

18th Edition | 2023-2024

IT Skills & Salary Report

global knowledge™



Table of Contents

INTRODUCTION	3	PROFESSIONAL DEVELOPMENT	50
What did we find in 2023?	5	Training types	52
Primary findings	6	What's in it for me?	54
		What's holding you back?	56
		The importance of leadership training	57
SALARY	12	JOB SATISFACTION	58
Base salary	14	Job security	60
Responsibility level	15	Employee turnover	62
Career experience	16		
Job function	17	MANAGING DISRUPTION	63
U.S. salaries	20	DEI efforts	64
Canadian salaries	22	Post-pandemic work locations	66
European salaries	23		
Raises and bonuses	24	CONCLUSION	68
		2023 methodology	70
CERTIFICATIONS	25	Thanks to our partners	70
Individual benefits of certification	27	Demographics	71
Certification categories	28		
Top-paying certifications	30	ABOUT GLOBAL KNOWLEDGE	74
Most popular certifications held	35	Media inquiries	74
Most pursued certifications	35		
CERTIFICATION RESOURCES	36		
What is the future of certifications?	36		
IT DECISION-MAKER INSIGHTS	37		
Key challenges	38		
IT department budgets	39		
Top investment areas	40		
Skills gaps	45		
Skills gap impact	47		
Skills gap response	48		
The dollar value of certifications	49		



Introduction

**5,700+ OF YOUR PEERS SHARED
THEIR EXPERIENCES WITH US**

The IT Skills and Salary Report shares the findings of an in-depth global survey of tech professionals at all stages of their careers, across geographies and industries.

For nearly two decades, the goal of this research has been to equip tech professionals — from newcomers to senior executives — with the data and analysis to understand the trends that will impact their careers, investments, strategies, and more.

Let's dive in.



Welcome to the Global Knowledge IT Skills and Salary Report.

For 18 years, we've published this comprehensive report on the global state of the IT industry. This year, as in the past, we look at all angles of IT to answer these important questions for our readers:

- What does the IT industry look like?
- Where are the growth opportunities?
- What do employees want?
- What do employers want?
- Are their wants/needs aligning?
- Am I paid what I deserve?
- Will certification increase my salary?
- Which certifications are in demand — and will pay the most?
- Does my team have the right skills to get the job done?
- How do I close skills gaps in my department?
- What is the best mode for training my employees?
- What's coming next?
- And more!

In this report, you'll find answers to these questions and insights backed by the latest research, worldwide trends, historical analysis, and educated projections.

We hope you find this information helpful.



WHAT WE DISCOVERED IN 2023: THE RISE OF ARTIFICIAL INTELLIGENCE

Our analysis of the IT sector revealed a critical focus on the rise of artificial intelligence (AI). While some trends from 2022 continued, the most significant change was the rapid evolution and influence of AI in the industry.

Despite seeing higher reported earnings and a continued importance placed upon certifications, the IT industry still faces a skills gap, with the most acute in artificial intelligence.

The question then becomes: How can we adequately prepare IT professionals for what AI promises? This gap underscores the need for ongoing talent development, especially given the challenges related to hiring skilled professionals and the relentless pace of change in this field.

In less than a year, GenAI has drastically altered our work landscape, proving that standing still is not an option in technology. It's now more important than ever for organizations to identify the necessary AI skills and implement effective training programs to stay relevant and meet customer demands.

This is, in part, why most plan not to hire but to look within. As the demand for skills in AI rises, these specialists have become the toughest to hire — leaving leaders with few other options than to train their teams. The lion's share of IT decision-makers say reskilling and upskilling is the path forward.

And while technical skills remain vital, professionals in this line of work must not ignore the value of soft skills — or as we call them: power skills.

Skills like empathy, agility, creativity, and resilience are rising in importance as those in tech take on increasingly influential roles within their organizations. It's worth reiterating, technical skills are crucial. But soft skills are making a marked difference in professionals' career trajectory — as you'll read about later on.

What this research also validates is why many remain excited to go to work every day. They solve problems with remarkable, innovative solutions that can have a tremendous impact on the lives of those around them. But to achieve this, a commitment to learning is key.

Skilling, upskilling, and reskilling are vital for workforce transformation, which is ultimately essential for business transformation in this age of AI.



PRIMARY FINDINGS

AI IS QUICKLY BLURRING THE LINE BETWEEN TECH AND BUSINESS — WITH LEADERS PLAYING CATCH-UP

The tech world was rapt with OpenAI's breakthrough app ChatGPT over the past year, leading to more interest in artificial intelligence than ever — more specifically generative AI (GenAI). Today, you can't open LinkedIn without seeing the plentiful, often imaginative ways people across industries use tools like these.

Apps like ChatGPT have also lit a fire in businesses that won't extinguish anytime soon. This year, AI is the top investment area for IT decision-makers, replacing other disciplines that typically rank in the number one position, like cloud computing or cybersecurity.

However, a clear problem was also revealed in this year's survey results: Professionals with these skills are the toughest to hire for.

Earlier this year, the World Economic Forum published its [Future of Jobs Outlook Report](#), showing that AI and machine learning specialists are now the fastest-growing jobs as demand soars and development ramps up. More recently, a Gartner poll showed [more than half of executives](#) have generative AI projects in the works, with 10% in production.

Despite this, our survey shows 43% of tech leaders say their team's skills in AI need improvement. The main reason for lacking skill is due to the pace of change. Simply, training programs can't keep up.

The lines between traditional IT skills and broader business acumen continue to blur as AI's impact extends beyond the tech department. IT professionals are increasingly called upon to understand AI's implications for decision-making, strategy, and operations.

Leaders must recognize that to get the full potential of AI, they need to empower their teams to work effectively with this technology. There must be an urgent focus on acquiring the skills and knowledge needed — or risk falling even more behind.

The ability to adapt and thrive in this fast-paced environment is contingent on IT professionals' willingness and capacity to continuously learn, adapt, and bridge the gap between technical and business skills.



THE SIGNIFICANCE OF POWER SKILLS FOR IT PROFESSIONALS

As companies across industries continue their digital transformations, IT professionals find themselves at the forefront, taking on roles that extend far beyond the server room. While technical proficiency remains essential, our research reveals that soft skills — or what we prefer to call “power skills” — have become a defining factor in the career trajectories of tech professionals.

When asked about the most important attribute of job candidates, roughly one in five IT decision-makers say power skills like communication or leadership rank highest.

Leaders still want to ensure candidates have the technical proficiency for the job, landing hard skills as the most important attribute. A job candidate’s work history, or proven track record, followed technical skills. But power skills are more important than certifications, a candidate’s portfolio, and even their college degree.

Power skills like communication, adaptability, teamwork, and problem-solving enable IT professionals to navigate more complex, cross-functional challenges that arise as they take on leadership roles within their organizations. Skills like these are universal, applying to virtually all types of projects and roles at work, which makes them both practical and highly transferrable. The survey also asked about the most important skills for leaders. Team communication topped the list by a wide margin, with 40% in agreement.

What’s fascinating, though, is where technical skills landed. Just 8% of respondents think technical skills are the most important skill for those in leadership positions, falling behind power skills like interpersonal communication, emotional intelligence, and business skills.

What these findings show is that professionals equipped with a strong blend of technical and power skills are poised to flourish in their careers.

For example, a professional’s ability to communicate complex technical concepts to non-technical stakeholders becomes instrumental in driving business success — especially as the IT department takes on a greater supporting role in the organization’s overall strategy.

All tech professionals must weigh their time carefully as they choose which skills to focus on in the coming year. A healthy mix of technical and soft skills looks more like a winning strategy as time goes on and IT becomes more engrained in propelling businesses forward.



JOB SATISFIED OR JOB SEEKING? THE PARADOX OF TECH

As we examine this year's research, an intriguing paradox emerges. More than 70% of IT professionals report they are satisfied in their job, and 77% feel secure in their current position. However, more than half tell us they are at least somewhat likely to look for another position in the next 12 months.

This coexistence of high satisfaction and an inclination towards exploring new career opportunities presents a dichotomy that deserves thoughtful examination. The implications offer insights into the relationship between employers and the tech workforce.

IT professionals, as a collective, often report a sense of contentment in their roles, attributing this satisfaction to the inherent intellectual challenges, innovation, and fast-paced nature of their work. However, this contentment doesn't keep them from considering alternative employment.

When asked about factors that would compel them to change employers, the largest group (43%) cite a lack of growth and development opportunities. Similarly, the number one reason for changing job roles within the same employer organization is also a lack of growth and development (25%).

Given an opportunity (through open-ended questions) to elaborate on why they would consider leaving, survey participants sent a clear message:

"[My] company does not consider IT as a worthy investment."

"No training for new projects and no new opportunities."

"Using IT as a utility department and not using it for digital transformation."

When organizations view their tech professionals as interchangeable parts of a machine, failing to invest in their growth and professional development, loyalty naturally diminishes. An inherent drive for continuous learning and personal growth pushes IT professionals to seek out employers who will recognize and nurture their potential.

On the other hand, organizations that embrace IT professionals as valuable assets and invest in their development have an opportunity not only to foster a loyal and motivated workforce, but also to harness the immense potential for innovation and excellence within their ranks.



THE GOOD NEWS: TECH CONTINUES TO FLOURISH

Our report suggests that IT professionals are reaping the rewards of their expertise, with salary figures showing an upward trend. This indicates that the demand for IT skills is on the rise, and companies are willing to invest in tech talent to keep pace with the demands of digital and business transformation.

Despite this, decision-makers still struggle with skills gaps. In fact, just like last year, 66% of IT decision-makers reported dealing with skills gaps on their teams in 2023 — mostly due to the pace of change in tech. However, the pace of change isn't likely to slow down.

Providing opportunities for reskilling and upskilling, along with building a culture of continuous learning, is key to filling today's gaps and preparing for tomorrow's. That's why 45% of IT decision-makers tell us that they plan to close skills gaps by training their existing teams.

Fifty-six percent of IT decision-makers expect their budgets to increase (and only 12% expect it to decrease). That's not surprising.

Virtually every business in every sector relies on technology and, as we adopt new technologies, that reliance will continue to grow. This realization is catalyzing a surge in IT investment across industries, fostering innovation and efficiency.

IT professionals play a pivotal role in shaping the growth trajectory of not only their own careers, but also the organizations they serve.

The future promises further expansion and transformation, making IT a dynamic and exciting field to be a part of, where skilled professionals can expect to be handsomely rewarded for their contributions.



IT CERTIFICATIONS: VALUE FOR INDIVIDUALS AND ORGANIZATIONS

IT certifications continue to hold a prominent place in the minds of both employers and job seekers. As technology progresses at an unprecedented pace, organizations rely on certifications to assess and validate the skills and expertise of IT professionals.

Certifications are a hallmark of competence in a specific technology, platform, or domain. They serve as an essential tool for job seekers to showcase their knowledge, skills, and commitment to professional growth.

Employers, in turn, rely on certifications as a reliable means of assessing a candidate's qualifications, often considering them a key factor in the hiring process. Certifications are not merely a point of pride but also a ticket to greater career opportunities and, subsequently, higher salaries.

The link between IT certifications and salary is unmistakable. Professionals who have invested in obtaining relevant certifications often enjoy higher earning potential and enhanced job security over their non-certified counterparts.

Certified professionals also cite other benefits, such as improved work quality, greater work engagement, and more efficiency. Although we saw a slight dip in the number of certified professionals participating in our study (88% in 2023 vs. 91% in 2022), the average number of certifications per individual increased — nearly doubling from four to seven.

Employers are willing to reward certified IT professionals for their demonstrated knowledge, as certifications can significantly reduce the risks associated with hiring and training new employees.

The value of certification, which typically involves training for new skills and a formal assessment of those skills mastered, emphasizes the profound importance of continual learning for both IT professionals and the organizations that employ them.



BUILDING AND BRIDGING A SUSTAINABLE WORKFORCE

While the IT industry is thriving, boasting growth and innovation, a consistent and concerning trend persists. Industry leaders continue to grapple with the arduous task of identifying, recruiting, and retaining the right talent.

The most disconcerting aspect is that this struggle has not abated over the past few years, despite efforts and resources poured into addressing the issue. We are experiencing a time of unprecedented skills disruption, and the IT sector is facing a talent crisis in which the traditional strategy of buying skills on demand is proving unsustainable.

In this year's research, IT decision-makers say that after the rate of change in tech, hiring candidates with the right skills and attracting talent to their industry are the leading reasons behind their skills gap.

However, organizations are beginning to recognize the importance of investing in a sustainable workforce. This shift is accentuated by the realization that buying the skills needed on a case-by-case basis not only strains budgets but also exacerbates the scarcity of qualified professionals. In response, a new approach has emerged: build and bridge.

This strategy involves nurturing existing talent while bridging the gaps between their current skills and the evolving needs of the industry. It's being adopted as a more prudent and effective method for ensuring a constant supply of skilled IT professionals, enabling companies to adapt to evolving technologies and stay competitive.

A build-and-bridge strategy offers myriad benefits to organizations, the workforce, and the industry as a whole. By investing in the continuous development of their employees, companies can foster a culture of innovation, resilience, and adaptability. As a result, employees experience increased job satisfaction, feel valued, and are more likely to remain committed to their organizations, mitigating the costly problem of high turnover rates.

While the challenges of recruiting and retaining IT talent persist, the move toward building and bridging presents a promising path forward.



Salary

COMPENSATION IS TRENDING UP — BUT IS IT ALL GOOD NEWS?

As an employee, you naturally have questions when it comes to your salary. Are you being paid what you're worth? Could you be earning more with a different employer? In a different function? With more experience?

At the same time, employers are also questioning salaries. Am I attracting the right candidates at the right salary range? What about raises? What about bonuses? Are my skilled employees satisfied with their compensation, or will they leave to make more money elsewhere?

Let's face it. Salaries matter.



Employees want to be paid what they feel they’re worth, and employers need to know whether they’re offering the appropriate packages to attract — and retain — the best talent.

This report provides employees and employers alike with comprehensive information on IT salary ranges across regions, skill sets, and experience levels.

We’ve compiled data and looked at multiple factors that contribute to salary and compensation packages, including:



EDUCATION



RESPONSIBILITY LEVEL



CAREER EXPERIENCE



SPECIFIC FUNCTIONAL JOB ROLE



BONUSES

We also conducted a global analysis to see how salaries compare across these geographic regions: North America; Europe, Middle East, and Africa; Asia-Pacific; and Latin America.*

** All salaries were converted into U.S. dollars during the survey to enable relevant comparisons.*



BASE SALARY

IT professionals are earning more in 2023 than they did in 2022. This year, we saw an average annual salary of \$96,185. That’s nearly \$20,000 more than the average annual salary we reported in 2022 (\$77,684). What led to this big jump? Performance in current jobs, standard company increases, and promotions were all reported as contributing factors.

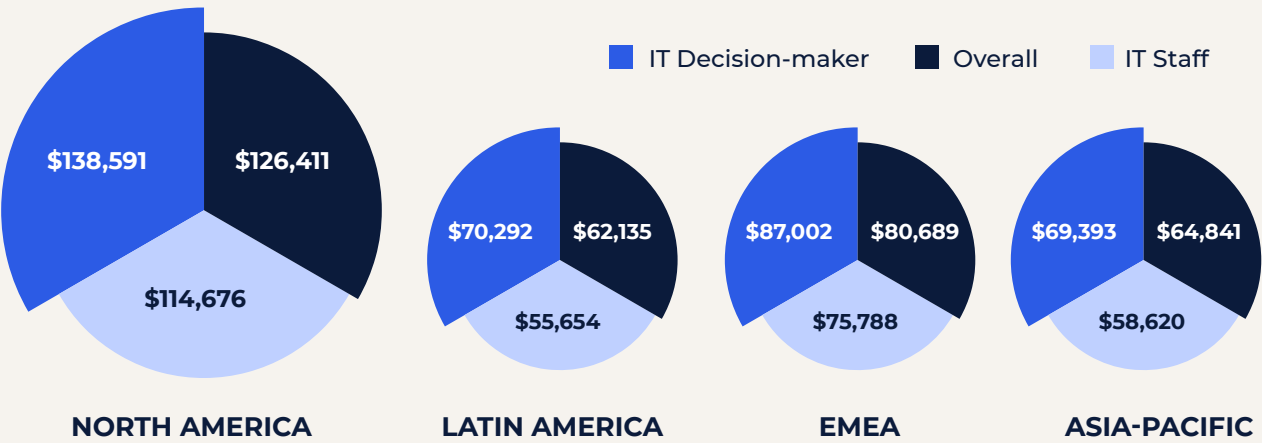
North America has led in overall base salaries every year that we have conducted this study. This year is no exception, with an average overall salary of \$126,411 annually. Breaking it down further, IT decision-makers bring in \$138,591, while IT staff earns \$114,676.

