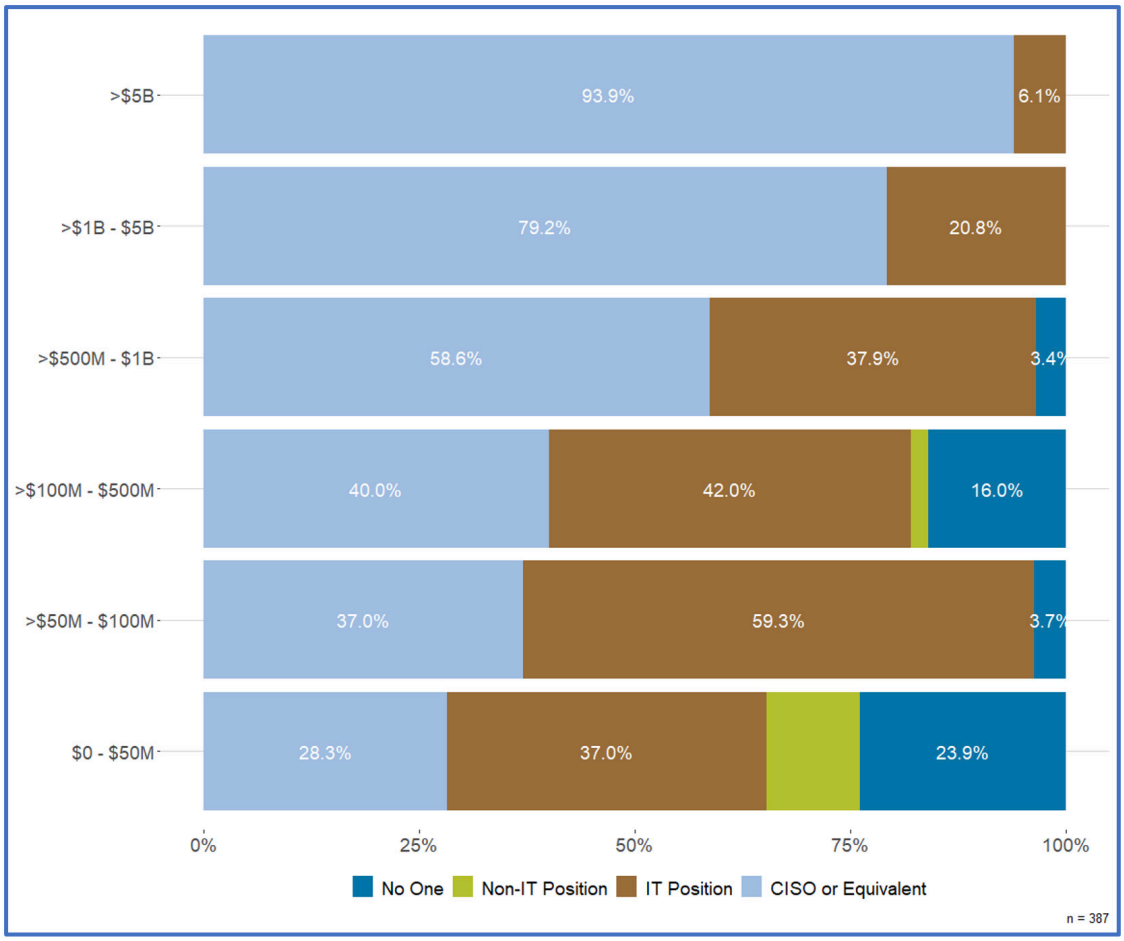
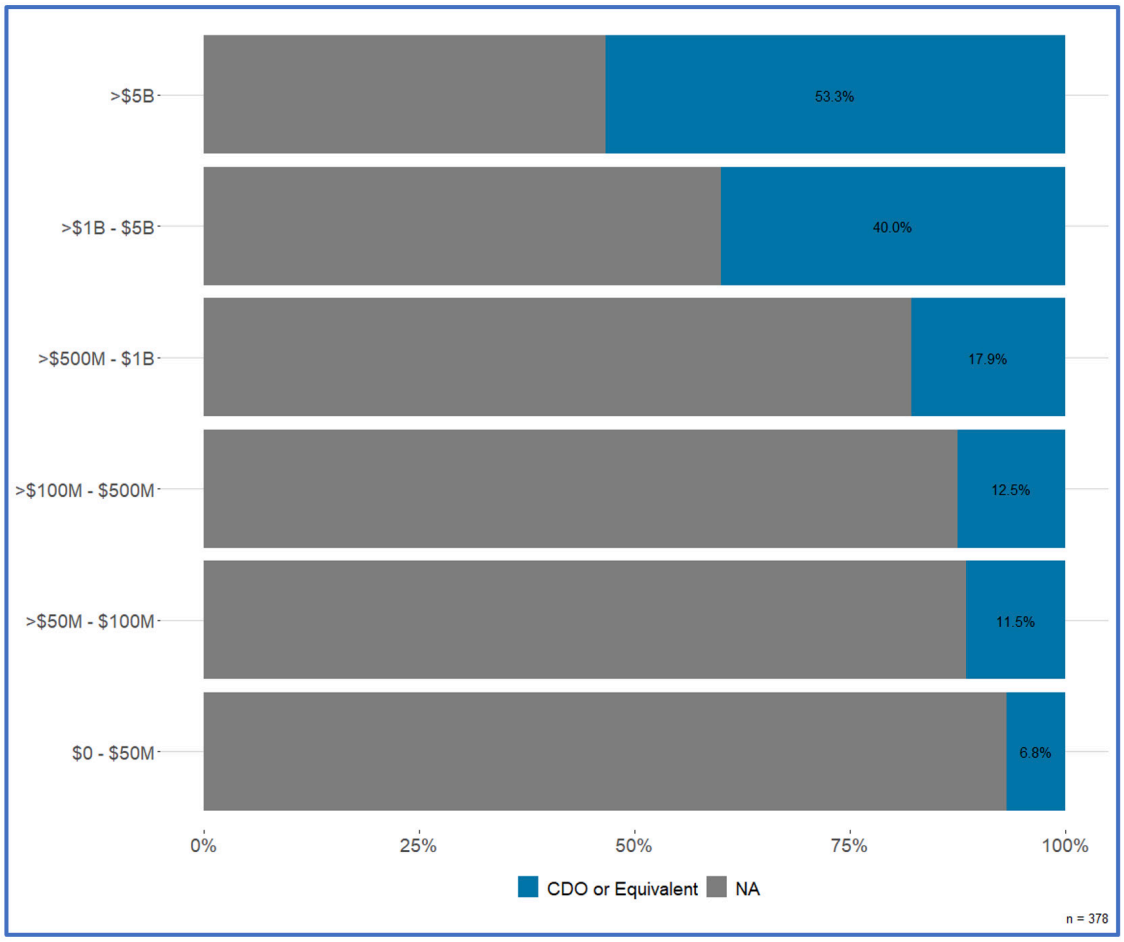


