Tech Talent Hiring Trends Survey

October 2023

tech:nyc | accenture

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1. **Executive Summary**

Executive Summary

The 2023 Tech: NYC and Accenture Tech Talent Survey shows there is continued focus on hiring tech talent in 2023

Companies are optimistic about finding this technology talent in New York City

Employers have a continued focus on Cloud, Security, AI and Data Technology skills

Skilling and upskilling continue to rise as a source of tech talent

Companies are also focused on leveraging their benefits and culture to attract and retain talent
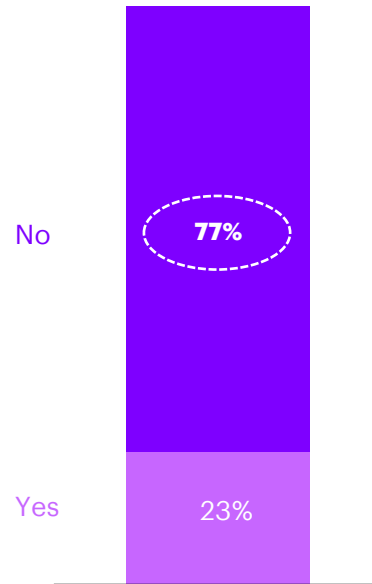
Demand for tech talent continues

Most organizations are growing their employee workforce and plan to continue doing so through 2023. More than half (59%) plan to increase their number of tech hires, with half planning an increase of up to 20% more tech hires than in 2022.

Companies are doing this while maintaining existing degree requirements for new hires and with no intention of restructuring their work location.

of Tech Hires in 2023 vs. 2022

- 50% increase — 1%
- 21%-50% increase — 7%
- Up to 20% increase — **51%**
- Maintain number of tech hires — 41%
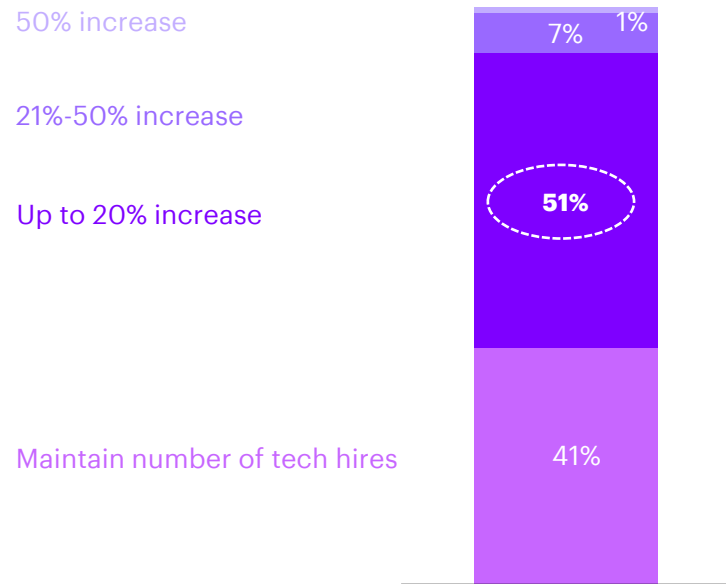
Removed/reduced degree requirements in last year/6 months

- No — **77%**
- Yes — 23%

Plan to restructure operations regarding employee work location in 2023

- No — **99%**
- Yes — 1%
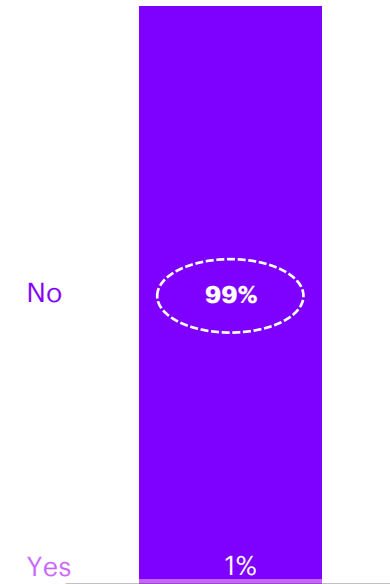
Sourcing talent to work in NYC

Almost all surveyed companies are confident or very confident that their organizations will be able to secure the tech skills needed in 2023 from the talent pool in New York City.