The second highest average salary level was reported in Europe, the Middle East, and Africa at \$80,689, followed by Asia-Pacific at \$64,841 and Latin America at \$62,135.

The good news (for IT employees) is that all regions experienced an increase from 2022. Europe, the Middle East, and Africa saw the biggest growth with a 5% increase overall, and IT decision-makers in that region saw a 7% growth in their salaries.

Globally, most IT decision-makers earn more than IT staff. The exception is in the Asia-Pacific region, where staff make slightly more (approximately \$1,100) than decision-makers. Latin America had the smallest percentage growth, with a 3% salary increase. It was the only region in which IT decision-makers also had smaller increases (3%) than IT staff (4%).

REGIONAL SALARY BY LEVEL



RESPONSIBILITY LEVEL

Our study includes salary data from a range of IT professionals, from non-management staff positions to decision-makers, directors, and those serving at an executive level.

Non-management IT staff (those who do not lead a team) represent 52% of the respondents for this report.

Common job roles:

- Cloud Architect
- IT Auditor
- Network Engineer/Technician
- Software Engineer
- Technical Support

Mid-level professionals (managers and team leaders) represent 36% of our respondents.

Common job roles:

- Information Security
- Infrastructure Manager
- Project Manager
- Solutions Architect
- IT Audit Manager

Senior-level professionals (vice presidents, directors) account for 10% of our respondents.

Common job roles:

- Director, Vice President
- Program Manager
- Enterprise Architect
- Security Manager
- IT Compliance Manager

Executives (C-suite) account for 2% of our report.

Common job roles:

- Chief Executive Officer (CEO)
- Chief Information Officer (CIO)
- Chief Security Officer (CSO)/Chief Information Security Officer (CISO)
- Chief Technology Officer (CTO)

COMPENSATION BY RESPONSIBILITY LEVEL

	NON-MANAGER	COUNT	MID	COUNT	SENIOR	COUNT	EXECUTIVE	COUNT
NORTH AMERICA	\$114,676	1098	\$127,859	724	\$158,985	279	\$176,407	55
LATIN AMERICA	\$55,654	214	\$65,822	130	\$82,311	32	\$94,875	8
EMEA	\$75,789	902	\$84,972	530	\$92,866	136	\$95,187	34
ASIA-PACIFIC	\$58,620	366	\$66,686	417	\$84,561	68	\$75,913	15

* Throughout the report, you'll notice some respondent counts do not meet the statistical minimum (n=100). These figures are presented for continuity and subject to fluctuation with more responses.



CAREER EXPERIENCE

The majority of our survey participants for this year’s report had one to five years of experience. Roughly half of those in our survey are at the start of their careers, having between one and 10 years of experience.

In previous years, IT staff and decision-makers earned more money as they accumulated more experience. This was the case in Europe, the Middle East, and Africa, where we saw a steady increase as years of experience increased.

Asia-Pacific saw a decrease when years of experience reached the 11-15 year range; in Latin America, a decrease is seen in the 16-20 year range. In Asia-Pacific, salaries jumped again significantly in the 21+ range. North American salaries dipped slightly in the 16-20 year range, went back up in the 21-25 year range, and then dipped again at 26+.

COMPENSATION BY CAREER EXPERIENCE

YEARS	NORTH AMERICA		LATIN AMERICA		EMEA		ASIA-PACIFIC	
	AVERAGE	COUNT	AVERAGE	COUNT	AVERAGE	COUNT	AVERAGE	COUNT
< 1	\$83,299	37	\$25,936	11	\$48,851	34	\$42,545	24
1-5	\$103,143	612	\$55,871	104	\$71,544	420	\$60,584	228
6-10	\$123,036	518	\$57,456	91	\$74,125	344	\$67,675	225
11-15	\$140,643	275	\$79,487	60	\$79,050	279	\$50,777	170
16-20	\$138,691	189	\$62,915	54	\$85,545	213	\$66,211	117
21-25	\$153,062	230	\$61,743	44	\$96,023	178	\$91,495	56
26+	\$144,103	295	\$82,602	20	\$109,604	134	\$99,751	46



JOB FUNCTION

In all regions, IT professionals working in management positions, IT Architecture and Design, and Operations are among those reporting the highest salaries.

The top three highest-paid functions in 2023 by region are as follows:

■ North America

- IT Executives (\$168,027)
- Cloud (\$165,056)
- IT Architecture and Design (\$142,689)

■ Latin America

- Business Operations (\$142,000)
- Product/Project Management (\$92,675)
- DevOps (\$85,620)

■ Europe, Middle East, and Africa

- IT Executives (\$118,145)
- Cloud (\$116,829)
- IT Architecture and Design (\$92,680)

■ Asia-Pacific

- IT Executives (\$89,856)
- Business Operations (\$83,641)
- Product/Project Managers (\$82,656)

Last year, all four regions reported that service desk/IT Support was the lowest-paying job function. This year, North America; Europe, the Middle East, and Africa; and Asia-Pacific still see this entry-level job as the lowest paying, while Latin America reports that those who are doing business analysis have the lowest salary. Other functions among the lowest salaries globally are infrastructure, networking, and telecommunications.

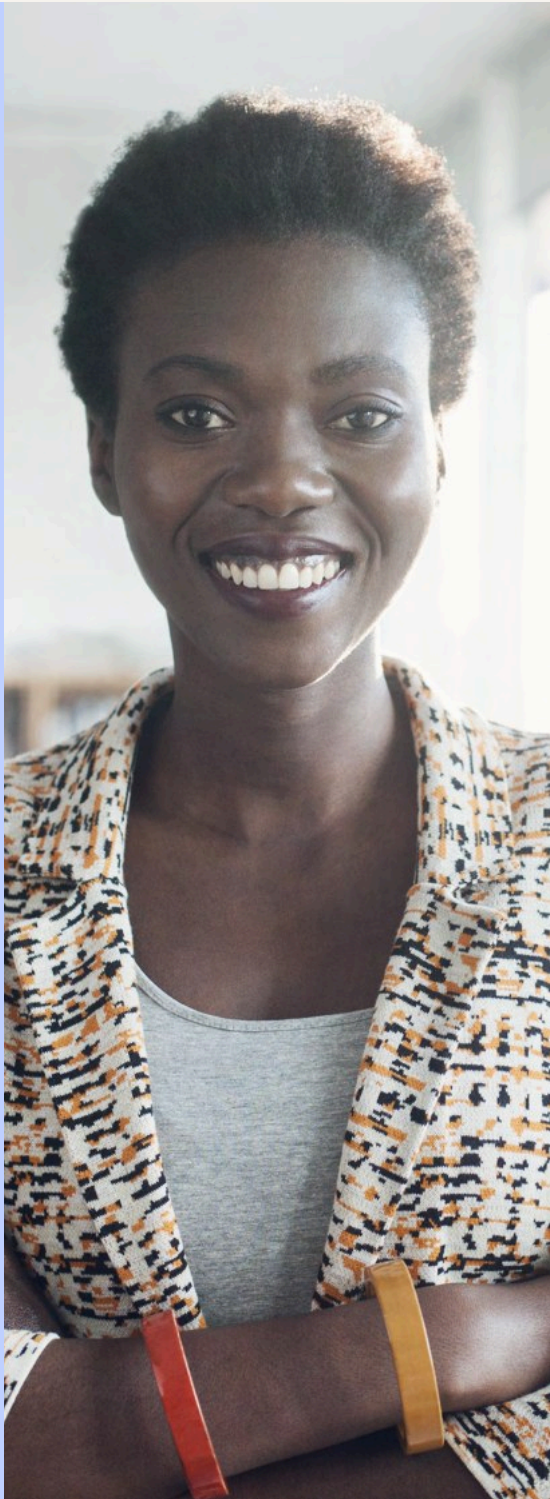


The table below provides salary data for each region based on IT job functions.

COMPENSATION BY JOB ROLE

JOB FUNCTION	NORTH AMERICA		LATIN AMERICA		EMEA		ASIA-PACIFIC	
	SALARY	COUNT	SALARY	COUNT	SALARY	COUNT	SALARY	COUNT
Application Development, Programming	\$114,265	219	\$51,102	27	\$84,001	154	\$62,702	76
Business Analysis	\$88,288	103	\$25,413	8	\$75,223	30	\$60,489	23
Business Operations	\$119,393	67	\$142,000	12	\$81,139	39	\$83,641	22
Cloud	\$165,056	213	\$64,818	66	\$116,829	168	\$62,081	116
Cybersecurity, Information Security	\$128,521	315	\$60,180	39	\$87,934	177	\$69,013	109
Data Science, Analytics, and Business Intelligence	\$121,664	129	\$59,612	33	\$82,418	85	\$63,253	43
DevOps	\$133,682	49	\$85,620	20	\$63,684	81	\$60,574	56
Executive	\$168,027	106	\$62,000	8	\$118,145	58	\$89,856	22
IT Architecture and Design	\$142,689	161	\$73,748	40	\$92,680	184	\$70,659	115
IT Auditing or Governance, Risk, and Compliance	\$137,538	170	\$61,520	17	\$75,550	89	\$68,654	45
Infrastructure, Networking, and Telecommunications	\$113,318	219	\$48,913	61	\$53,244	240	\$54,906	124
Product or Project Management	\$141,913	134	\$92,675	16	\$70,522	72	\$82,656	36
Service Desk and IT Support	\$79,836	171	\$29,511	23	\$52,237	141	\$51,206	51

** Some of the data presented in this table and elsewhere in this report share results that don't meet the statistical minimum of 100 responses. These instances are presented for continuity and are subject to fluctuation with more responses.*



INDUSTRY

In North America, there’s good news if you’re an IT professional in the system integrator and Value Added Reseller (VAR) integrator field. This industry has the highest average salary at \$170,517.

Asia-Pacific’s highest-paying industry is in natural resources. Europe, the Middle East, and Africa’s is in IT software, and Latin America’s is in hospitality, travel, and recreation.



global knowledge.

COMPENSATION BY INDUSTRY

FUNCTIONAL AREA	NORTH AMERICA		LATIN AMERICA		EMEA		ASIA-PACIFIC	
	AVERAGE	COUNT	AVERAGE	COUNT	AVERAGE	COUNT	AVERAGE	COUNT
Accounting, Auditing, Banking, and Finance	\$129,133	178	\$39,386	42	\$69,447	128	\$55,984	86
Aerospace or Defense	\$75,549	79	\$130,000	4	\$85,150	23	\$74,710	13
Automotive	\$123,938	56	\$124,631	8	\$71,032	25	\$45,770	13
Communications or Public Relations or Advertising	\$110,671	73	\$40,004	9	\$68,442	42	\$80,206	19
Construction, Architecture, and Engineering	\$120,926	80	\$80,004	10	\$97,614	38	\$114,470	12
Education Services	\$91,705	139	\$62,609	12	\$54,803	60	\$60,699	33
Government: Military and Homeland Security	\$129,499	84	\$105,000	5	\$103,565	17	\$82,180	7
Government: Nondefense, State, Local	\$105,334	126	\$47,620	15	\$66,494	54	\$80,324	21
Healthcare	\$122,469	135	\$99,107	9	\$72,150	39	\$66,724	25
Hospitality, Travel, and Recreation	\$134,609	23	\$151,939	4	\$63,539	23	\$48,000	4
IT Consulting	\$133,479	221	\$55,019	100	\$74,839	355	\$56,490	208
IT Hardware	\$139,128	103	\$77,818	14	\$111,838	63	\$90,625	34
IT Software	\$152,463	348	\$78,670	54	\$114,339	240	\$67,787	209
Insurance, Real Estate, and Legal	\$126,263	67	\$47,667	3	\$72,146	33	\$94,760	11
Manufacturing: Consumer and Industrial	\$122,207	80	\$44,906	18	\$83,230	82	\$77,527	33
Media, Film, Music	\$102,529	28	\$88,333	3	\$79,763	16	\$106,667	6
Natural Resources: Agriculture, Forestry, Fishing	\$119,543	16	\$139,183	6	\$57,926	9	\$200,000	1
Natural Resources: Mining, Oil and Gas	\$126,682	12	\$17,862	1	\$76,207	17	\$71,250	4
Pharmaceutical, Medical, Biotech	\$127,445	25	\$24,133	3	\$75,999	10	\$94,548	6
Professional Business Services	\$129,943	46	\$73,350	9	\$75,430	40	\$75,923	6
Retail	\$121,310	38	\$25,665	7	\$67,658	43	\$67,517	8
System Integrator and VAR Integrator	\$170,517	27	\$33,186	4	\$83,429	37	\$53,641	35
Telecommunications	\$138,746	47	\$47,544	28	\$60,299	97	\$43,139	34
Transportation or Public Utilities	\$119,776	28	\$52,000	1	\$71,155	24	\$91,144	8

U.S. SALARIES

IT professionals in the U.S. (including the 50 states, the District of Columbia, and Puerto Rico) earn an average annual salary of \$124,931. When you drill down further, you find that salary by state varies significantly.

As we have seen over the last several years, the states that pay the most differ slightly each year. Generally, we see states with higher living costs and greater competition also have higher salaries.

This year we’re seeing that the East Coast offers some of the highest salaries, but we’re also seeing some unexpected states enter the mix.

It’s not surprising that states like New Jersey, Maryland, and Massachusetts would be among the top five.

What is unique to this year is that Montana holds the number one position — but we also have to take into consideration that Montana had among the smallest group of respondents to our survey.

Indiana, Minnesota, and Illinois were among the top five in 2022. This year, they’ve fallen to the mid-range for IT salaries by state.

STATES WITH THE HIGHEST PAYING SALARIES

2023	2022
Montana (\$283,750)	New Hampshire (\$164,853)
New Jersey (\$170,020)	New Jersey (\$147,476)
Maryland (\$159,669)	Indiana (\$143,000)
Massachusetts (\$157,146)	Minnesota (\$140,523)
Alaska (\$153,094)	Illinois (\$135,448)



COMPENSATION BY U.S. STATE

STATE	AVERAGE	NUMBER OF RESPONSES
Alabama	\$106,636	33
Alaska	\$153,094	16
Arizona	\$141,878	43
Arkansas	\$143,165	17
California	\$131,090	288
Colorado	\$120,212	50
Connecticut	\$107,154	26
Delaware	\$91,098	29
District of Columbia	\$110,682	38
Florida	\$106,210	109
Georgia	\$124,567	51
Hawaii	\$117,388	16
Idaho	\$126,403	11
Illinois	\$124,852	83
Indiana	\$113,155	32
Iowa	\$78,501	16
Kansas	\$115,939	16
Kentucky	\$111,339	28

STATE	AVERAGE	NUMBER OF RESPONSES
Louisiana	\$142,857	14
Maine	\$116,333	3
Maryland	\$159,669	42
Massachusetts	\$157,146	49
Michigan	\$129,430	35
Minnesota	\$130,609	17
Mississippi	\$113,331	8
Missouri	\$111,633	24
Montana	\$283,750	4
Nebraska	\$105,054	17
Nevada	\$107,778	9
New Hampshire	\$107,375	8
New Jersey	\$170,020	45
New Mexico	\$123,325	4
New York	\$149,914	140
North Carolina	\$116,791	46
North Dakota	\$129,902	5
Ohio	\$127,013	66

STATE	AVERAGE	NUMBER OF RESPONSES
Oklahoma	\$107,059	17
Oregon	\$134,854	17
Pennsylvania	\$120,755	50
Puerto Rico (U.S. territory)	\$83,785	15
Rhode Island	\$112,466	5
South Carolina	\$149,123	16
South Dakota	\$92,208	12
Tennessee	\$127,488	27
Texas	\$131,429	147
Utah	\$100,005	22
Vermont	\$134,167	6
Virginia	\$154,139	75
Washington	\$146,607	57
West Virginia	\$63,333	3
Wisconsin	\$136,178	19
Wyoming	\$97,533	3

CANADIAN SALARIES

Across the 12 provinces surveyed, the average annual salary of an IT professional in Canada is \$116,790.

This year’s list of salaries by provinces is completely different than last year when Alberta, British Columbia, and Ontario made the top five. This year, they did not. In fact, the only province that made the top five in 2022 and 2023 is Nova Scotia (\$117,212).

This year’s top five highest-paying provinces are Prince Edward Island (\$250,000), Newfoundland (\$120,196), Nova Scotia, Northwest Territories (\$115,000), and Quebec (\$112,533).

Like Montana in the U.S., Prince Edward Island also has the fewest responses — just one, in fact, who works as an application development manager.