Table 22: IT Areas where CIOs Spend their Time, 2016-2023

IT Activities	2023 (n=208)	2022 (n=294)	2021 (n=242)	2020 (n=295)	2018 (n=369)	2017 (n=430)	2016 (n=430)
IT Priorities/Strategy	1 (70.2%)	1 (74.5%)	1 (74.4%)	1 (75.3%)	1	1	1
Innovation for IT	2 (38.5%)	2 (37.4%)	3 (34.3%)	2 (35.3%)	3	4	4
Evangelist for IT	3 (36.5%)	3 (35.0%)	2 (36.8%)	3 (31.9%)	6	3	2
IT Governance	4 (28.4%)	4 (28.0%)	5 (26.9%)	4 (29.2%)	5	2	6
Project Management	5 (24.0%)	5 (22.4%)	4 (29.8%)	5 (25.1%)	2	5	3
IT Operations/Facilities Management	6 (21.6%)	6 (21.3%)	7 (19.8%)	7 (19.0%)	4	6	5
IT Vendor Management	7 (19.2%)	7 (18.5%)	8 (16.1%)	8 (17.6%)	9	9	7
Resource Allocation/ Budgeting	8 (17.8%)	7 (18.5%)	6 (21.5%)	6 (22.7%)	10	10	10
IT HR and Talent Management	9 (15.4%)	10 (12.9%)	10 (12.0%)	10 (11.5%)	8	8	9
IT Architecture	10 (12.5%)	9 (14.7%)	9 (14.0%)	9 (16.9%)	7	7	8
Software Development	11 (6.7%)	11 (6.6%)	12 (6.2%)	12 (6.8%)	12	12	12
Technical Research	12 (6.2%)	12 (6.3%)	11 (7.0%)	11 (7.1%)	11	11	11

Figure 19: Presence of Digital Transformation Leadership by Organization Revenue



transformation initiatives across the organization. This is a trend worth keeping an eye on in coming years

Respondents were also asked about the focus of their digital transformations in improving seven areas, measured using a five-point scale ranging from (1) "not at all" to (5) "a great deal." As shown in Table 17, the primary focus seems to be on improving customer experience (average 3.3) with less focus on organizational culture (average 2.9). Nevertheless, it seems that digital transformation is having significant impacts across the organization

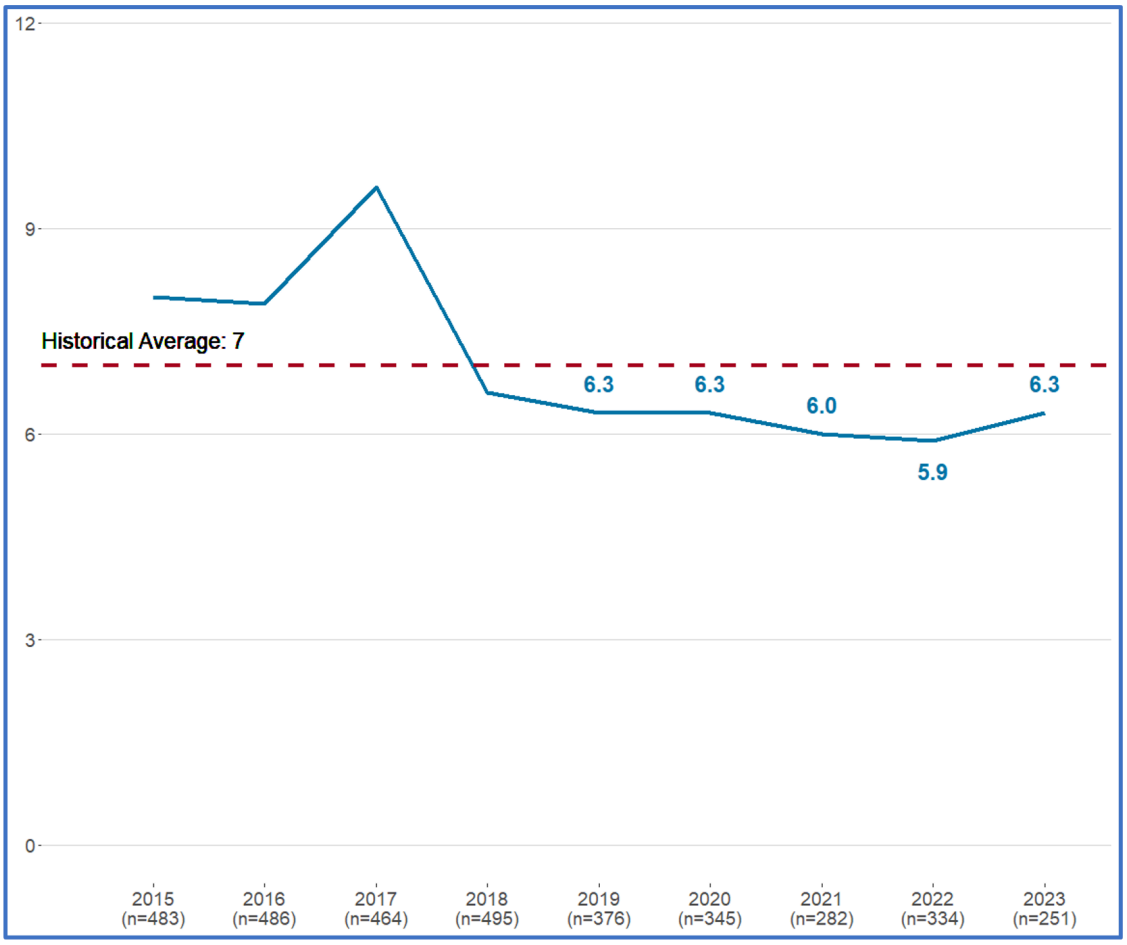
4. IT Performance Measurement

To better understand how organizations monitor IT performance, respondents were asked to choose up to five of the most important performance measures (from a predefined list) for evaluating internal IT operations, outsourced IT and their own personal performance.