Confidence with being able to secure needed tech skills in 2023 from the talent pool in New York City

Very confident — 19%

Confident — **80%**

Somewhat confident — 1%
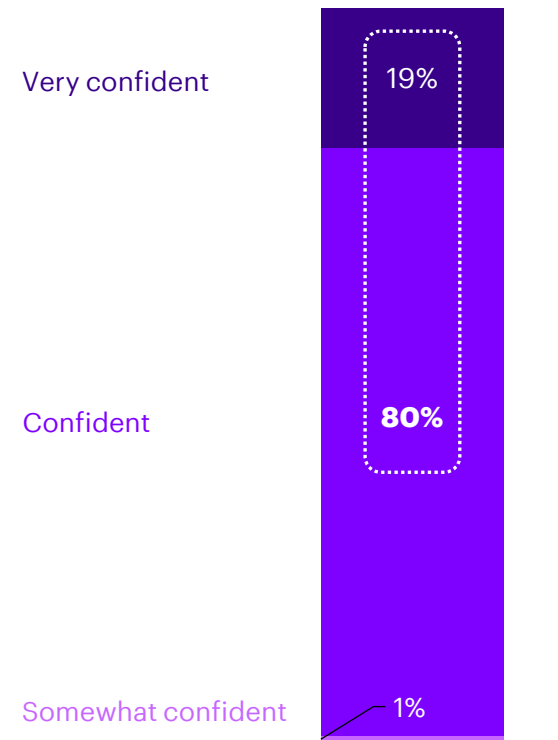
Cloud, Security and AI still considered top skills

When looking for tech talent, skills in Cloud, Security, Artificial Intelligence (including machine learning) and Data Technology continue to set candidates apart. This is consistent with 2022 results.

Of these hiring priorities companies expect the most difficulty hiring for security skills, followed by AI.

2023 Hiring Priorities vs. Expected Difficulty in Hiring in 2023

	Cloud	Security	Artificial Intelligence	Data Technology
Priority hire tech expertise	78%	77%	75%	59%
Expected diffficulty with hiring skill	19%	35%	29%	20%