COMPENSATION BY CANADIAN PROVINCE

PROVINCE	AVERAGE	COUNT
Alberta	\$100,613	26
British Columbia	\$94,630	39
Manitoba	\$107,205	7
New Brunswick	\$79,579	6
Newfoundland	\$120,196	13
Northwest Territories	\$115,000	3
Nova Scotia	\$117,212	4
Ontario	\$97,601	90
Prince Edward Island	\$250,000	1
Quebec	\$112,533	23
Saskatchewan	\$90,125	5



EUROPEAN SALARIES

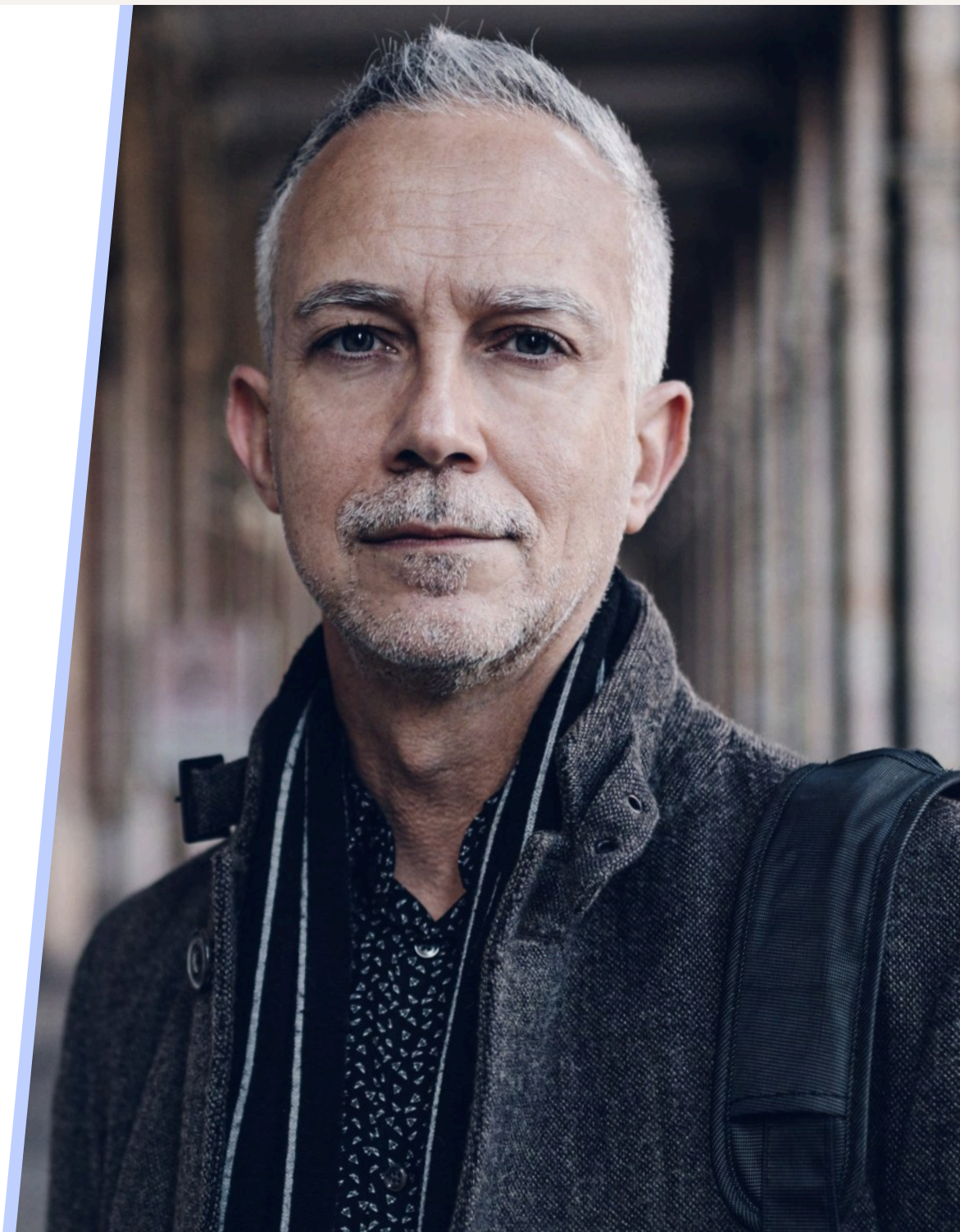
For the fifth consecutive year, Switzerland leads European salaries, where the average annual salary reported is \$172,042. This reflects a \$30,000 increase from last year.

Unlike last year, when Norway was the only other country above the \$100,000 mark, 2023 saw six countries exceed \$100,000 in average earnings.

This year, Norway fell to the number four position (\$112,153), trailing behind Germany (\$142,911) and Ireland (\$140,744).

COMPENSATION BY EUROPEAN COUNTRY

COUNTRY	AVERAGE	COUNT
Austria	\$87,599	25
Belgium	\$78,634	58
Croatia	\$108,775	7
Czech Republic	\$77,414	16
Denmark	\$96,058	29
Finland	\$82,421	10
France	\$94,627	123
Germany	\$142,911	73
Greece	\$43,293	11
Hungary	\$44,970	14
Ireland	\$140,744	24
Italy	\$81,262	68
Netherlands	\$80,411	158
Norway	\$112,153	9
Poland	\$60,114	48
Portugal	\$53,510	18
Romania	\$41,621	24
Spain	\$62,693	105
Sweden	\$104,716	24
Switzerland	\$174,042	14
United Kingdom	\$97,836	202



RAISES

Among IT workers who received a raise in 2023, the average amount was lower than in previous years. In 2023, the highest average raise went to decision-makers in North America (\$7,576). The lowest raise amount was in Asia-Pacific, where IT staff saw a \$1,774 increase in their salaries. This year, IT professionals overall in North America received a 3 percentage point lower raise than last year. This drop wasn’t unique to North America; all other regions saw a decrease in raise percentages in 2023 from last year.

REGION	2023	2022
North America	5%	8%
Europe, Middle East and Africa	5%	7%
Asia-Pacific	3%	7%
Latin America	3%	7%

Those who did see an increase cited job performance, standard company raises, and new skills development as the top three reasons for the jump in salary.

BONUSES

Last year, we saw a decrease in bonuses earned overall. Worldwide, in 2021, 57-69% of eligible decision-makers and 43-55% of eligible staff earned a bonus. In 2022, the number dropped slightly to 53-62% for decision-makers but remained the same for staff. This year, most IT professionals were bonus-eligible at 61%.

COMPENSATION BY REGION

BONUS ELIGIBLE	NORTH AMERICA	LATIN AMERICA	EMEA	ASIA-PACIFIC
Overall	62%	55%	58%	65%
IT Decision-Maker	71%	59%	65%	68%
IT Staff	55%	52%	52%	61%



Certifications

CERTIFIED STAFF ARE MORE PRODUCTIVE, ENGAGED AND LOYAL

The average number of certifications a person has nearly doubled this year to last. Professionals continue investing their time into these credentials because they see them as time well spent — and it's paying off.

Certified staff add more value to their organizations and tend to earn more too.

In many ways, certifications are a win-win.



Latin America had the highest number of certified IT professionals for the past four years. This year, however, they lag behind all other regions at 87%, slightly below the worldwide average. The top spot for certifications was split between Asia-Pacific and Europe, Middle East, and Africa (89%).

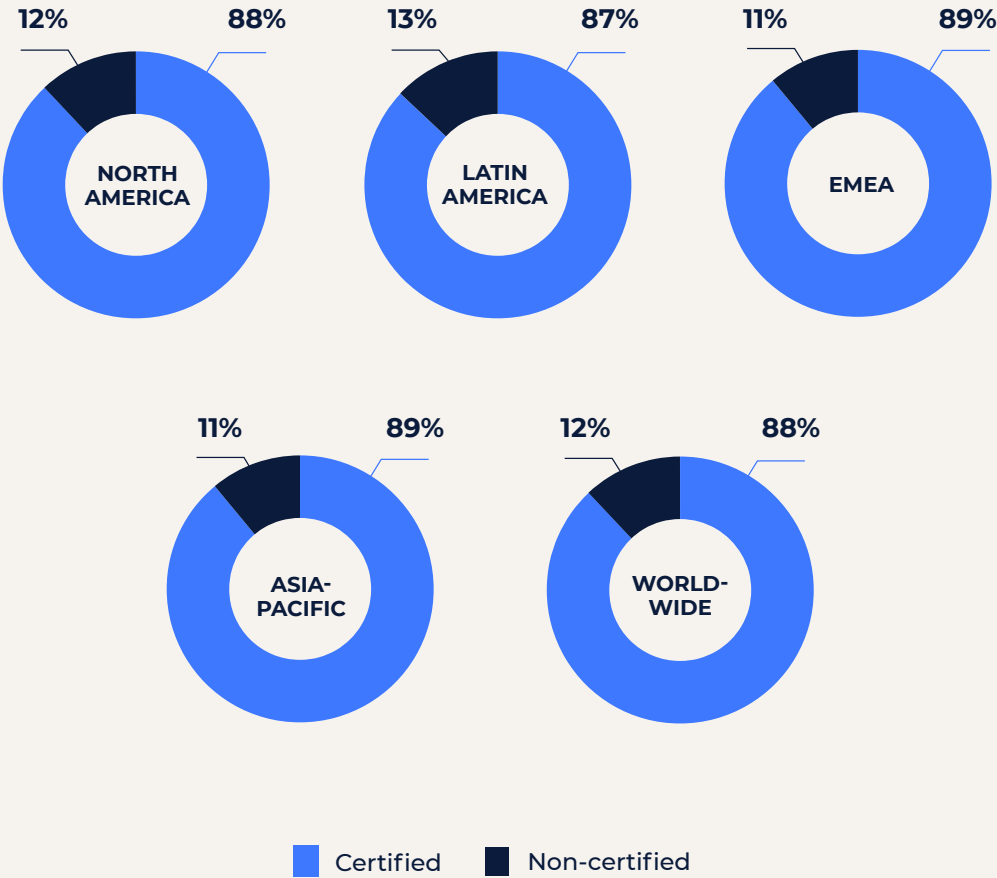
This may be the result of growing compliance and privacy concerns in both of those regions. Legislation like the General Data Protection Regulation (GDPR) has emerged in recent years, bringing a new importance to data privacy and security for international businesses.

To remain compliant with regulations like the European Union’s GDPR or, more recently, China’s Personal Information Protection Law (PIPL), virtually every organization must employ people with the skills and knowledge needed to ensure protections are put in place.

In North America, 88% of IT professionals hold certifications — equal to the world average.



CERTIFIED PROFESSIONALS BY REGION

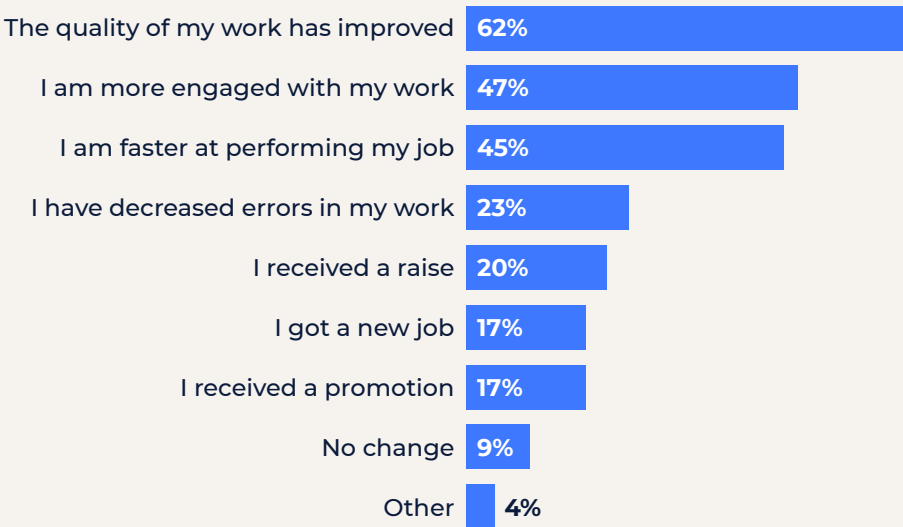


INDIVIDUAL BENEFITS OF CERTIFICATION

With so many respondents reporting multiple certifications, there must be benefits associated with the effort — and our survey takers had a lot to say on that topic.

Sixty-two percent felt that the quality of their work improved. They are also more engaged at work (47%) and perform their duties faster (45%). That’s good news for employers. Other key benefits include decreased errors, receiving a raise or promotion, and getting a new job.

JOB EFFECTIVENESS AFTER TRAINING



CERTIFICATION CATEGORIES

After years conducting this study, we know that certifications affect salaries. Generally speaking, certification makes you more valuable to employers.

That’s why every year, we explore which certifications are paying off. This year is no different.

This chart includes respondents with at least one certification in each category.

It’s important to realize that IT professionals usually have multiple certifications, with each one contributing to an increase in salary level.

SALARY BY CERTIFICATION CATEGORY — NON-CYBERSECURITY

CERTIFICATION CATEGORY	NORTH AMERICA		LATIN AMERICA		EMEA		ASIA-PACIFIC	
	AVERAGE	COUNT	AVERAGE	COUNT	AVERAGE	COUNT	AVERAGE	COUNT
Avaya	\$115,370	114	\$68,456	16	\$73,200	52	\$119,365	22
AWS (Amazon Web Services)	\$127,663	429	\$65,870	76	\$84,402	226	\$61,092	222
Blockchain Training Alliance	\$126,752	121	\$83,092	13	\$101,034	61	\$71,208	20
Broadcom (Symantec)	\$111,795	66	\$64,000	6	\$95,722	30	\$103,468	9
Business Analysis (e.g., IIBA, PMI)	\$127,820	184	\$64,132	25	\$106,625	72	\$99,215	33
Business Process (e.g., Six Sigma)	\$125,777	131	\$102,343	21	\$87,863	70	\$83,033	31
C++ Institute	\$118,459	97	\$34,906	7	\$129,796	36	\$112,800	10
Cisco	\$122,374	165	\$60,994	34	\$74,219	166	\$66,811	66
Citrix	\$147,610	59	\$56,506	8	\$92,771	60	\$58,099	18
Cloud Credential Council	\$141,205	59	\$103,092	13	\$121,278	18	\$114,643	14
CompTIA	\$109,814	288	\$55,936	21	\$75,516	103	\$64,421	23
Data Center	\$136,946	68	\$40,333	6	\$96,130	49	\$95,452	29
Database	\$125,799	93	\$65,374	19	\$99,721	67	\$83,077	41
Dell	\$134,868	52	\$98,690	8	\$81,482	59	\$42,279	28
DevOps (e.g., DOI, DASA)	\$151,903	41	\$89,412	6	\$90,212	40	\$86,020	22
Enterprise Architecture (e.g., TOGAF)	\$161,101	49	\$158,400	5	\$116,017	61	\$95,375	16
Google Cloud	\$171,276	282	\$81,145	66	\$138,854	209	\$75,277	146
Help Desk (e.g., HDI)	\$100,462	40	\$61,069	5	\$86,264	31	\$19,000	3
HP	\$133,051	32	\$44,278	9	\$65,676	37	\$60,321	20
IBM	\$124,654	26	\$52,455	11	\$66,692	34	\$76,384	25
ITIL and IT Service Management	\$133,869	240	\$60,248	49	\$76,618	296	\$75,617	101
Juniper Networks	\$125,669	32	\$74,750	4	\$88,907	16	\$94,067	15
Microsoft	\$119,933	347	\$53,337	108	\$70,428	524	\$53,192	243
Nutanix	\$132,461	92	\$53,210	40	\$65,680	145	\$43,533	130
Oracle	\$145,825	42	\$45,798	18	\$88,866	56	\$57,141	47
Project Management, Agile and Scrum	\$149,816	156	\$69,869	34	\$85,107	156	\$80,422	55
Red Hat	\$178,830	28	\$56,710	11	\$91,354	50	\$68,455	48
Salesforce	\$125,615	26	\$124,298	5	\$131,058	16	\$63,505	5
Sustainability	\$104,367	30	\$71,000	2	\$80,579	8	\$86,140	5
Veeam	\$118,660	21	\$68,361	18	\$60,695	53	\$46,579	21
VMware	\$135,794	93	\$68,044	29	\$75,128	151	\$51,886	96
Web Development (e.g., Codecademy)	\$127,188	65	\$108,768	6	\$79,389	35	\$80,761	23
Wireless (e.g., CWNP)	\$114,753	33	\$141,000	2	\$107,409	16	\$61,931	10
Wireshark	\$131,238	23	\$25,000	1	\$86,573	15	\$15,000	3