4.1. Performance Measures for Internal and Outsourced IT

As shown in Table 18, the top ten measures for internal IT are largely unchanged from 2022 with the exception of IT Spending as a Percentage of Revenue, which jumped from 17th to 10th. Rankings for outsourced IT performance measures also remained consistent with previous years. Cybersecurity-related performance measures for outsourced IT dropped from 4th to 8th this year, while the ranking of most others changed by no more than two places.

Figure 20: Average Job Tenure of CIOs, 2015-2023



4.2. Performance Measures for CIOs

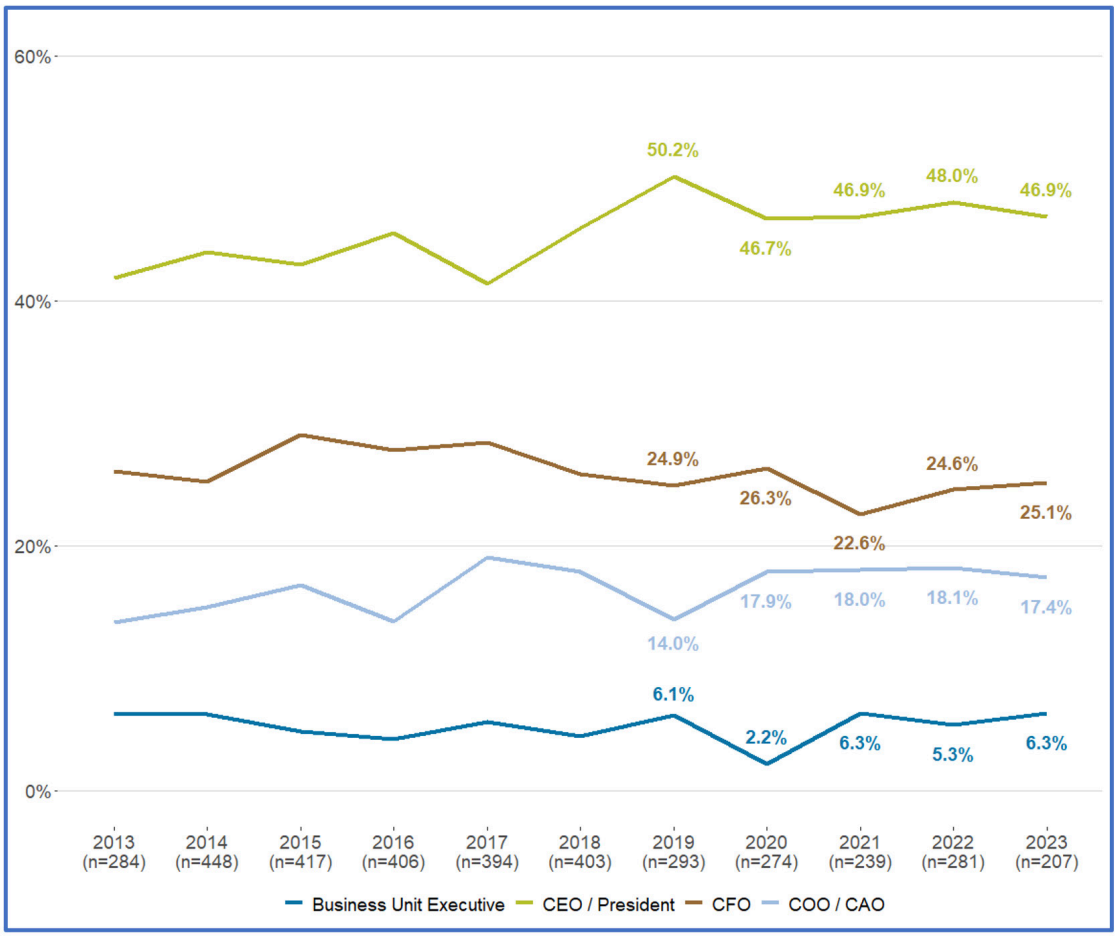
In 2023, there were no significant changes to how CIOs are evaluated on their personal performance. The top ten measures used to evaluate CIO performance continue to be a blend of IT, budget and strategic measures (Table 19). One minor shift in 2023 is that several measures evaluating cost/budget compliance rose in the rankings (e.g., Cost Control/Reduction – IT moved from 6th to 4th). There also appears to be a trend where there is less consistency at the top of the rankings. In both 2021 and 2022, the top two measures were both selected by more than a third of the sample but in 2023 no single performance measure was selected by a third of the sample, suggesting that there is growing variation in how CIOs are evaluated.

5. CIO Tenure, Reporting, Background and Activities

The average age of the 178 CIOs who responded to this question was 52.4 (standard deviation 7, median 53). 86.3% of them were male, which is down slightly from 86.9% in 2022. As shown in Figure 20, average tenure for the top IT person increased from 5.9 years in 2022 to 6.3 years (standard deviation 5.9 years and median 4.2 years).

Table 20 shows CIO reporting relationships over the past eleven years and indicates that in 2023 89.4% reported to CEOs, CFOs or COOs, down from 90.7% in 2022. Though the number of CIOs reporting to the CEO is down, those

Figure 21: To Whom Does the CIO Report, 2013-2023



reporting to CFOs and COOs are both up. Figure 21 displays the data from Table 15 graphically.

5.1. CIO Previous Employment

CIOs coming from prior IT positions increased from 75.4% in 2022 to 77.6% in 2023, the highest level since 2017 (Figure 22). CIOs coming from outside of IT declined in 2023 to 22.4%.

As shown in Figure 23, the percentage of CIOs coming from outside the organization decreased slightly to 81.3% while those coming from inside increased to 18.7%.