■ Priority hire tech expertise ■ Expected diffficulty with hiring skill
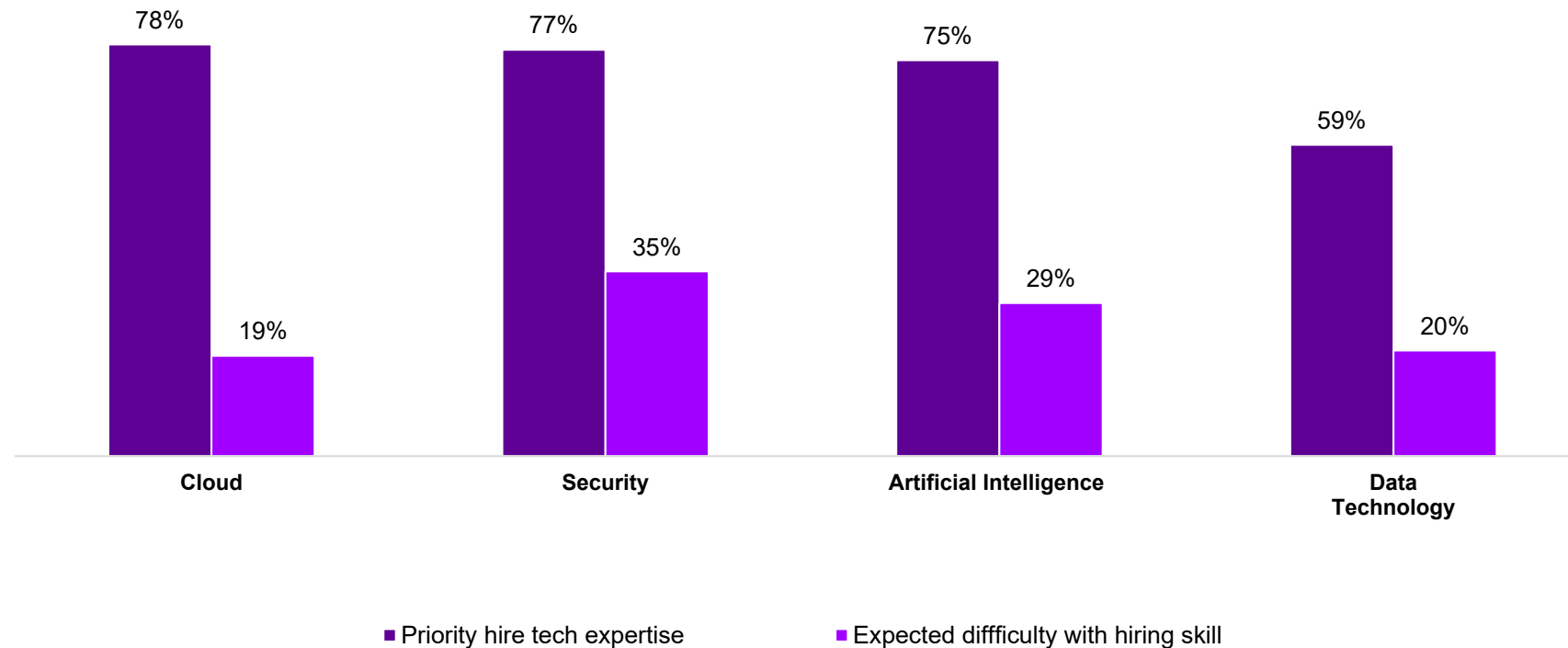
An emphasis on skilling and upskilling

Skilled and upskilled workers have become increasingly common sources for tech talent needs.

NYC companies are taking strategic steps to grow and nurture their tech workforce. They are confident in the ability and preparedness of staff to recruit, develop, and retain the required skill sets.
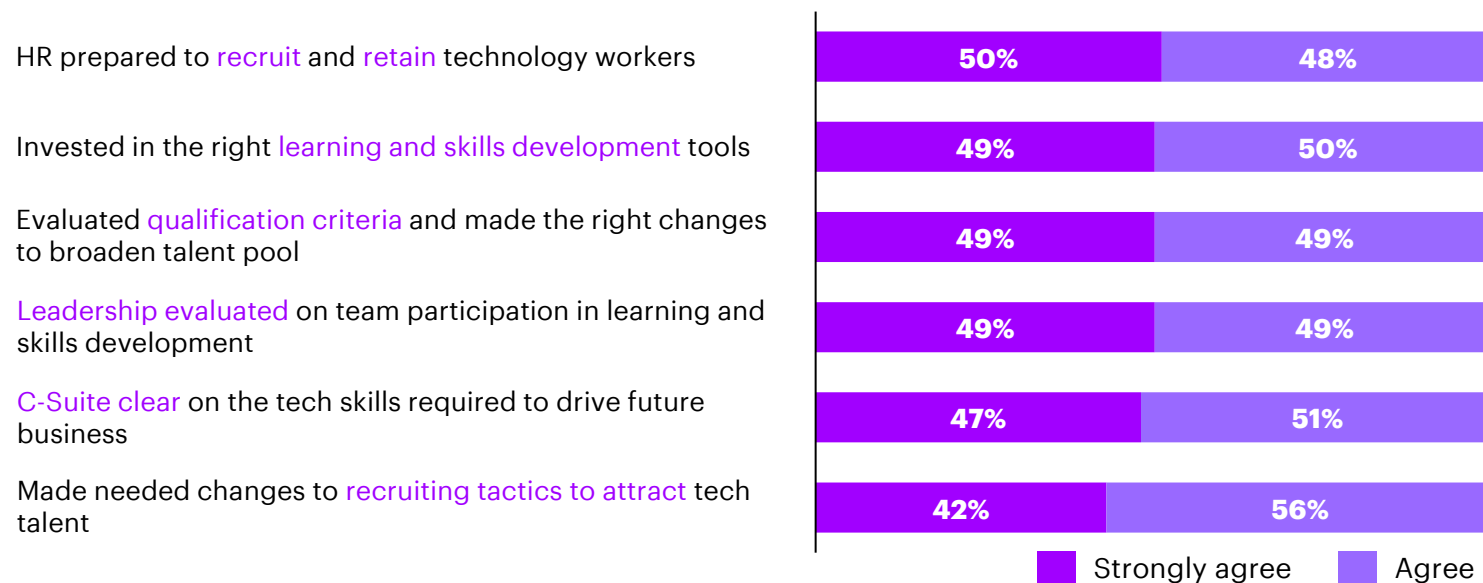
Approximately three in four organizations use on-the-job training to reskill their tech employees, with over half leveraging internal courses.