COMPENSATION BY CERTIFICATION CATEGORY — CYBERSECURITY

CERTIFICATION CATEGORY	NORTH AMERICA		LATIN AMERICA		EMEA		ASIA-PACIFIC	
	AVERAGE	COUNT	AVERAGE	COUNT	AVERAGE	COUNT	AVERAGE	COUNT
ISC2	\$127,229	319	\$72,418	18	\$94,183	110	\$75,742	89
AWS - Security	\$134,635	264	\$72,920	35	\$102,029	112	\$71,436	111
Broadcom (Symantec)	\$126,403	82	\$71,395	11	\$92,689	61	\$71,338	17
CertNexus	\$124,789	121	\$76,753	16	\$106,577	43	\$87,659	22
Check Point	\$118,883	99	\$77,750	21	\$96,232	46	\$79,528	27
Cisco - Security	\$134,875	128	\$46,406	22	\$87,962	125	\$52,726	56
CompTIA - Security	\$122,618	296	\$63,989	16	\$79,493	93	\$48,739	30
CSFI - Cybersecurity Forum Initiative	\$147,347	74	\$125,651	13	\$115,136	28	\$113,340	21
CWNP	\$136,795	34	\$97,500	6	\$166,986	14	-	-
Dell - Security	\$134,004	56	\$55,043	7	\$115,636	30	\$80,258	14
EC-Council	\$151,292	76	\$58,333	3	\$95,828	45	\$62,014	43
F5	\$129,746	32	\$45,341	6	\$100,414	18	\$42,493	5
Fortinet	\$119,876	40	\$56,202	22	\$66,901	49	\$54,588	22
GIAC	\$154,138	45	\$93,333	3	\$90,737	19	\$93,872	10
Google Cloud - Security	\$166,757	143	\$110,465	28	\$135,293	83	\$88,145	51
HP	\$105,667	18	\$28,000	1	\$107,991	19	\$59,315	7
IAPP	\$150,262	42	\$225,000	2	\$147,687	17	\$136,545	11
IBM - Security	\$147,288	49	\$83,250	6	\$115,583	26	\$93,952	18
ISACA	\$154,314	239	\$72,711	19	\$84,989	139	\$78,883	90
Juniper Networks - Security	\$131,643	21	\$100,000	1	\$108,335	13	\$108,929	7
Microsoft - Security	\$131,477	173	\$56,042	55	\$75,941	218	\$53,521	104
NIST	\$180,809	39	\$43,704	7	\$147,693	17	\$105,364	11
Offensive Security	\$132,378	25	\$27,500	2	\$108,295	11	\$59,000	4
Oracle - Security	\$113,704	32	\$41,221	10	\$105,459	16	\$49,019	14
Palo Alto Networks	\$122,810	27	\$51,474	10	\$78,822	18	\$80,163	11
Red Hat - Security	\$147,392	23	\$79,500	4	\$103,912	17	\$73,817	20
SECO Institute	\$85,857	7	\$32,500	4	\$141,492	6	\$50,000	1
SonicWall	\$133,000	19	\$40,667	3	\$77,483	10	\$15,000	1
VMware - Security	\$138,987	44	\$81,670	10	\$75,289	45	\$52,240	28
Web Development	\$138,693	59	\$35,000	5	\$110,762	23	\$79,750	12

TOP-PAYING CERTIFICATIONS

Across all regions, a consistent trend remains in effect. Certifications in areas like cloud architecture, cybersecurity, data analysis and science, machine learning and more tend to earn professionals outsized salaries. Why?

These professionals are tough to hire, given that the demand for their skills remains fiercely high — especially considering the rate of change in artificial intelligence, the severity of security attacks, and the reliance on cloud solutions at work and at home.

While other factors impact one’s compensation, certifications are a credible validation of a professional’s experience, signaling to employers that candidates have the ability to effectively do the job.

During times of incredible change when the stakes are high, having professionals you can trust is almost priceless.

As is the case in all areas of compensation, there are regional differences in how certifications affect salaries — and not surprisingly, based on data we’ve already seen with North America reporting higher salary levels than its global counterparts.

When looking at the data, it’s important to remember salaries are the culmination of several factors, including the ability to apply your skills at work, job role, continuous professional development, tenure, and hard work.

TOP PAYING CERTIFICATIONS WORLDWIDE

CERTIFICATION	AVERAGE	SAMPLE SIZE
Google Cloud Certified - Professional Cloud Network Engineer	\$163,198	107
Google Cloud Certified - Professional Cloud Security Engineer	\$159,135	133
Google Cloud Certified - Professional Cloud DevOps Engineer	\$148,781	98
Google Cloud Certified - Professional Data Engineer	\$148,082	174
Google Cloud Certified - Professional Cloud Developer	\$147,253	126
Google Cloud Certified - Professional Cloud Architect	\$146,212	349
CISSP - Certified Information Systems Security Professional	\$140,069	207
AWS Certified Security - Specialty	\$138,053	115
AWS Certified Advanced Networking - Specialty	\$137,698	118
Google Cloud Certified - Professional Cloud Database Engineer	\$137,394	114
AWS Certified Machine Learning - Specialty	\$136,595	69
PMP®: Project Management Professional	\$135,784	124
Google Cloud Certified - Professional Machine Learning Engineer	\$134,373	50
CRISC - Certified in Risk and Information Systems Control	\$133,616	87
AWS Certified Solutions Architect - Professional	\$132,852	145
Certified Scrum Product Owner	\$132,230	50
CISM - Certified Information Security Manager	\$131,967	163
CCIE Data Center	\$128,948	52
CDPSE - Certified Data Privacy Solutions Engineer	\$127,403	59
Certified ScrumMaster	\$125,497	101

NORTH AMERICA

The certification associated with the highest salary in North America this year is Google Cloud’s Professional Cloud Security Engineer, paying \$201,687 on average. Last year, the top-paying certification was ISACA’s CRISC, or Certified in Risk and Information Systems Control.

Historically, Google Cloud certifications have earned tech professionals high salaries — but this year, we’re seeing a marked increase over last year. The Professional Cloud Architect certification last year earned professionals \$154,234, whereas this year we see a \$40,000 increase.



TOP PAYING CERTIFICATIONS NORTH AMERICA

CERTIFICATION	AVERAGE	SAMPLE SIZE
Google Cloud Certified - Professional Cloud Security Engineer	\$201,687	56
Google Cloud Certified - Professional Data Engineer	\$196,163	75
Google Cloud Certified - Professional Cloud Network Engineer	\$195,311	52
Google Cloud Certified - Professional Cloud Architect	\$194,612	137
Google Cloud Certified - Professional Cloud Developer	\$179,622	55
AWS Certified Solutions Architect - Professional	\$173,260	69
Google Cloud Certified - Professional Cloud Database Engineer	\$167,502	65
PMP®: Project Management Professional	\$165,195	75
CISM - Certified Information Security Manager	\$162,046	83
AWS Certified Security - Specialty	\$161,681	68
CISSP - Certified Information Systems Security Professional	\$154,068	140
AWS Certified Advanced Networking - Specialty	\$153,438	67
AWS Certified Solutions Architect - Associate	\$152,838	102
CISA - Certified Information Systems Auditor	\$150,973	67
AWS Certified SysOps Administrator - Associate	\$150,534	51
Google Cloud Certified - Associate Cloud Engineer	\$149,846	92
AWS Certified DevOps Engineer - Professional	\$149,436	81
Nutanix Certified Professional - Multicloud Infrastructure (NCP-MCI) v6.5	\$138,749	53
BTA Certified Blockchain Security Professional (CBSP)	\$129,185	50
CCNA	\$125,063	98

LATIN AMERICA

In keeping with the trend, average earnings in Latin America rose from what we reported last year.

Those who hold Google Cloud’s Professional Cloud Architect certification reported earning \$64,303 last year but over \$92,000 this year. Those with AWS’ DevOps Engineer - Professional certification earned \$72,106 in 2022 — more than \$10,000 less than this year. VMware’s Data Center Virtualization certification also earns professionals more this year at \$76,836, versus \$59,664.



TOP PAYING CERTIFICATIONS LATIN AMERICA

CERTIFICATION	AVERAGE	SAMPLE SIZE
Google Cloud Certified - Professional Cloud Security Engineer	\$119,622	10
AWS Certified Data Analytics - Specialty	\$103,636	11
Google Cloud Certified - Professional Cloud Architect	\$92,192	38
AWS Certified DevOps Engineer - Professional	\$85,250	12
CCSM - Check Point Security Master	\$85,200	10
Google Cloud Certified - Professional Data Engineer	\$85,168	17
VMware Certified Professional - Data Center Virtualization 2023	\$76,836	19
Certified ScrumMaster	\$72,288	13
Microsoft Certified: Azure Solutions Architect Expert	\$67,951	13
Google Cloud Certified - Associate Cloud Engineer	\$65,619	30
Microsoft Certified: Azure Security Engineer Associate	\$62,433	12
AWS Certified Developer - Associate	\$61,687	10
AWS Certified Solutions Architect - Associate	\$60,093	32
Nutanix Certified Master - Multicloud Infrastructure (NCM-MCI) v5.20	\$58,542	12
Nutanix Certified Associate (NCA) v6.5	\$57,416	25
Nutanix Certified Professional - Multicloud Infrastructure (NCP-MCI) v6.5	\$57,241	29
Nutanix Certified Professional - Unified Storage (NCP-US) v6	\$56,750	10
Security+	\$56,719	12
CCNA	\$56,325	22
AWS Certified Cloud Practitioner	\$56,300	47

EUROPE, MIDDLE EAST, AND AFRICA

Last year, Google Cloud’s Professional Cloud Security Engineer certification held the seventh position on this list. This year, it climbed to the top in EMEA — as is seen around the world.

However, ISC2’s CISSP certification remains near the top in EMEA, where it held the number one position last year.



TOP PAYING CERTIFICATIONS EMEA

CERTIFICATION	AVERAGE	SAMPLE SIZE
Google Cloud Certified - Professional Cloud Security Engineer	\$172,380	38
Google Cloud Certified - Professional Cloud Developer	\$154,841	38
Google Cloud Certified - Professional Cloud Architect	\$140,408	102
Google Cloud Certified - Professional Data Engineer	\$135,890	46
CISSP - Certified Information Systems Security Professional	\$128,640	37
AWS Certified Solutions Architect - Professional	\$122,919	34
CRISC - Certified in Risk and Information Systems Control	\$114,648	31
AWS Certified SAP on AWS - Specialty	\$109,569	30
Google Cloud Certified - Associate Cloud Engineer	\$103,909	65
Microsoft Certified: Azure AI Engineer Associate	\$101,832	30
AWS Certified Database - Specialty	\$98,633	36
CISM - Certified Information Security Manager	\$97,604	50
AWS Certified Developer - Associate	\$97,399	32
Microsoft Certified: Azure Developer Associate	\$97,283	41
Microsoft Certified: DevOps Engineer Expert	\$92,483	33
CISA - Certified Information Systems Auditor	\$92,186	63
AWS Certified Solutions Architect - Associate	\$91,773	81
Microsoft Certified: Azure DevOps Engineer Expert	\$89,232	46
AWS Certified Data Analytics - Specialty	\$87,714	35
Microsoft Certified: Azure Solutions Architect Expert	\$86,510	117

ASIA-PACIFIC

ISC2’s CISSP certification fell from the number one position this year in the Asia-Pacific region, with relatively steady earnings for professionals.

Behind Google Cloud’s Professional Cloud Network Engineer certification, ISACA’s CISM ranks at the top, replacing the CISA, which ranked third last year.



TOP PAYING CERTIFICATIONS ASIA-PACIFIC

CERTIFICATION	AVERAGE	SAMPLE SIZE
Google Cloud Certified - Professional Cloud Network Engineer	\$113,318	28
CISM - Certified Information Security Manager	\$109,819	24
Google Cloud Certified - Professional Cloud Developer	\$101,841	21
Google Cloud Certified - Professional Cloud DevOps Engineer	\$98,071	25
AWS Certified SAP on AWS - Specialty	\$96,126	25
AWS Certified Advanced Networking - Specialty	\$95,376	27
Google Cloud Certified - Professional Cloud Database Engineer	\$93,979	21
Google Cloud Certified - Professional Data Engineer	\$93,199	36
Google Cloud Certified - Professional Cloud Architect	\$90,849	72
AWS Certified Data Analytics - Specialty	\$87,469	20
CISSP - Certified Information Systems Security Professional	\$87,299	24
Microsoft Certified: Azure AI Engineer Associate	\$87,059	24
AWS Certified Security - Specialty	\$79,962	22
Microsoft Certified: Azure DevOps Engineer Expert	\$75,007	25
AWS Certified Solutions Architect - Professional	\$74,390	34
Google Cloud Certified - Professional Cloud Security Engineer	\$73,233	29
AWS Certified DevOps Engineer - Professional	\$70,797	22
CISA - Certified Information Systems Auditor	\$68,339	39
AWS Certified SysOps Administrator - Associate	\$68,212	24
Microsoft Certified: Identity and Access Administrator Associate	\$62,971	23

MOST POPULAR CERTIFICATIONS HELD IN 2023

MOST WIDELY HELD CERTIFICATIONS WORLDWIDE FOR 2023:

- 1. Microsoft Certified: Azure Fundamentals
- 2. ITIL 4 Foundation
- 3. Microsoft Certified: Azure Administrator Associate
- 4. AWS Certified Cloud Practitioner
- 5. Cisco CCNA
- 6. Google Cloud Professional - Cloud Architect
- 7. AWS Certified Solutions Architect - Associate
- 8. Nutanix Certified Professional - Multicloud Infrastructure
- 9. CompTIA Security+
- 10. CompTIA A+

MOST WIDELY HELD NON-CYBERSECURITY CERTIFICATION CATEGORIES AND PROVIDERS FOR 2023:

- 1. Microsoft
- 2. Amazon Web Services (AWS)
- 3. ITIL and IT Service Management
- 4. Google Cloud
- 5. Cisco
- 6. Nutanix
- 7. CompTIA
- 8. Product Management, Agile and Scrum (PMP®, ScrumMaster, Prince2)
- 9. VMware
- 10. Business Analysis (e.g., IIBA, PMI)

MOST POPULAR CYBERSECURITY VENDORS AND BODIES OF KNOWLEDGE FOR CERTIFICATIONS IN 2023:

- 1. Microsoft
- 2. ISC2
- 3. Amazon Web Services (AWS)
- 4. ISACA
- 5. CompTIA
- 6. Cisco
- 7. Google Cloud
- 8. CertNexus
- 9. Check Point
- 10. Broadcom (Symantec)

MOST PURSUED CERTIFICATIONS

TOP 10 CERTIFICATIONS THAT IT PROFESSIONALS PLAN TO PURSUE THIS YEAR:

- 1. Google Cloud Professional - Cloud Architect
- 2. Microsoft Certified: Azure Administrator Associate
- 3. Google Cloud Associate - Cloud Engineer
- 4. AWS Certified Cloud Practitioner
- 5. AWS Certified Solutions Architect - Associate
- 6. Google Cloud Professional - Cloud Security Engineer
- 7. CISSP
- 8. AWS Certified Solutions Architect - Professional
- 9. CompTIA Security+
- 10. ISC2 Certified in Cybersecurity

TOP 10 NON-CYBERSECURITY CERTIFICATION CATEGORIES AND PROVIDERS BEING PURSUED THIS YEAR:

- 1. Google Cloud
- 2. Amazon Web Services (AWS)
- 3. Microsoft
- 4. Cisco
- 5. Nutanix
- 6. CompTIA
- 7. ITIL and IT Service Management
- 8. Business Analysis (e.g., IIBA, PMI)
- 9. VMware
- 10. Project management, Agile and Scrum (e.g., PMP, CAPM, ScrumMaster)

TOP 10 CYBERSECURITY VENDORS AND BODIES OF KNOWLEDGE BEING PURSUED FOR CERTIFICATION PURPOSES:

- 1. Amazon Web Services (AWS)
- 2. ISC2
- 3. Microsoft
- 4. Google Cloud
- 5. CompTIA
- 6. Cisco
- 7. ISACA
- 8. Broadcom (Symantec)
- 9. VMware
- 10. EC - Council

Certification Resources

WHAT IS THE FUTURE OF CERTIFICATIONS?

Employees aren't the only ones to see value in certifications. Employers are reaping the rewards, too. When asked for the top three ways certified staff add value to their organization, many leaders reported that they see a boost in productivity (36%), troubleshooting takes less time (35%), and certifications close skills gaps (34%).

All of this leads to one conclusion: additional training is a win-win for employees and employers. If you're not investing in skilling, upskilling, and reskilling, you risk falling victim to even wider skills gaps that impact the overall success of your organization. Have questions on the most efficient approach to certification? We can help.

Where do I start?

Start with [How to Select the Right Certification for You](#).

What does certification entail? Am I ready?