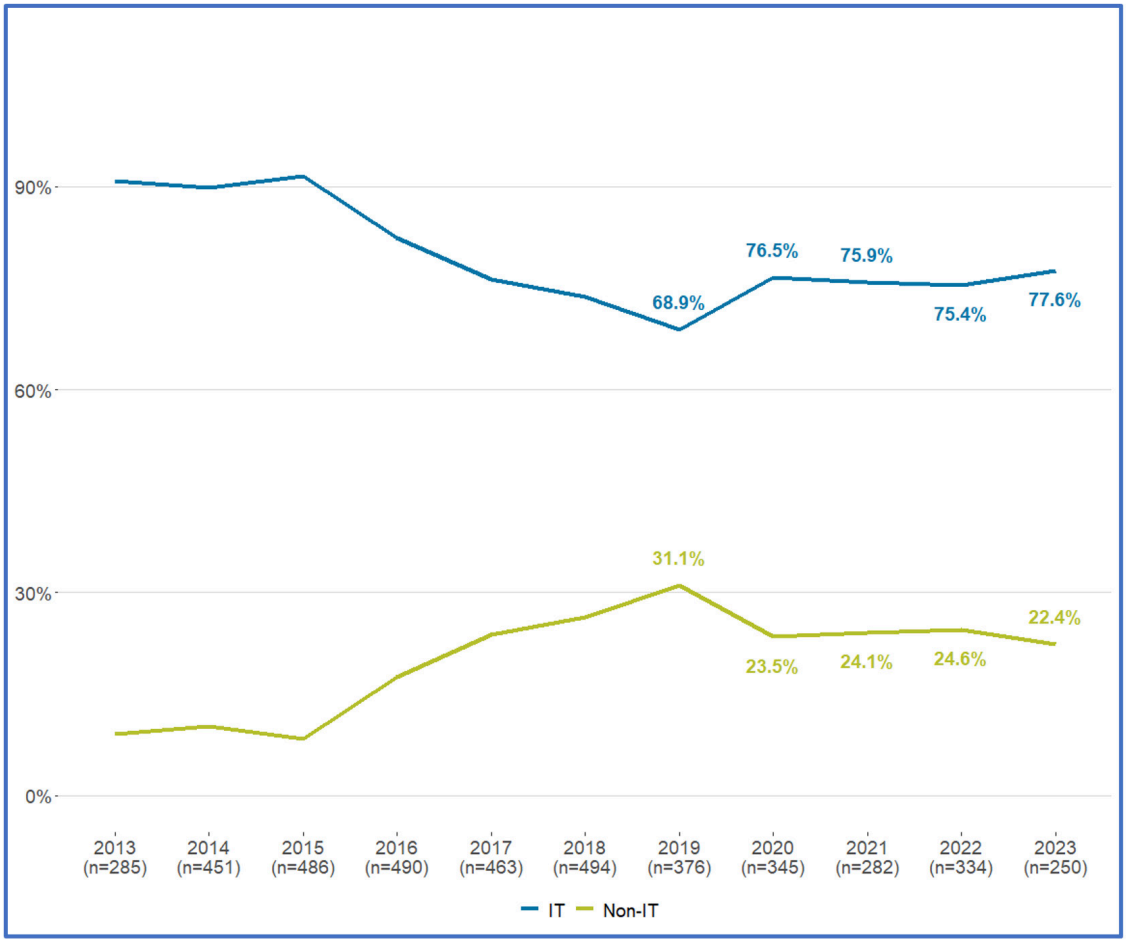
In 2023, the number of CIOs coming from IT roles outside their current organizations increased from 60.8% in 2022 to 62.8% (Figure 24). In addition, the number of CIOs coming from IT roles inside their current organization also increased to 14.8%. CIOs coming from non-IT positions outside their current organizations fell significantly from 21.3% in 2022 to 18.4%, while CIOs from non-IT positions inside their organizations increased from 3.3% to 4%. Overall, the number of CIOs in 2023 who came from other organizations decreased from 82.2% in 2022 to 81.2%.

5.2. With Whom CIOs Spend their Time

The job of the CIO is complex and involves interactions with people both inside and outside the organization. Figure 25 shows the average percentage of a CIO's time spent with different groups of people.

On average, the 214 responding CIOs spent over four times more time with people in their own organization than with those from other organizations (78.2% vs 16.9%). The percentage of time spent with non-IT C-level colleagues remained relatively flat at 24.3%. In addition,

Figure 22: CIOs Prior Position – IT vs. Non-IT, 2013-2023



time spent with non-IT, non-C-level employees decreased to 16.4%.

CIOs spending any time with "C-level (non-IT) personnel" were also asked about the frequency of those interactions—specifically, if they met daily, weekly, monthly, quarterly or annually with C-level executives and/or board members. Table 21 summarizes their responses and highlights the percentage of CIOs reporting "at least weekly" interactions (i.e., daily plus weekly).