Agreement with statements

Statement	Strongly agree	Agree
HR prepared to recruit and retain technology workers	50%	48%
Invested in the right learning and skills development tools	49%	50%
Evaluated qualification criteria and made the right changes to broaden talent pool	49%	49%
Leadership evaluated on team participation in learning and skills development	49%	49%
C-Suite clear on the tech skills required to drive future business	47%	51%
Made needed changes to recruiting tactics to attract tech talent	42%	56%

Legend: Strongly agree | Agree

Used to reskill tech employees

On-the-job training	74%
Internal courses	53%
External courses	39%
Technical apprenticeships	37%

Retention and focus on benefits and culture

Organizations are making themselves more appealing to not only attract new talent, but to also keep their current workforce happy. Many are increasing or enhancing their benefits, changing their organization culture, and setting compensation in response to living wage rates/other market demands.

Organization's talent efforts

Category	Percent
Increased/enhanced other benefits	85%
Made efforts to change organization culture	83%
Set compensation in response to living wage rates or other market demands	82%
Changed work hours/created more flexible schedule options in the last year/6 months	65%
Considered synchronized office closures	21%
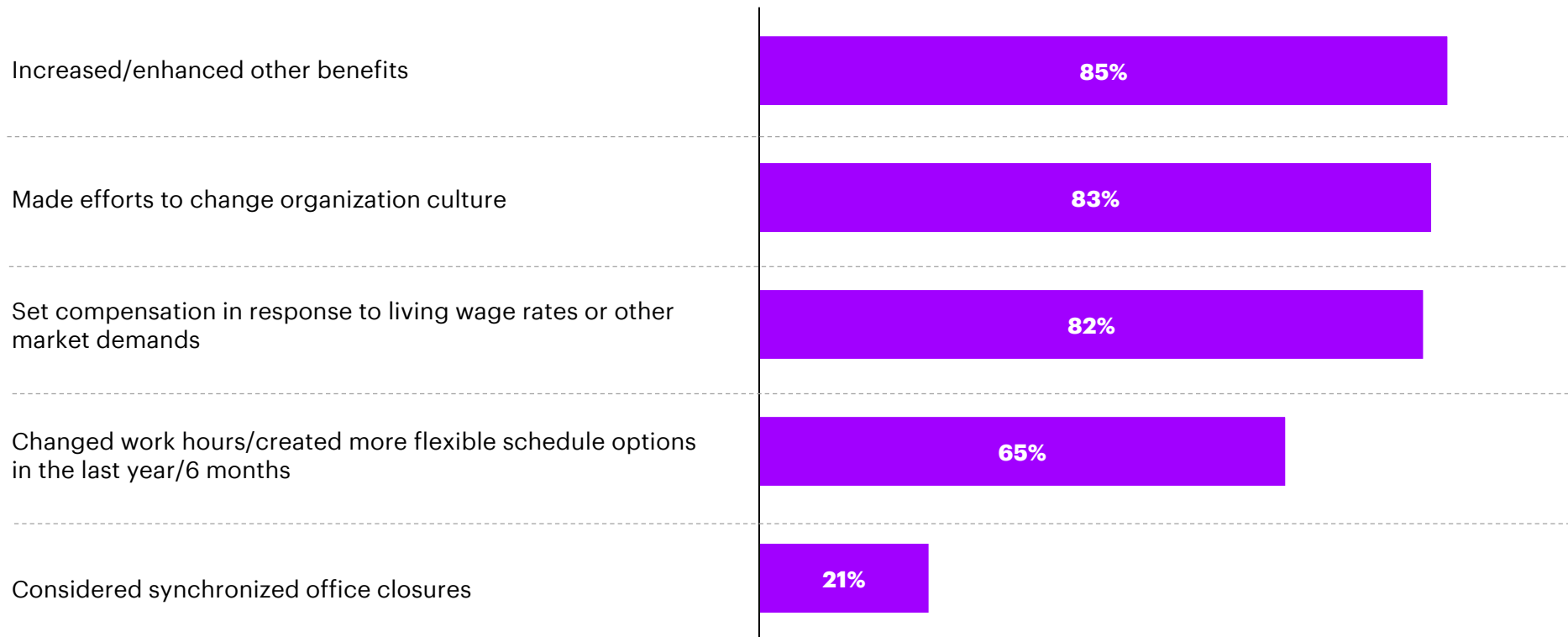
2. **Demographics**