Get the facts on what to expect from courses, what the requirements are, and the exam prep available for the following certifications:

■ [AWS](#)

■ [Business Analysis](#)

■ [Blockchain](#)

■ [Cisco](#)

■ [Citrix](#)

■ [CompTIA](#)

■ [Cybersecurity](#)

— (ISC)2

— EC-Council

— F5

— ISACA

— Palo Alto Networks

— SonicWall

— And more

■ [DevOps](#)

■ [Google Cloud](#)

■ [ITIL®](#)

■ [Microsoft](#)

■ [Nutanix](#)

■ [Project Management](#)

■ [Red Hat](#)

■ [TOGAF®](#)

■ [Veeam](#)

■ [VMware](#)

■ [Wireshark](#)



IT Decision-Maker Insights

SKILLS GAPS REMAIN AN UNWAVERING CHALLENGE FOR LEADERS

Making decisions for an organization comes with uncertainty and stress, and it requires a willingness to look at multiple sides of an issue to come up with the best solutions.

Most are looking to the future with AI in mind. Only, many challenges stand in their way as they strive to realize the technology's full potential.

AI shows promise. But what's the catch?



The person responsible for making decisions can be the hero or the neck on the chopping block depending on which direction they take.

We wanted to know which decisions or challenges leaders were facing in 2023. The answers from decision makers show that there is still a fair amount of uncertainty, anxiety, and stress in the IT sector.

Of those IT decision-makers surveyed, 46% have more than 10 years of career experience and 59% manage a training budget for their teams. Seventy-five percent are mid-level managers, 21% are senior-level, and 5% of respondents are at an executive level.

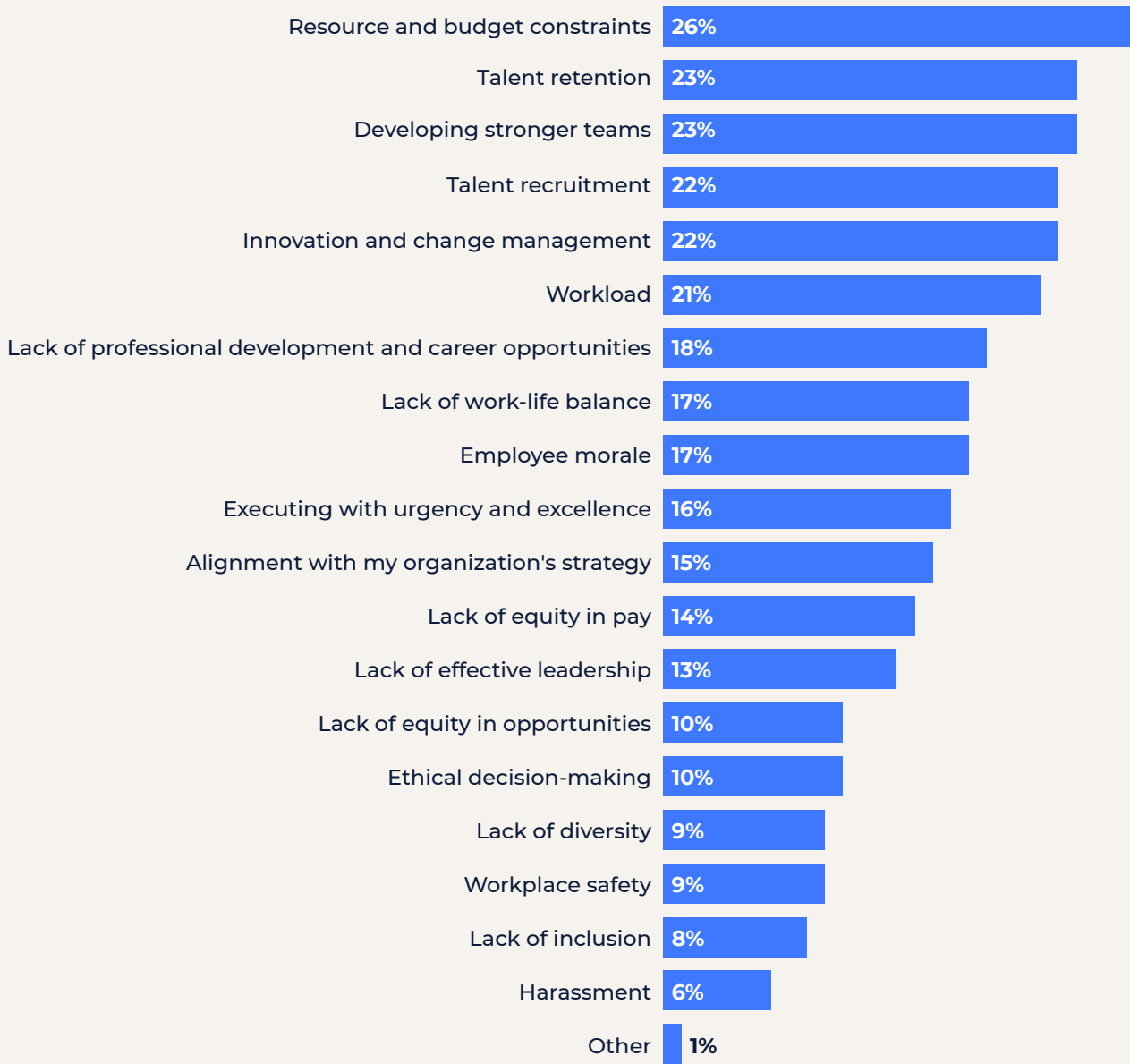
KEY CHALLENGES

Let’s first look at where IT has been historically. In 2020, IT decision-makers were plagued with talent recruitment and retention concerns. In 2021, as people started to go back to working in an office, they were concerned with managing workloads and budgets.

Last year, the focus shifted to how they were going to prevent skilled and talented people from leaving their organization, as well as how to attract new skilled and talented professionals to fill open positions.

We asked decision-makers about their top three challenges in 2023. The top two concerns are similar: resource and budget constraints (26%) and talent retention (23%). Developing strong teams (23%) was also a pressing matter.

THE TOP CHALLENGES FOR IT DECISION-MAKERS



It’s no longer enough to bring a single superstar onto your team. Decision-makers must now build cohesive, productive teams of superstars. If those superstars are hard to find on the market, reskilling and upskilling current talent becomes imperative.

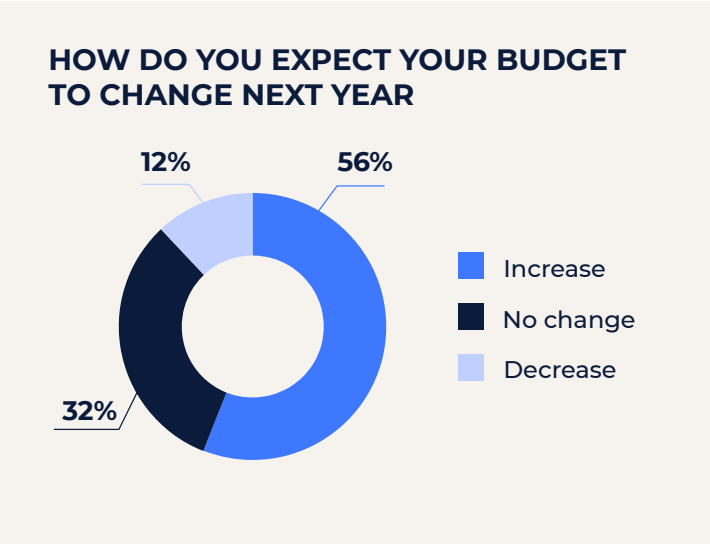
On the opposite end, DEI-related concerns are not viewed as a key challenge for decision-makers in IT. Only 8% felt that a lack of inclusion was a top challenge they were facing.

When asked how they are addressing DEI challenges, 45% of leaders report that they are recruiting diverse talent. Close behind are mentoring, DEI training, and leadership development.

IT DEPARTMENT BUDGETS

More than half (56%) of IT decision-makers saw an increase in their budgets, 32% saw no change, and just 12% experienced a decrease. That differs slightly from last year when more (59%) saw an increase and only 8% saw a decrease.

The big jump last year could be attributed to a rebound from COVID-19 when department budgets saw steeper cuts than in previous years. This year, budgets are leveling out a bit more.



TOP INVESTMENT AREAS

For the past couple of years, the hot topic was cybersecurity, and many companies were investing money to minimize their attack surfaces, harden their defenses, and train and hire cybersecurity staff. In fact, 50% of the respondents from 2021 and 31% from 2022 chose cybersecurity as their main area of focus. While cybersecurity is still a top certification focus, it has fallen to the number four slot in terms of IT decision-makers' priorities. Only 29% of decision-makers named it a key focus area this year. Cloud computing (35%) and data analytics, data management, and data science (33%) have remained steady over the past several years. However, 82% of decision-makers say the demand for cloud computing skills is increasing within their organizations.

In 2023, the technology everyone is talking about is AI. In fact, at the end of October, President Biden announced an [Executive Order](#) that underscores the need for further training on AI in the United States. But it is not as easy as it sounds.

Our data shows that hiring professionals with artificial intelligence skills is more difficult than any other area of tech. Thirty percent of survey respondents report having the most difficulty hiring qualified AI professionals.

Further, skills gaps in this discipline are among the most acute and they are compounded by a lack of AI training opportunities. When it comes to AI and generative AI, our decision-makers are dissatisfied with their teams' existing skill sets. Seventeen percent feel that their employees' skill level in these two areas is low; roughly 26% feel that it is somewhat low.

So, it's no surprise then that "AI and machine learning" is the top focus area for 38% of our IT decision-makers. And they are starting to invest real money in learning how to incorporate AI into their IT departments — 11% listed GenAI as a top investment area this coming year. Particularly with the rise in popularity of generative AI (e.g., ChatGPT), some in IT leadership plan to use the technology to augment their teams (14%) and create efficiencies where today there are gaps.



A recent [Deloitte survey](#) showed that a lack of skills related to AI was a top-three issue for 31% of organizations. Yet only 17% were making the investment in AI training. This could lead to issues as the number of AI specialists worldwide is just over 22,000 (according to [Deloitte](#)). That's not a lot of supply in a field this is becoming very much in demand.

This is one example of why upskilling and reskilling have become strategic imperatives for decision-makers. With too few AI specialists in the field today, training or retraining your team often becomes the best option to close gaps.

On the power skills side, about one-third of IT decision-makers feel confident in their team's leadership skills, but the highest percentage feel ambivalent. Almost half (48%) rated their team's skills in this area as "medium," with a quarter feeling pessimistic.

Decision-makers stand to gain substantial benefits by investing in their teams' leadership skills, as employees can then assume leadership roles, coach less experienced staff, and direct strategic priorities for the business.

It's clear that decision-makers need to invest more thought, time, and money into developing AI and power skills within their teams. Consider data compiled by the World Economic Forum (WEF) for its [2023 Future of Jobs Report](#). WEF reports that analytical thinking is the highest priority for skills training from 2023-2027. The second priority for workforce development is to promote creative thinking.

Training workers to utilize AI and big data ranks third among company skills-training priorities in the next five years and will be prioritized by 42% of surveyed companies. Employers also plan to focus on developing workers skills in leadership and social influence, resilience, flexibility and agility, and curiosity and lifelong learning.



Global Knowledge - IT Decision-Maker Insights							
INTRODUCTION	SALARY	CERTIFICATIONS	IT DECISION-MAKER INSIGHTS	PROFESSIONAL DEVELOPMENT	JOB SATISFACTION	MANAGING DISRUPTION	CONCLUSION
Global Knowledge - IT Decision-Maker Insights	KEY AREAS OF FOCUS		NORTH AMERICA	LATIN AMERICA	EMEA	ASIA-PACIFIC	WORLDWIDE
	Cloud Computing		26%	40%	39%	44%	35%
	Cybersecurity, Information Security		28%	26%	32%	28%	29%
	AI and Machine Learning		37%	27%	37%	42%	38%
	Infrastructure and Systems		10%	12%	12%	11%	11%
	Data Analytics, Data Management, Data Science		33%	38%	32%	34%	33%
	Internet of Things (IoT)		3%	2%	4%	5%	4%
	Containers		7%	12%	9%	10%	9%
	Governance, Risk, and Compliance		11%	4%	9%	7%	9%
	Software Development		4%	4%	5%	4%	4%
	Virtualization		4%	5%	7%	9%	6%
	GDPR and Data Privacy		6%	6%	8%	5%	6%
	Green Technology		3%	3%	3%	2%	3%
	Networking and Wireless LAN		4%	4%	5%	4%	4%
	Service Management		5%	4%	5%	3%	14%
	Business Process Management		21%	18%	15%	11%	17%
	Mobile App Development & Deployment		4%	4%	2%	1%	3%
	Blockchain		13%	11%	8%	11%	11%
	Mobility and Endpoint Management		3%	2%	2%	1%	2%
	Augmented Reality		18%	19%	11%	14%	15%
	Web Development		2%	2%	3%	2%	2%
	Customer Relationship Management (CRM)		10%	8%	6%	5%	8%
	Enterprise Resource Management (ERM)		7%	11%	7%	5%	7%
	Collaboration Application		9%	9%	7%	6%	8%
	Video, Voice, and Telephony		2%	1%	2%	1%	2%
	Virtual Reality		2%	1%	2%	1%	1%
	Other		1%	3%	1%	1%	1%
	Generative AI (ChatGPT, etc.)		11%	10%	10%	15%	11%
	Project Management		6%	4%	7%	6%	6%
	Leadership Skills		6%	5%	5%	6%	6%
global knowledge	Soft Skills Development		5%	2%	5%	6%	5%

WITHIN THESE KEY AREAS OF INVESTMENT, HOW DO YOU RATE YOUR TEAMS' EXISTING SKILL SETS?

AREAS	LOW	SOMEWHAT LOW	MEDIUM	SOMEWHAT HIGH	HIGH
AI and Machine Learning	17%	26%	34%	15%	8%
Generative AI (ChatGPT, Etc.)	17%	25%	31%	19%	8%
Containers	11%	11%	23%	23%	32%
Augmented Reality	9%	24%	40%	21%	6%
Project Management	9%	16%	31%	30%	14%
Internet of Things (IoT)	8%	8%	24%	24%	36%
Leadership Skills	7%	17%	48%	17%	11%
Customer Relationship Management (CRM)	7%	15%	37%	32%	9%
Data Analytics, Data Management, Data Science	7%	20%	39%	26%	8%
Cloud Computing	7%	18%	37%	25%	13%
Business Process Management	6%	18%	44%	26%	6%
Green Technology	6%	19%	28%	37%	10%
Cybersecurity, Information Security	6%	16%	37%	29%	12%
Mobility and Endpoint Management	6%	11%	39%	26%	18%
Mobile App Development and Deployment	5%	10%	38%	28%	19%
Governance, Risk, and Compliance	5%	14%	40%	30%	11%
Blockchain	5%	21%	40%	25%	9%
Virtual Reality	5%	15%	38%	36%	5%
Web Development	5%	5%	42%	35%	13%
GDPR and Data Privacy	5%	19%	44%	26%	6%
Soft Skills Development	4%	20%	44%	22%	10%
Networking and Wireless LAN	4%	10%	42%	28%	16%
Video, Voice, and Telephony	4%	13%	40%	30%	13%
Other	4%	22%	41%	22%	11%
Service Management	3%	17%	45%	23%	12%
Software Development	3%	12%	26%	41%	18%
Virtualization	4%	4%	15%	15%	62%
Collaboration Applications	3%	17%	40%	28%	12%
Enterprise Resource Management (ERP)	3%	17%	37%	31%	12%

global knowledge.



Fifty percent of decision-makers worldwide plan to invest in Microsoft. The other top vendors that IT decision-makers plan to invest in this coming year are Amazon Web Services (40%) and Google Cloud (28%). These top three vendors have remained consistent over the past two years.

Outside the top three vendors, we see some shifts in investment plans. This year, Kubernetes, VMware, Cisco, Apple, OpenAI, Nutanix, and IBM round out the top 10.

LATIN AMERICA TOP VENDORS

AREAS	%
Microsoft	46%
Amazon Web Services (AWS)	41%
Google Cloud Platform	37%
Kubernetes	27%
VMware	21%
Cisco	16%
MongoDB	16%
Fortinet	14%
Nutanix	14%
Apple	14%

WORLDWIDE TOP VENDORS

AREAS	%
Microsoft	50%
Amazon Web Services (AWS)	40%
Google Cloud Platform	28%
Kubernetes	23%
VMware	18%
Cisco	18%
Apple	17%
OpenAI	17%
Nutanix	14%
IBM	14%

EMEA TOP VENDORS

AREAS	%
Microsoft	53%
Amazon Web Services (AWS)	32%
Google Cloud Platform	30%
Kubernetes	23%
Cisco	20%
VMware	19%
Apple	16%
OpenAI	15%
Fortinet	15%
Nutanix	14%

NORTH AMERICA TOP VENDORS

AREAS	%
Microsoft	48%
Amazon Web Services (AWS)	37%
Apple	21%
Google Cloud Platform	19%
Kubernetes	18%
OpenAI	16%
Atlassian	16%
IBM	16%
Cisco	16%
NetApp	15%

ASIA-PACIFIC TOP VENDORS

AREAS	%
Amazon Web Services (AWS)	55%
Microsoft	50%
Google Cloud Platform	37%
Kubernetes	30%
VMware	24%
OpenAI	21%
Nutanix	20%
Cisco	19%
IBM	16%
Docker	16%



SKILLS GAPS

Decision-makers are feeling the skills gap burden. Sixty-six percent report experiencing it the same amount as last year. And again, like last year, 9% are still unsure whether or not they have a skills gap.