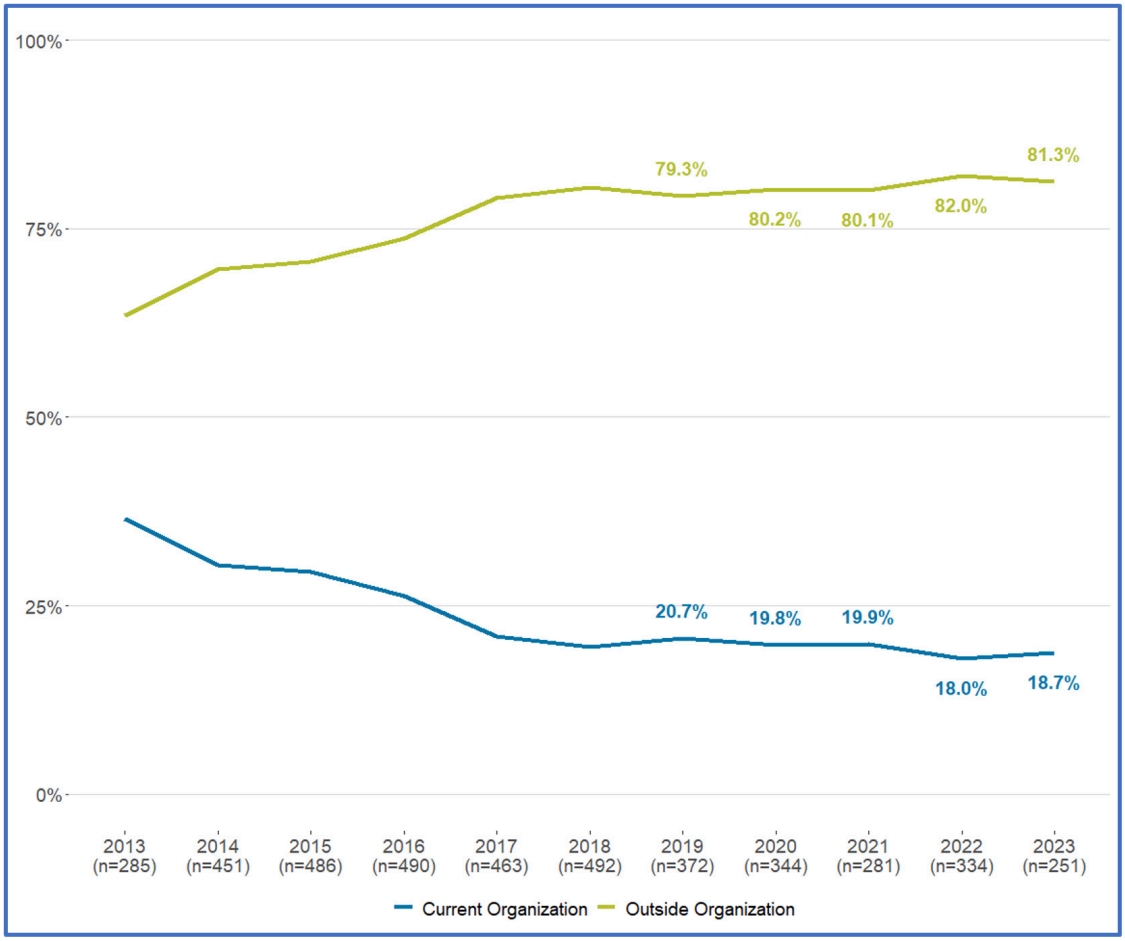
In 2023 the time spent with both the CEO and the CTO increased, and time spent with the CEO increased slightly. Interactions with other categories (i.e., COO, CFO, and Board of Directors) decreased.

Figure 26 illustrates that the 62% of CIOs meeting "at least weekly" with their CEO in 2023 continues the downward trend from the 2019 high of 75.7%. The percentage of CIOs meeting at least weekly with their COO increased to 79%. The "at least weekly" interactions with CFOs and Board of Directors decreased to 77.3%, and 8.9% respectively.

5.3. What CIOs Do with Their Time

To understand how CIOs spend their time, a preliminary question asked about the overall percentage of time spent on three general activity categories: Business (Non-IT), IT-Related and Other Work-Related Activities. Time allocations between 2016 and 2023 have remained somewhat flat (Figure 27). The percentage of CIO time allocated to IT-Related activities decreased from 63.2% in 2022 to 61.1% in 2023, while time allocated to Non-IT-Related activities rose from 29.3% to 29.7%. The time spent on Other Job and

Figure 23: CIOs Prior Position – Outside vs. Within Current Organization, 2013-2023



Work-Related Activities increased from to 7.6% in 2022 to 9.2%.

Separate activity lists were then provided for each of the three categories and respondents were asked to indicate the top three areas where they spend their time. As shown in Table 22, IT Priorities/Strategy remains the top IT-Related activity by a wide margin, and Innovation for IT and Evangelist for IT round out the top three.

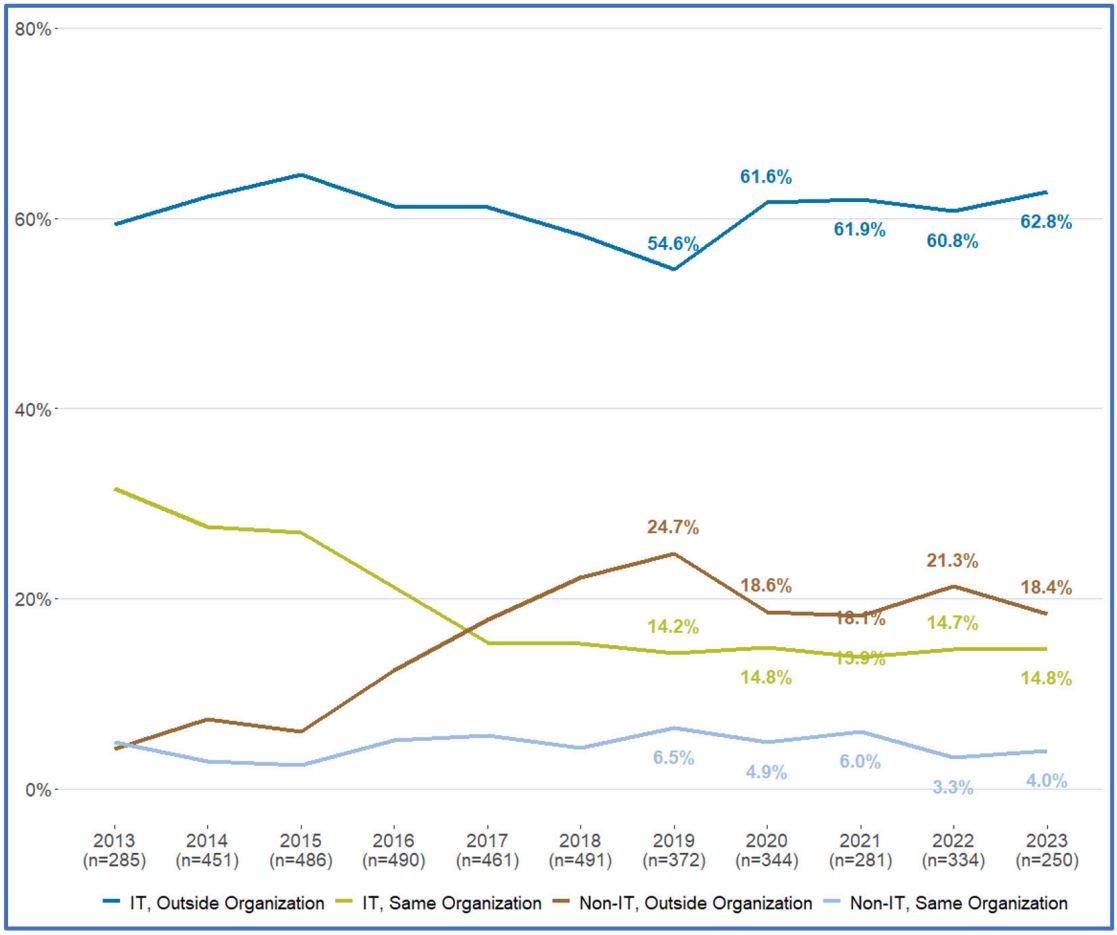
As illustrated in Table 23, for the third consecutive year Organizational Priorities and Strategy remains the most commonly cited Non-IT Business area where CIOs spend their time, which has been present in the top four since 2016 when it was first added. Managing Organizational Changed moved up again this year and is now 2nd.