The future looks like more of the same, with 56% reporting that they anticipate a skills gap in the next 1-2 years. It stands to reason that if you can anticipate it, you can plan for it. It's true that technology evolves quickly — take GenAI as an example — but now is the time to assess your team's skills so you're not caught off guard. Proactive companies will start making efforts today to determine where their skills gaps are, how to address them, and who they'll partner with to make up for shortcomings.

WHAT'S CAUSING SKILLS GAPS?

Decision-makers recognize that there are skills gaps in their organizations. But why? The most common answer organizations report is that technology is changing faster than their skills development programs can keep up (43%). Forty-one percent are struggling to hire candidates with the skills they need, while 37% find it difficult to even attract the right candidates in the first place.

If there's a glimmer of hope, it's that organizations aren't citing retention as a big factor like it was last year. However, there was an uptick in the percentage of respondents who say their organizations haven't invested enough in training (36%). Last year, we saw this figure at 26%.

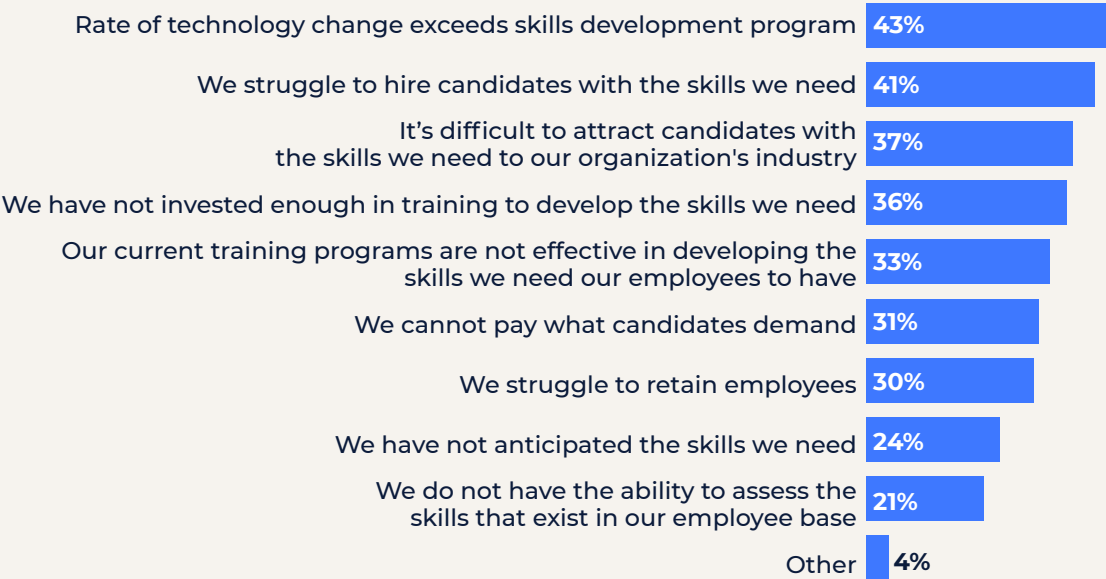
Knowledge is power.

It's imperative that organizations invest in educating, certifying, and training their employees, whether that means building skills that are lacking or keeping up with emerging technologies. When you invest in training, you show an interest in both your employees' futures and the longevity of your overall organization. It's easier to keep the qualified employees you have, attract new hires, and stay focused on the work.

Future-focused thinking pays off, and the stakes are simply too high to do anything less.



WHAT ARE THE TOP REASONS FOR SKILLS SHORTAGES ON YOUR TEAM?



AREAS WITH GREATEST DIFFICULTY FOR HIRING TALENT



SKILLS GAP IMPACT

We’ve looked at why we need to close the skills gaps, but what happens when we don’t? Our respondents had a lot to say on the subject. Forty-five percent are seeing increased stress among their employees. They’re overworked, overburdened, and short on the resources they need to do their jobs. Forty percent claim that projects are taking longer, and 37% aren’t meeting their business objectives. Those are very measurable side effects that carry heavy cost burdens. Companies are also putting themselves at risk with a decrease in innovation and customer satisfaction and an increase in security risks and operating costs.

We’ve said it before, but organizations and decision-makers must leverage skilling and reskilling to lessen the impacts of skills gaps. The good news? Business leaders are starting to take notice.

ORGANIZATIONAL IMPACTS OF SKILL GAPS



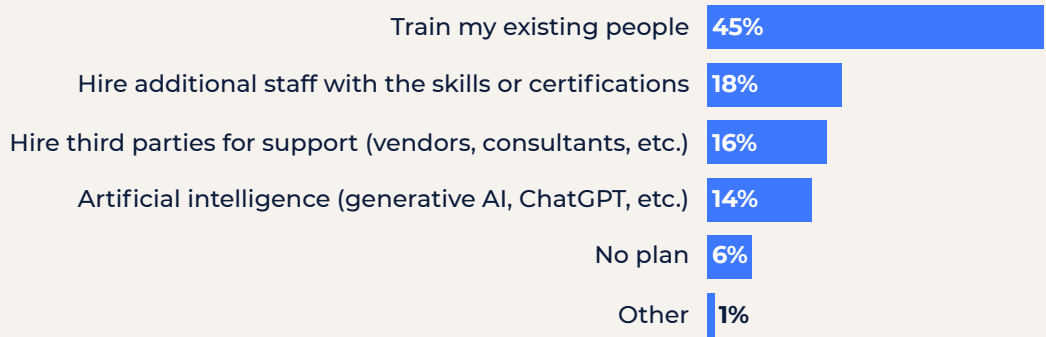
SKILLS GAP RESPONSE

This year, 77% of our respondents report that their company provides some type of formal training — similar to last year (72%). Eighty-six percent have authorized training in the last 12 months. An impressive 97% believe that certified staff add value to their organization.

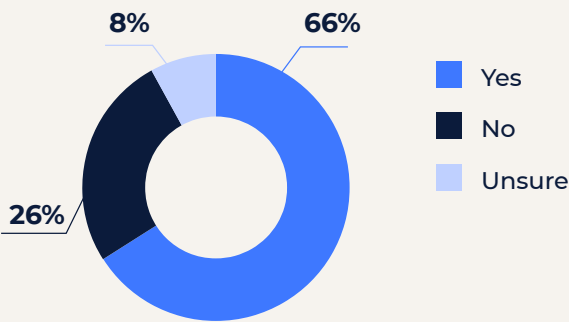
Those who are implementing training programs are seeing an improvement in morale. They’re seeing talent retention rates improve.

Twenty-nine percent say a candidate’s skills are the most important criteria in hiring, not their degrees (7%) or references (5%). That’s good news, with 56% reporting that hiring will likely increase as we move into the new year.

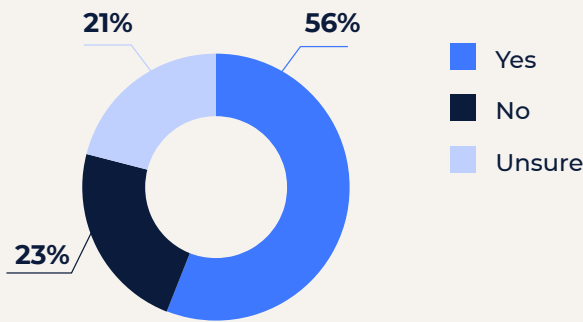
HOW DO YOU PLAN TO CLOSE SKILLS GAPS?



SKILLS GAPS ARE PRESENT TODAY



SKILLS GAPS ARE ANTICIPATED IN THE NEXT 1 TO 2 YEARS



THE DOLLAR VALUE OF CERTIFICATIONS

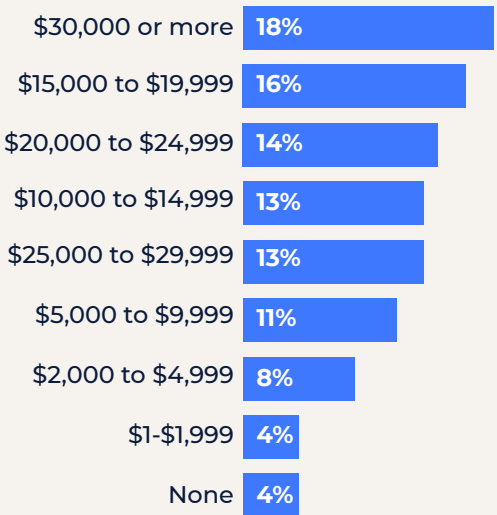
Here’s even more concrete proof that skilling, upskilling, and certifying pay off. We asked our respondents if they could put a dollar amount on the annual added value a certified employee brings to their organization.

Eighteen percent estimate \$30,000 or more. Sixteen percent report in the range of \$15,000 to \$19,999. Remember, these figures only reflect the value of a single certified individual! Less than 4% claim a certified employee adds no measurable monetary value.

BENEFITS OF CERTIFIED STAFF



CERTIFIED EMPLOYEE ANNUAL
ADDED VALUE



Professional Development

MORE SEE TRAINING AS A STRATEGIC IMPERATIVE

The deployments, initiatives, and projects tech leaders have planned for the year hinge on their team's ability to follow through.

However, skills gaps, recruiting, and retention are all big issues affecting those in tech and impacting their ability to deliver. But these are also issues that can be fixed.

The solution? Training.

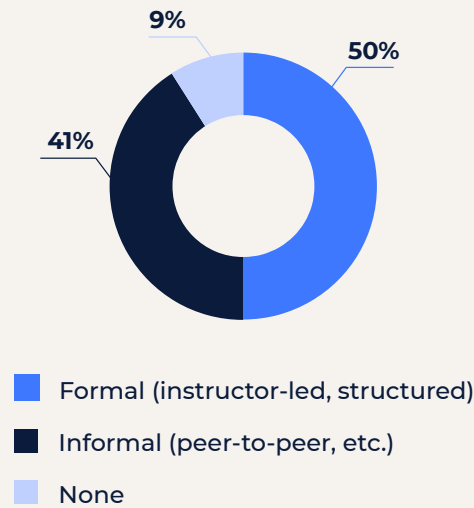


Money put into skilling, reskilling, and developing IT people pays off. Employees not only want to learn, but they’re also actively seeking ways to advance their skills — in both technology and power skills.

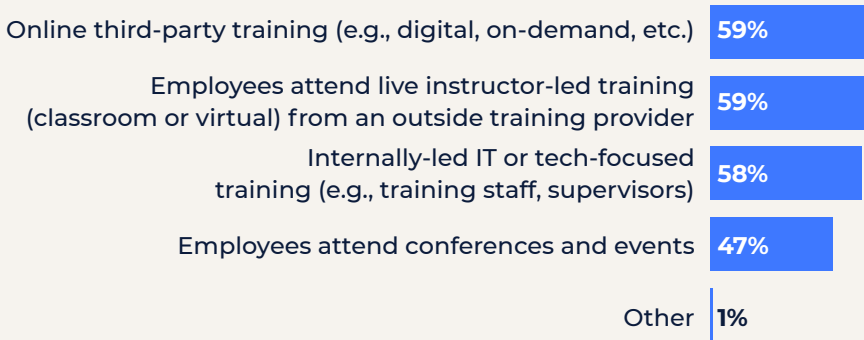
As reported last year, IT professionals are seeking out free online learning tools on their own, such as free trials, subscriptions, and accounts. This proves that whether or not employers are providing learning, employees are looking for it. They also attend webinars, read and download white papers or technical guides, and attend seminars or conferences.

Our respondents were asked to select their favorite learning modalities. Most popular are online, on-demand sessions (59%), followed by online live training sessions (46%), and informal training opportunities (31%). Specifically, when learners are weighing training opportunities, the most important criteria are content quality, hands-on learning, and updated content.

TYPES OF TRAINING OFFERED



WHAT TYPES OF FORMAL TRAINING DOES YOUR COMPANY OFFER



TRAINING TYPES

This year, we found that respondents overwhelmingly prefer formal training (71%) to informal training (29%).

When it comes to their ideal mode of formal training, respondents prefer in-person, instructor-led training (29%), followed by online instructor-led (24%); online, on-demand (24%); and a blended mix of online and in-person training (23%).

TRAINING SESSIONS TAKEN IN THE PAST YEAR

	NORTH AMERICA	LATIN AMERICA	EMEA	ASIA-PACIFIC
An online, on-demand session (interactive, self-paced, etc.)	57%	63%	60%	58%
An online live training session	41%	50%	49%	47%
An informal training session at work (unorganized, impromptu, peer-to-peer, etc.)	35%	26%	31%	25%
A classroom training session (outside the office)	22%	25%	24%	24%
A formal training session at work (in office, instructor-led)	20%	19%	20%	22%
None	8%	6%	8%	8%
Other	0%	1%	1%	1%



LEARNING RESOURCES CONSUMED IN THE PAST YEAR

	NORTH AMERICA	LATIN AMERICA	EMEA	ASIA-PACIFIC
Used free online learning tools (free trials, free subscriptions, or accounts)	44%	50%	55%	49%
Attended webinars	40%	46%	43%	37%
Books, textbooks, manuals	38%	40%	41%	34%
Training subscription through employer	35%	36%	34%	32%
Downloaded a white paper or technical guide	31%	35%	32%	31%
Attended a seminar, luncheon, or technical conference	30%	33%	32%	29%
Downloaded certification prep guides	25%	30%	29%	26%
Joined an online community (e.g., GitHub, Reddit, CNET)	24%	25%	29%	25%
Training subscription (personal)	24%	23%	24%	21%
Followed or engaged with influencers, groups, or my network on social media	23%	21%	23%	20%
Podcasts	19%	16%	17%	12%
None	5%	3%	3%	5%
Other	2%	2%	3%	2%

WHAT’S IN IT FOR ME?

Before we explore the benefits of training, we need to know why IT professionals are seeking training in the first place. Preparing their organization for new technology was the number one answer (32%), followed by more personal reasons: earning a salary increase (21%) and preparing for a career change (13%).

Unsurprisingly, 47% of our respondents report that professional development is “extremely important” to their careers, and 35% say it’s “very important.” But are they getting it? Only 37% report that training is included when their employers invest in new technology. They also cite workload (46%) and lack of a training budget (35%) as inhibitors to training and their professional development.

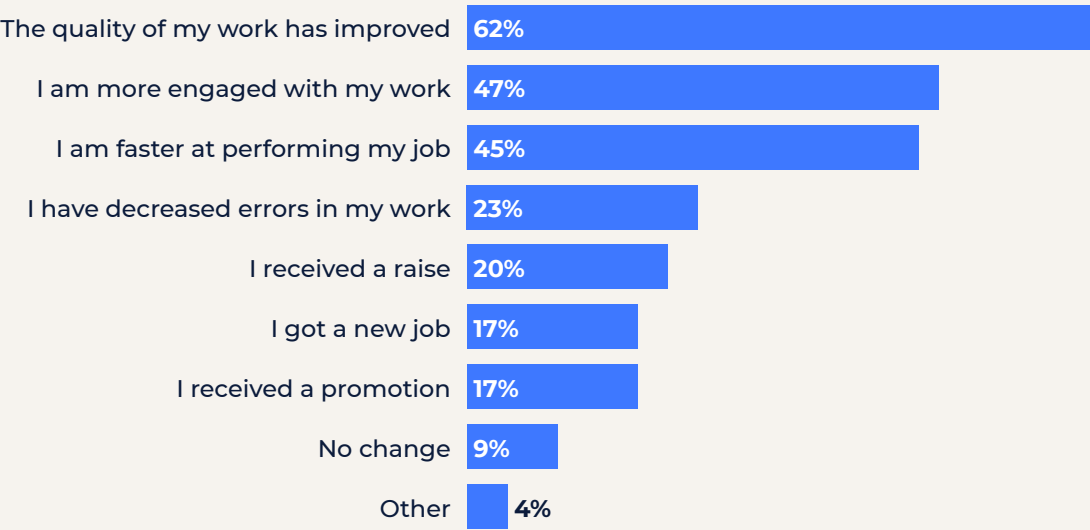
MAIN DRIVERS FOR TRAINING



This seems short sighted because to get the most of the platforms or tools introduced, organizations must have people who understand their potential. That requires expertise and continuous learning. This belief is particularly relevant when we look at how employee effectiveness changes after training to achieve certification. Sixty-two percent feel that the quality of their work has improved.