6. Summary and Conclusions

The collective findings of the 2023 SIM IT Trends study point to a complex business landscape in which IT leaders are expected to both anticipate and react to constant change. Though many trends identified in prior years are still evident, this latest study identifies several new IT priorities and corresponding changes in organizational practices. Based on 671 responses from IT leaders, representing 436 unique organizations and including 251 CIOs, the study provides significant insight into the IT concerns of modern organizations.

The issues ranked as the top five management concerns—Alignment, Cybersecurity, Data Analytics, Digital Transformation and Compliance—remained stable in 2023 (Table 1). However, the rankings of both AI and Cost

Figure 24: CIO Prior Employment, 2013-2023



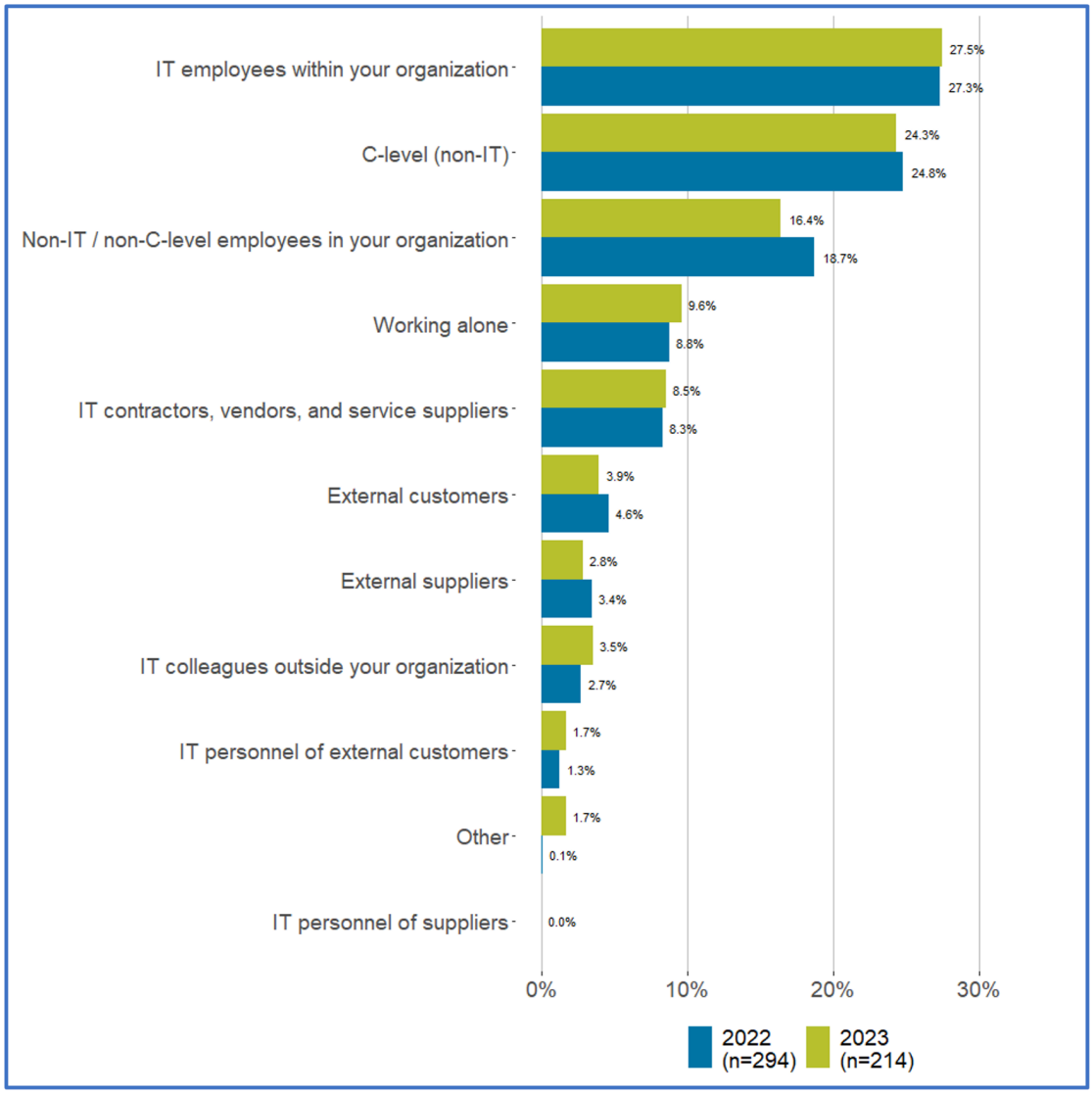
Reduction significantly increased. Cybersecurity was again identified as the IT issue of greatest personal concern to IT leaders. The remaining top five personal concerns were IT Talent, Alignment, AI and Credibility of IT, ranked 2nd through 5th respectively (Table 2).

The largest current or near-term investments of organizations also remained stable: Analytics, Cybersecurity, Software Development, Cloud Computing and ERP (Table 4). Significantly, however, AI broke into the top ten for the first time since its introduction in the survey. AI occupies the top place in the list of investments IT leaders think should get more funding but, consistent with the two previous studies, Analytics and Cybersecurity also rank high on that list. Staff Development and Disaster Recovery are no longer in the list of top organizational investment priorities (Table 5).

The 2023 study revisited technical skills after a break in 2022 and found alignment between the top five skills of largest importance to the organization and those most difficult to find, with both including Cybersecurity, Analytics, Business Analysts, Cloud and Functional Area Knowledge (Table 6). AI also gained significant ground in the list of technical s most important to organization.