Other tangible benefits include greater work engagement (47%), faster performance on the job (45%), and a decrease in errors (23%). Employees also saw several personal benefits — raises (20%), new jobs (17%), and promotions (17%).

IMPACT OF CERTIFICATION ON ROLE



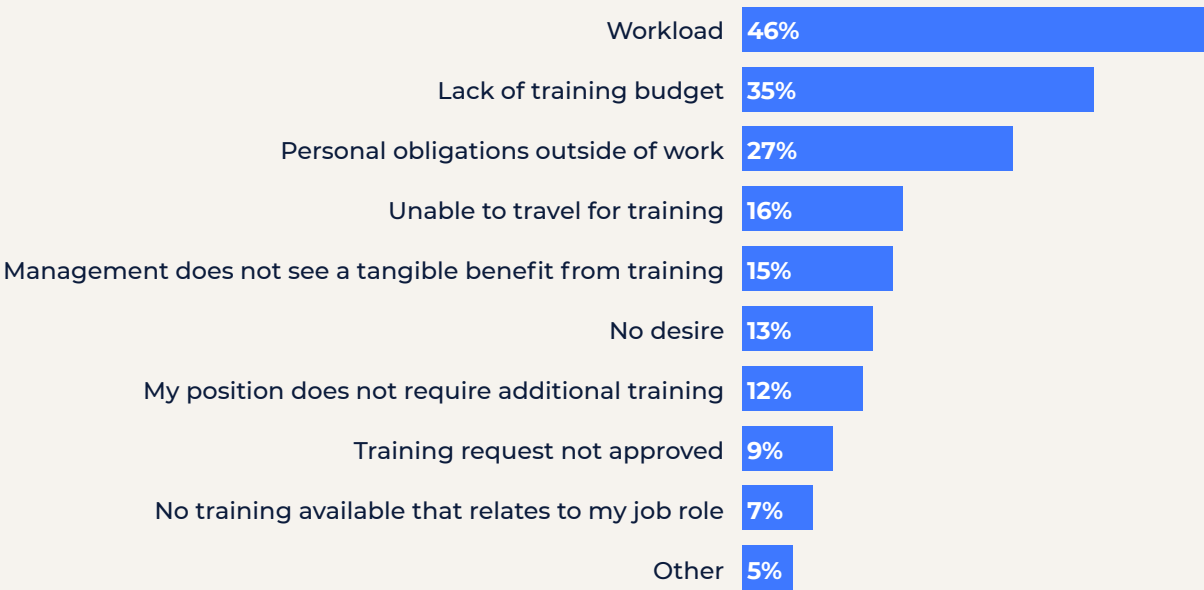
WHAT’S HOLDING YOU BACK?

Among the most significant changes this year from last is the number of respondents who say management doesn’t see the value in training.

This year, only 15% say their managers don’t value training. That’s good news, as it suggests more and more organizations are recognizing the importance of upskilling their teams.

Other inhibitors to training are workload, lack of training budget, and personal obligations outside of work.

WHAT PREVENTS YOU FROM TRAINING?



THE IMPORTANCE OF POWER SKILLS IN LEADERSHIP TRAINING

We queried respondents about training that falls outside of the typical IT curriculum. When asked if their organization offers a leadership development program, 65% affirmed that it does and 31% of respondents reported focusing on professional skills in the past year, like leadership, management, and communication.

Another 18% said they focused on business process skills.

While that's encouraging, 20% of employers don't offer valuable leadership training and 15% are unsure. Clearly there's a gap and an excellent opportunity for organizations to offer leadership training as a differentiator.

We dug a little deeper to see what our respondents felt were important skills for IT leaders. Technical skills only receive 8% of the vote, while power skills like team communication (40%), interpersonal communication (21%), and emotional intelligence (13%) are deemed far more important.

Other essential skills for leaders include business skills, technical skills, critical thinking, project management, and adaptability.

Why are power skills so important to leaders? Consider this: [Gartner](#) predicts that by 2024, AI and emerging technologies will replace almost 69% of the manager's workload. That doesn't mean managers will be automated out of their jobs.

Rather, they'll need to develop critical thinking, project management, adaptability, and other skills to continue driving innovation, growth, and efficiency in their organizations.



Job Satisfaction

STILL, TECH PROVIDES A FULFILLING CAREER

Job satisfaction plays a major role in addressing the challenges of recruiting and retaining talent. The good news is that over 70% of employees report they are satisfied in their job, similar to last year.

However, 53% are at least somewhat likely to look for another position in the next 12 months.

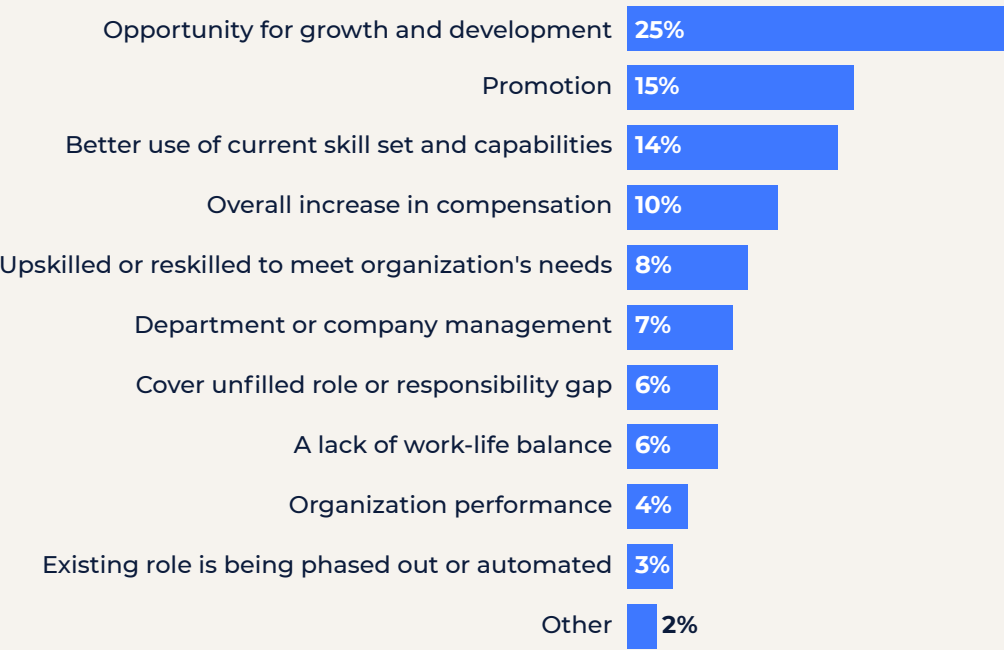
To stay or go?



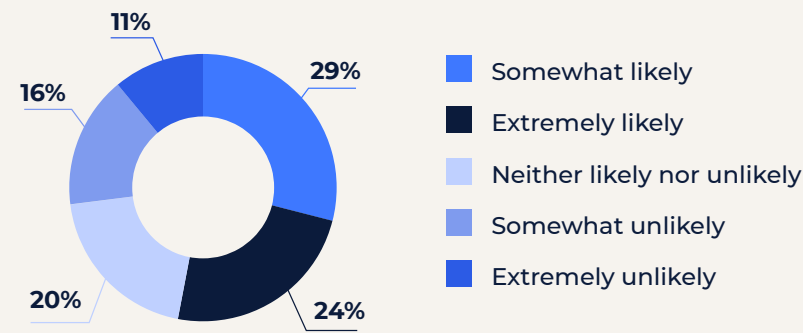
The percentage of those likely to look for another role has increased slightly over the past few years: 52% in 2022 and 49% in 2021. So, while they may be happy with what they do, IT professionals are not necessarily happy for whom they work.

The largest group (43%) say that the reason behind wanting to change employers is due to a lack of growth and development. And the number one reason for changing job roles entirely is also a lack of growth and development (25%). The writing is on the wall, and the message is clear: develop your employees, position them for growth, provide them with skills training, and they’ll be more likely to stay with and contribute to your organization. A stagnant career path leads to a quick exit, and high turnover rates can be disastrous for an organization. Some respondents pointed out that management “sees IT as a commodity compared to other support functions,” and no one finds worth or satisfaction in this type of devaluation.

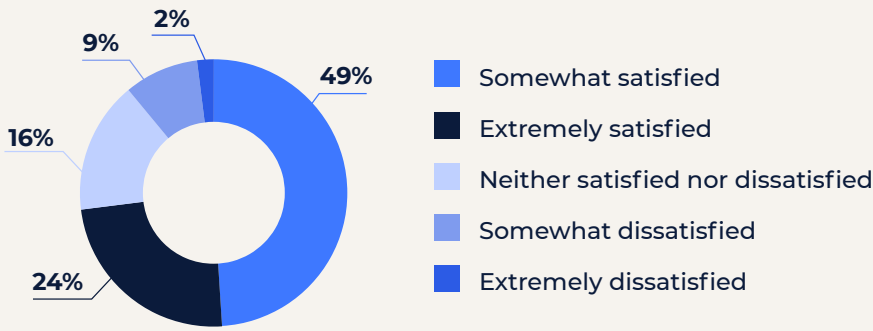
PRIMARY FACTOR FOR CHANGING JOB ROLES



HOW LIKELY ARE YOU TO LOOK FOR ANOTHER POSITION WITHIN THE NEXT 12 MONTHS?



OVERALL, HOW SATISFIED OR DISSATISFIED ARE YOU WITH YOUR CURRENT JOB?



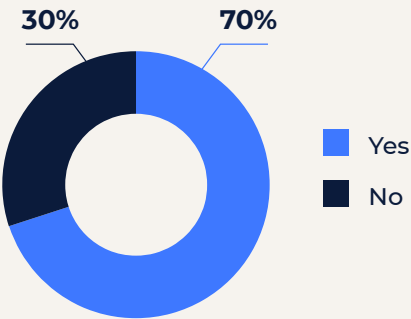
JOB SECURITY

While most IT professionals feel secure in their current positions (77%), their feeling of overall security is down slightly from last year.

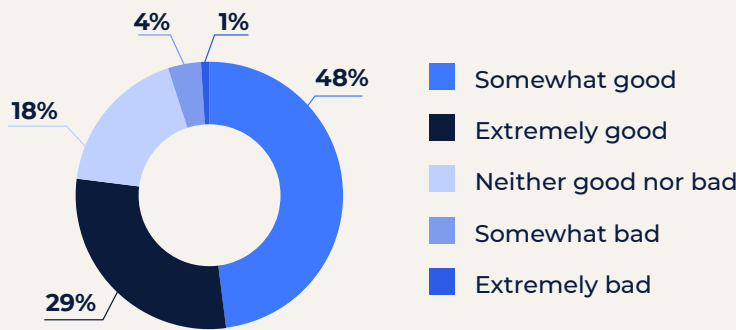
So why the downturn? 2023 saw record tech layoffs — up 50% from 2022, affecting 240,000 jobs. Layoffs of this scale likely left many second-guessing decisions to switch employers unless absolutely necessary, while also instilling doubt that their job is as safe as they may have thought.

Of those who did switch job roles, the overwhelming majority did not switch to a non-tech role. Those who did (26%) are shrinking the pool of skilled tech workers, which makes recruiting even harder.

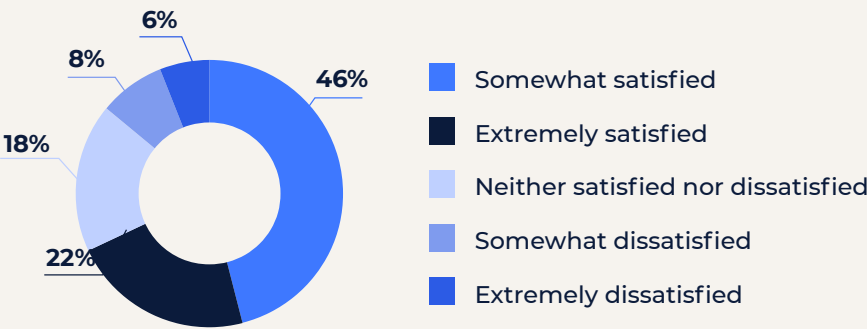
AFTER BEING LAID OFF, DID YOU RECEIVE SEVERANCE?



OVERALL, WHAT ARE YOUR FEELINGS ABOUT YOUR JOB SECURITY?



WERE YOU SATISFIED WITH YOUR SEVERANCE?



When asked about the top workplace challenges, most employees reported feeling the weight of resource and budget constraints (20%) and unclear job roles and responsibilities (13%). Employee morale is a top issue for 11% of our respondents.

Given the constant demands in tech, workload remained near the top of top workplace challenges for this group, along with developing stronger teams and professional development opportunities.

TOP WORKPLACE CHALLENGES



EMPLOYEE TURNOVER

As mentioned previously, [layoffs skyrocketed in early 2023](#) partly due to fears over a slowing economy. Despite these layoffs, tech skills remained in demand.

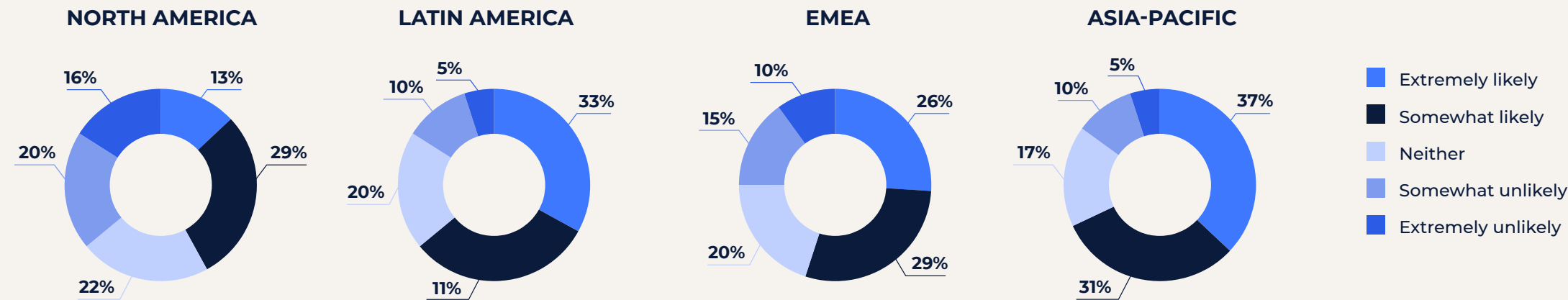
From an employee perspective, the average time to find a new job is 1-3 months. That’s not a lot of time in the tech world. Whether employees were impacted by layoffs or left on their own, skills hold a good deal of power in the labor market — especially in tech.

With shallow labor pools and high demand in so many areas — namely, cybersecurity and artificial intelligence — employers need to prepare so they aren’t left short-staffed. They need concrete strategies to retain their workforces and maintain productivity.

Of those who were affected by layoffs, the majority (70%) received a severance package, and most were satisfied with that package.

What helped IT professionals find their new jobs? Twenty-two percent saw their IT or technical certifications as the key factor in finding new employment. They also relied on their networks (20%) and their tech skills (15%).

HOW LIKELY ARE YOU TO LOOK FOR ANOTHER POSITION WITHIN THE NEXT 12 MONTHS?



Managing Disruption

ARE WE LIVING THE 'NEW NORMAL'?

The pandemic began four years ago. Are we really over the worst of it, or have we simply become accustomed to chaos and upheaval?

The answer may be “yes” to both. Those in the industry — and beyond — have become increasingly resilient in the face of change. And that’s a good thing.

More change is on the horizon.



We've gone from working in an office to working at home to returning to an office — at least part of the time. We went from being gainfully employed to mass resignations to massive layoffs.

Now, IT professionals all find themselves asking: What about me? Where do I fit in with all this change?

DEI EFFORTS

Social injustice was a big topic in 2022, so naturally 75% of respondents from last year's survey felt that their company took Diversity, Equity, and Inclusion (DEI) efforts seriously. This year with the economy moving into the forefront, it seems that DEI might have shifted out of focus.

In fact, the [Supreme Court's June decision](#) to strike down universities' affirmative action policies has significantly impacted DEI programs beyond the classroom. DEI consulting firm, [Paradigm](#), reports that companies across the country are cutting their DEI budgets (by four points since last year) and only 35% "measure the impact" of the trainings.

It tracks, then, that in 2023, 62% of our non-managerial level survey takers felt that their company took DEI seriously. The news is a little more promising from a managerial perspective with 70% of managers expressing that their company was taking DEI seriously.

There's also a bit of a discrepancy between non-managers and managers when it comes to equal opportunities. Less than half (48%) of non-managers feel they have equal opportunities, whereas 66% of managers feel the same.