IT spending is down from 2022, but similar to 2021. However, IT spending as a percentage of organization revenue is up in 2023 (Figure 1). This may indicate a contraction in organization revenue and is consistent with increased interest in cost controls (Table 1). Overall, IT budgets decreased slightly, though likely from

Figure 25: Average Percentage of CIO Time Spent Interacting with _____, 2023 vs. 2022

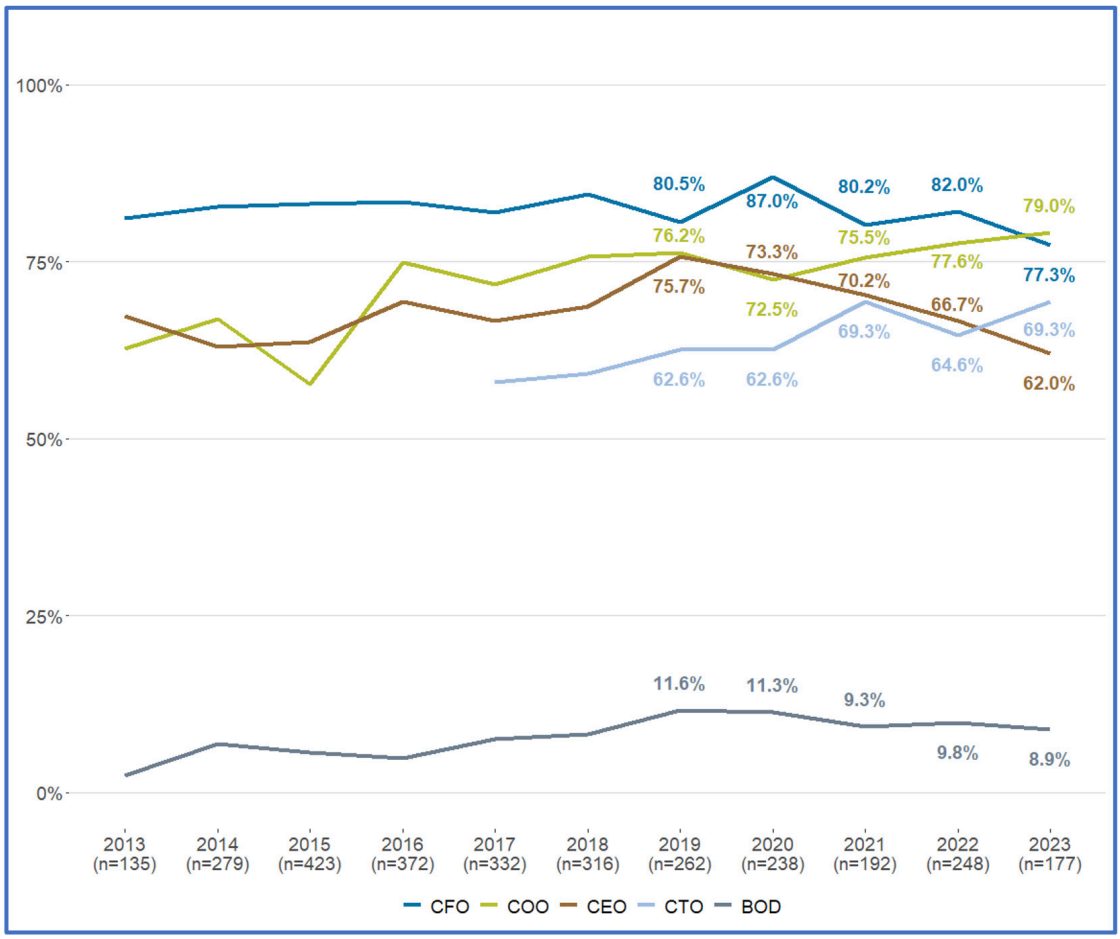


organizational budgetary concerns rather than a concerted effort to constrain IT spending. IT budget allocations for Cloud, Consultants and Facilities increased slightly in 2023, while spending on Employees, Software and Hardware decreased (Table 8).

IT headcount decreased slightly in 2023, particularly for internal IT employees (Figure 4), which may be an adjustment following multiple years of increases. 95.9% of responding organizations indicated that average IT salaries increased in 2023 (Figure 5). There was a sharp decline in the use of IT Contractors and Consultants in 2023, though there was considerable variability among the responding organizations. Turnover for full-time IT employees decreased slightly from 8.9% in 2022 to 8.5% (Figure 6), with 73.2% of departures being voluntary separations.

Cloud-based IT solutions remain a priority, with organizations reporting on average 60.7% of all IT services delivered via the cloud (Figure 8). Cloud usage strategies appear to be shifting significantly away from multi-tenant solutions