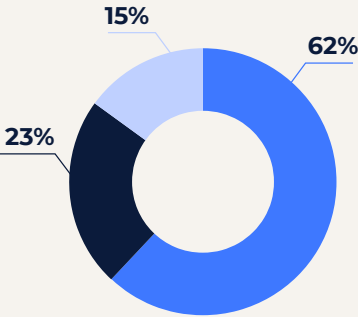
In 2023, slightly more people expressed that they had experienced harassment at work. If companies are taking their efforts away from DEI, it's not unrealistic that this figure would increase.

Last year, 43% non-managers said their employers were recruiting diverse talent. This year that figure dropped to 36%. Respondents did report that their companies are setting and measuring DEI goals and objectives as part of their Environmental, Social, and Corporate Governance (ESG) programs, as well as providing more mentoring opportunities, coaching, and holistic training.

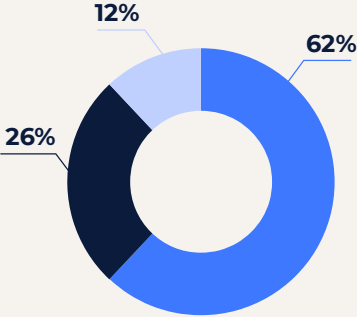


NON-MANAGER

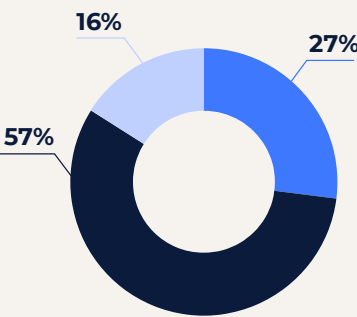
MY COMPANY TAKES
DEI SERIOUSLY



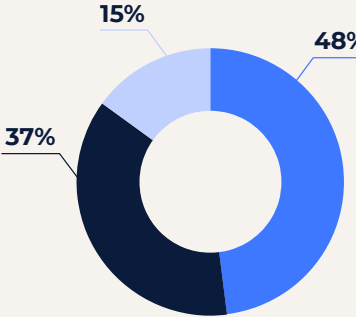
I FEEL COMFORTABLE
EXPRESSING MY
OPINION AT WORK



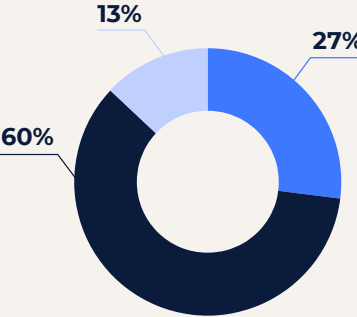
I HAVE EXPERIENCED
MICROAGGRESSIONS
AT WORK



I AM GIVEN EQUAL
OPPORTUNITIES

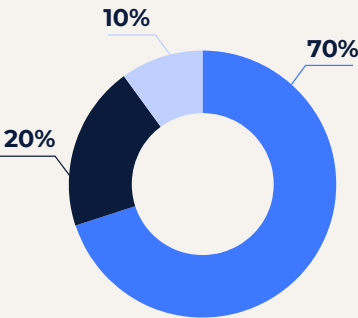


I HAVE EXPERIENCED
HARASSMENT OR
DISCRIMINATION

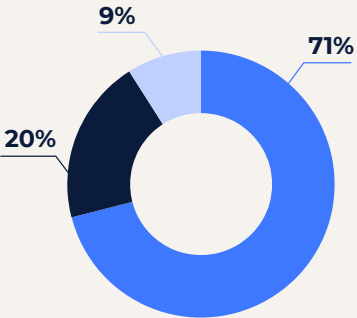


MANAGER

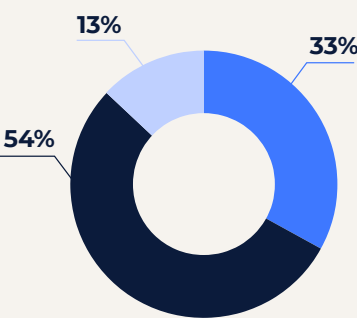
MY COMPANY TAKES
DEI SERIOUSLY



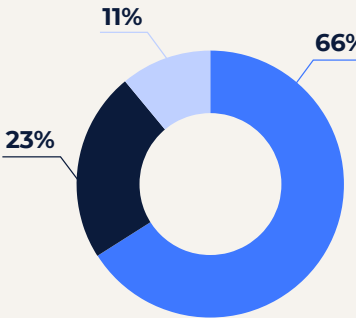
I FEEL COMFORTABLE
EXPRESSING MY
OPINION AT WORK



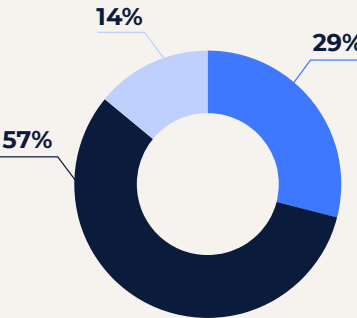
I HAVE EXPERIENCED
MICROAGGRESSIONS
AT WORK



I AM GIVEN EQUAL
OPPORTUNITIES



I HAVE EXPERIENCED
HARASSMENT OR
DISCRIMINATION



I Agree I Disagree Prefer not to answer

POST-PANDEMIC WORK LOCATIONS

When the pandemic hit, the majority of IT workers were already working remotely at least some of the time. That didn't mean they weren't affected by the switch to fully remote business. Quite the opposite.

IT was responsible for the lion's share of the work when it came to switching office workers to remote employees.

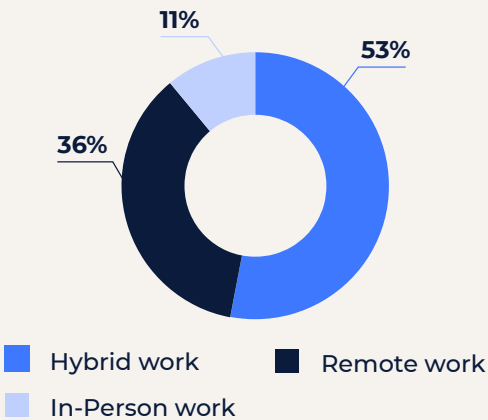
Now, they're tasked with either returning to the office themselves or reversing the trend of remote work for the rest of the organization.

Of our respondents, 61% plan to work a hybrid schedule, 27% plan to stay remote, and 11% will return to an office full-time.

That's not making everyone happy.

When asked for their preference, 53% preferred hybrid, 36% would choose to stay remote, and 11% would like to work in an office setting.

WORK PREFERENCE
(REMOTE, HYBRID, IN-PERSON)



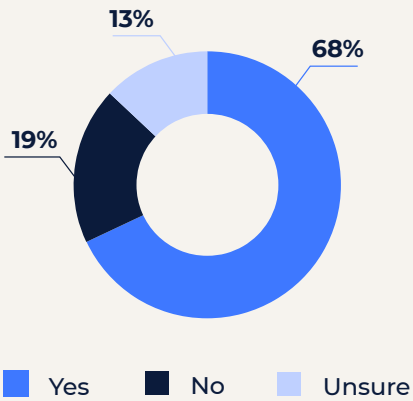
And how are employers feeling?

Sixty-eight percent are encouraging employees to return to the office, 20% are okay with remote work, and 13% are unsure.

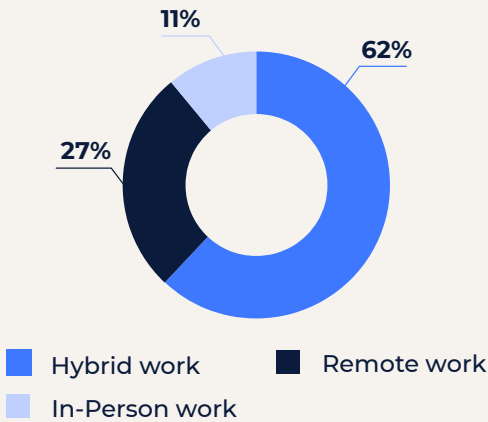
While remote work has its benefits, it also brings challenges. Most notably, respondents reported struggling with team communication (16%), interpersonal communication (12%), workload (8%), and communication with leadership (7%).

Respondents' answers point clearly to a common issue: lack of communication. The good news is there is also an equally clear solution. Develop communication skills and other soft skills to create a more unified team, regardless of location.

EMPLOYER ENCOURAGING
STAFF TO RETURN TO OFFICE



PLANS FOR REMOTE, HYBRID
OR IN-PERSON WORK



WHICH CHALLENGES HAVE YOU FACED WHILE WORKING REMOTE OR HYBRID?



Conclusion

A DYNAMIC INDUSTRY THAT'S LEADING THE INNOVATION IMPACTING US ALL

Learning is at the heart of this report. It shows the progress the industry has made and reveals what work is left undone.

While ground-in challenges remain, the solutions to overcome them are clearer thanks to the input and experiences of those professionals dedicated to this line of work.

Here's to 2024.



Most IT professionals find satisfaction in what they're doing. In many ways, opportunities now and in the future feel limitless.

Nevertheless, challenges persist as IT decision-makers struggle to fill skills gaps — gaps that will only widen as new technologies like GenAI emerge at an unprecedented pace. Retaining skilled talent can be difficult because while most IT professionals report that they are satisfied, more than half are likely to look for employment elsewhere in the next 12 months.

With the demand for IT talent so high, hiring to acquire new skills — or to replace skills that are leaving — is not a sustainable solution.

Organizations must pivot away from buying what they need, adopting instead a build-and-bridge strategy. This approach benefits employers and employees alike.

Eighty-two percent of IT employees report that professional development is either “extremely important” or “very important.” Yet only 37% report that their employer includes training when they invest in a new technology. This represents a critical disconnect — and a major reason why employees choose to leave a role or company.

On the other hand, by embracing a culture of continual learning and investing in reskilling and upskilling existing employees, leaders can nurture truly sustainable workforces in which talent feels appreciated (and, consequently, stays put).

Moreover, sustainable workforces are better able to both meet today's needs and take advantage of tomorrow's opportunities.



2023 METHODOLOGY

The Global Knowledge 2023 IT Skills and Salary Survey was conducted online from May to September 2023 using the Qualtrics XM Platform. Global Knowledge and the sponsors of this report distributed survey invitations to professionals around the world. The survey was made available in blogs, newsletters, social media and the Global Knowledge website. After cleaning the data, the survey yielded 5,711 responses from IT decision-makers and staff worldwide. For reporting compensation, 5,010 responses were counted after filtering out anomalous data. Salaries are not normalized for cost of living or location.

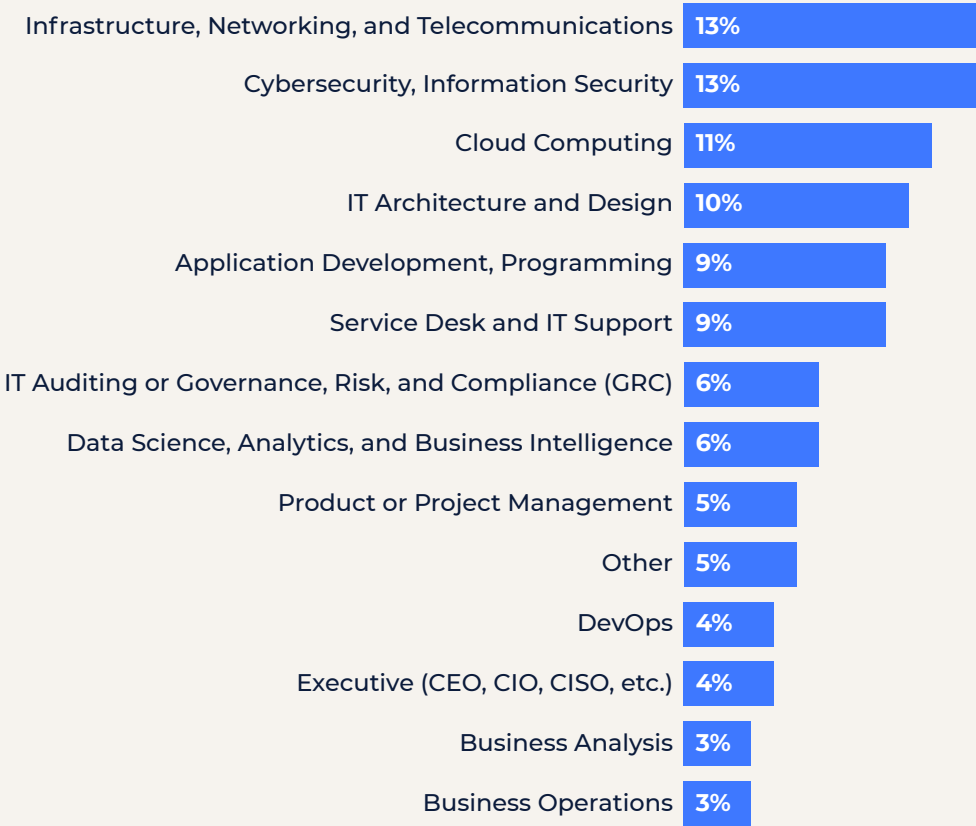
THANKS TO OUR PARTNERS

Global Knowledge extends a special thank you to our partners for helping make this year's survey possible:



DEMOGRAPHICS - GLOBAL

2023 RESPONDENTS BY ROLE



GENDER

GLOBAL	COUNT	%
Male	4560	80%
Female	1046	18%
Prefer not to answer	76	1%
Non-binary	23	1%
Other	7	0%

EDUCATION

GLOBAL	COUNT	%
Undergraduate degree (bachelor's or other)	2882	51%
Post-graduate degree (master's or doctorate)	1557	27%
Technical or vocational school degree	694	12%
Completed high school or GED	500	9%
No degree or diploma	79	1%

EMPLOYMENT STATUS

GLOBAL	COUNT	%
Yes, full-time permanent employee	4913	86%
Yes, contract employee	472	8%
Yes, part-time permanent employee	327	6%

DEMOGRAPHICS - NA

GENDER

GLOBAL	%
Male	74%
Female	24%
Prefer not to answer	2%
Non-binary	0%
Other	0%

EDUCATION

GLOBAL	%
Undergraduate degree (bachelor's or other)	52%
Post-graduate degree (master's or doctorate)	26%
Technical or vocational school degree	12%
Completed high school or GED	10%
No degree or diploma	1%

EMPLOYMENT STATUS

GLOBAL	%
Yes, full-time permanent employee	87%
Yes, contract employee	7%
Yes, part-time permanent employee	6%

DEMOGRAPHICS - EMEA

GENDER

GLOBAL	%
Male	82%
Female	17%
Prefer not to answer	1%
Non-binary	0%
Other	0%

EDUCATION

GLOBAL	%
Undergraduate degree (bachelor's or other)	42%
Post-graduate degree (master's or doctorate)	31%
Technical or vocational school degree	15%
Completed high school or GED	11%
No degree or diploma	1%

EMPLOYMENT STATUS

GLOBAL	%
Yes, full-time permanent employee	84%
Yes, contract employee	10%
Yes, part-time permanent employee	6%



DEMOGRAPHICS - LATIN AMERICA

GENDER

GLOBAL	%
Male	82%
Female	17%
Prefer not to answer	1%
Non-binary	0%
Other	0%

EDUCATION

GLOBAL	%
Undergraduate degree (bachelor's or other)	50%
Post-graduate degree (master's or doctorate)	28%
Technical or vocational school degree	12%
Completed high school or GED	8%
No degree or diploma	2%

EMPLOYMENT STATUS

GLOBAL	%
Yes, full-time permanent employee	83%
Yes, contract employee	12%
Yes, part-time permanent employee	5%

DEMOGRAPHICS - ASIA-PACIFIC

GENDER

GLOBAL	%
Male	88%
Female	10%
Prefer not to answer	2%
Non-binary	0%
Other	0%

EDUCATION

GLOBAL	%
Undergraduate degree (bachelor's or other)	62%
Post-graduate degree (master's or doctorate)	25%
Technical or vocational school degree	7%
Completed high school or GED	4%
No degree or diploma	2%

EMPLOYMENT STATUS

GLOBAL	%
Yes, full-time permanent employee	89%
Yes, contract employee	8%
Yes, part-time permanent employee	3%



About Global Knowledge

Global Knowledge is an enterprise learning company that delivers IT, engineering and business training, building people who can do the work an organization needs next. Founded in 1995, the company teaches through real-world experts who work with learners to apply what they know, give feedback in the moment and stand by the result.

Training runs across more than 150 locations worldwide and a catalog of over 3,000 IT courses, with authorized programs from Amazon Web Services, Cisco, Google, IBM, ITIL, Microsoft, Red Hat and VMware, alongside curricula in AI, cloud, security and data. Customers in financial services, healthcare and life sciences, federal and defense, and telecommunications use that portfolio to close capability gaps and keep teams current.

Learn more at globalknowledge.com.

MEDIA INQUIRIES

Please contact the Global Knowledge team at globalknowledge.com/us-en/contact

global knowledge™