Figure 26: Trends in "At Least Weekly" C-level Interaction, 2013-2023



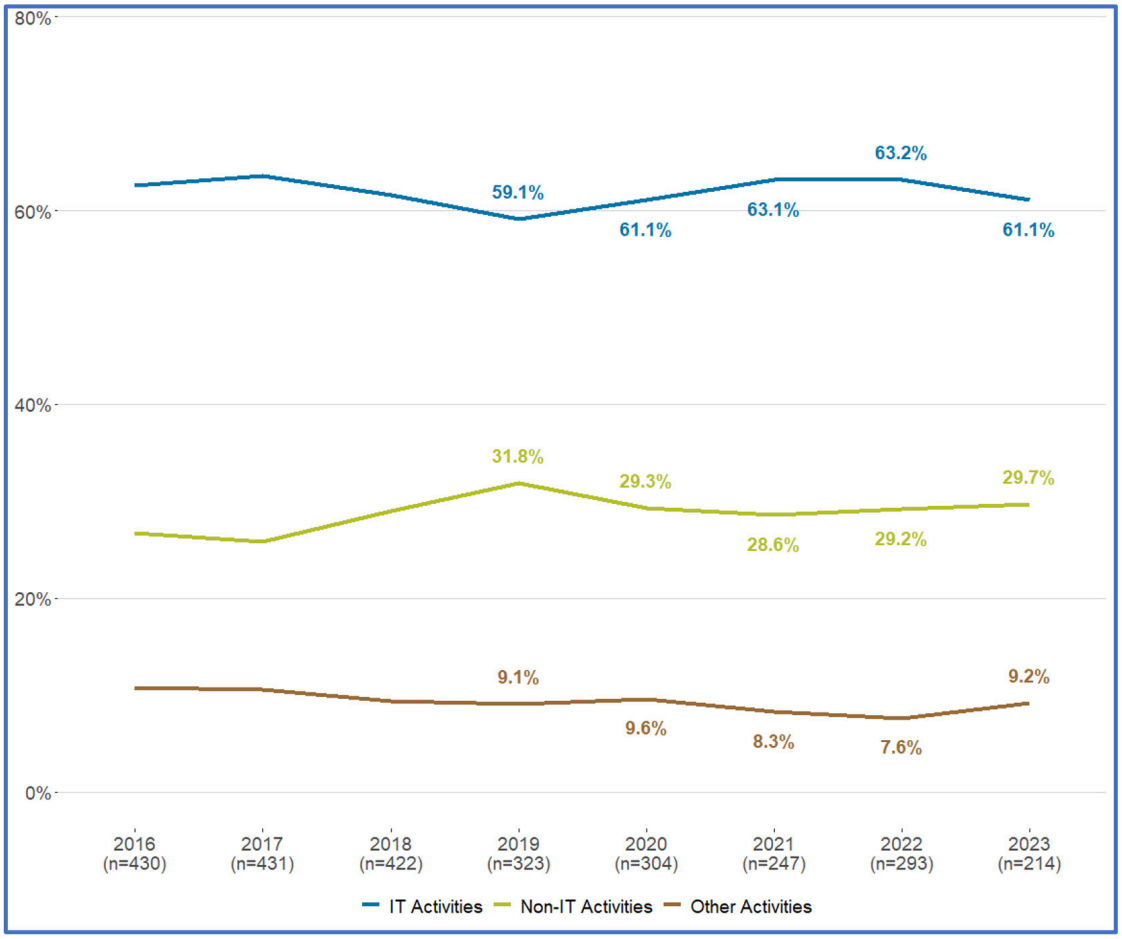
and toward single-tenant cloud offerings, while simultaneously moving from public to private solutions (Figure 14). This trend may be related to cybersecurity and other risk-reduction concerns.

Organizational concern for cybersecurity remains high and 57.1% of organizations report having a dedicated person responsible for cybersecurity practices (Table 10), a trend which is more pronounced for larger organizations (Figure 18). CISOs (or equivalents) overwhelmingly report to the CIO (Table 11). Organizations employ a variety of management practices to encourage cybersecurity compliance, with the top two being Requirements Set by Management and Leading Through Example (Table 12). The majority of organizations believe the frequency and severity of cybersecurity-related disruptions are equivalent to—or slightly less than—those experienced by their rivals (Table 13). Finally, the majority of organizations report that cybersecurity attacks generally originate outside the organization, sometimes through trusted partners, while direct attacks from inside the organization are significantly less frequent (Table 14).

This year, the study included additional questions about digital transformation. Almost a quarter of organizations (24.3%) report having a CDO (or equivalent) (Table 15) who typically reports to the CEO (Table 16). Digital transformation has far-reaching impacts, but our findings suggest that improving customer experience is a primary target (Table 17).

The average tenure of CIOs rose slightly in 2023 from 5.9 to 6.3 years (Figure 20). CIOs typically report to the CEO (46.9%), but also report to the CFO (25.1%) or the COO/CAO

Figure 27: How CIOs Spend their Time, 2016-2023



(17.4%) (Table 20). CIO performance is assessed in terms of Customer Satisfaction of Internal Users, Value of IT to the Business, IT Cost Controls, Availability/Up Time and Cybersecurity-related factors (Table 14).

Most CIOs' prior positions were with an IT organization (77.6%), and the number originating in non-IT positions declined slightly to 22.4% in 2023 (Figure 22). Though the number of CIOs being hired from outside the organization fell slightly in 2023, it remains high (81.3%) suggesting a clear preference for external expertise when hiring new CIOs (Figure 23).

Overall, the emergence of AI as a key organizational issue stands out in this year's study. The interest in AI could simply be related to the current hype surrounding AI and its capabilities, without specific organizational goals in mind. However, significant increases in AI spending suggest organizations are finding tangible ways to use AI to achieve business goals. In short, AI appears to have transitioned from a topic of interest among academics and a few technology-heavy innovative companies, to a technological asset of potential value to all organizations.

Other dramatic changes revealed by the 2023 study appear to be corrections from extremes seen in 2022. These changes are likely ripple effects of the initial organizational disruptions caused by the Covid-19 pandemic or the subsequent organizational reactions to the pandemic. We expect such corrections to wane in coming years as a new organizational equilibrium emerges.

Table 23: Non-IT Business Areas where CIOs Spend their Time, 2016-2023

Business (Non-IT) Activities	2023 (n=202)	2022 (n=294)	2021 (n=235)	2020 (n=291)	2018 (n=369)	2017 (n=430)	2016 (n=427)
Organization Priorities and Strategy	1 (66.8%)	1 (65.0%)	1 (63.0%)	1 (65.3%)	3	3	3
Managing Organizational Change	2 (53.0%)	3 (48.2%)	3 (54.0%)	4 (46.0%)	4	4	4
Knowing the Needs of Internal IT Customers	3 (51.5%)	2 (53.6%)	2 (58.3%)	2 (56.7%)	1	1	1
Knowing the Needs of Customers of the Organization	4 (44.1%)	4 (44.2%)	4 (47.2%)	3 (51.5%)	2	2	2
Organization or Business Innovation	5 (37.6%)	5 (39.4%)	5 (32.3%)	5 (31.3%)	6	6	5
Evangelist for the Organization	6 (25.2%)	6 (22.6%)	6 (25.5%)	6 (24.1%)	5	5	6
Knowing the Needs of Vendors and Suppliers of the Organization	7 (7.4%)	8 (6.9%)	8 (6.0%)	8 (8.2%)	8	7	8
Organization Architecture	8 (5.4%)	7 (10.6%)	9 (3.8%)	7 (9.6%)	7	8	7
Organizational Research	9 (2.0%)	9 (4.4%)	7 (6.4%)	9 (5.2%)	9	9	9