Demographics

350 C-level executives working across 11 industries for organizations with at least one work location in the New York City borough of Manhattan, Brooklyn, The Bronx, Staten Island, and Queens were surveyed between June and July 2023.

Title/Role	n	%
Chief Technology Officer	82	23%
Chief Financial Officer	65	19%
Chief Strategy Officer	60	17%
Chief Marketing Officer	53	15%
Chief HR Officer	43	12%
Chief Information Officer/Chief Information & Digital Officer	29	8%
Chief Executive Officer	15	4%
Other C-Suite	3	1%

Borough	n	%
Manhattan	156	45%
Brooklyn	87	25%
The Bronx	45	13%
Staten Island	42	12%
Queens	37	11%

NYC Employees	n	%
Less than 50	20	6%
50-100	18	5%
101-500	51	15%
501-1,000	98	28%
1,001-5,000	102	29%
5,001-10,000	40	11%
More than 10,000	21	6%

NYC Tech Employees *	n	%
Up to 50	220	63%
51-200	113	32%
More than 200	17	5%
Average	197	56%

Organization size by Revenue *	n	%
Large ($20 Billion>)	50	14%
Medium ($1-$19.9 Billion)	239	68%
Small (<$999 Million)	61	18%

Revenue	n	%
$50 billion or more	21	6%
$20 to $49.9 billion	29	8%
$10 to $19.9 billion	60	17%
$6 to $9.9 billion	69	20%
$1 to $5.9 billion	110	31%
$500 to $999 million	20	6%
$250 to $499 million	20	6%
Less than $250 million	21	6%

FTEs based in NYC*	n	%
>5000 employees	61	17%
501 to 5000 employees	200	57%
<500 employees	89	25%

| Industry	n	%
Banking	32	9%
Capital Markets	32	9%
Communications, Media & Entertainment	32	9%
Education	32	9%
Healthcare Payer	31	9%
Healthcare Provider	31	9%
Insurance	32	9%
Pharmaceuticals / Biomedical	32	9%
Consumer Goods/ Retail / Fashion	32	9%
Technology / High Tech / Fintech	32	9%
State and Local Government	32	9%

3. **Detailed Results**

Most organizations (87%) changed their workforce in 2022, with 83% having increased the number of employees.

Did your organization change its workforce (i.e., full-time employees) in 2022?

83%

Yes, our workforce increased

87%

Yes, our workforce declined — 4%

No, our workforce remained stable — 13%
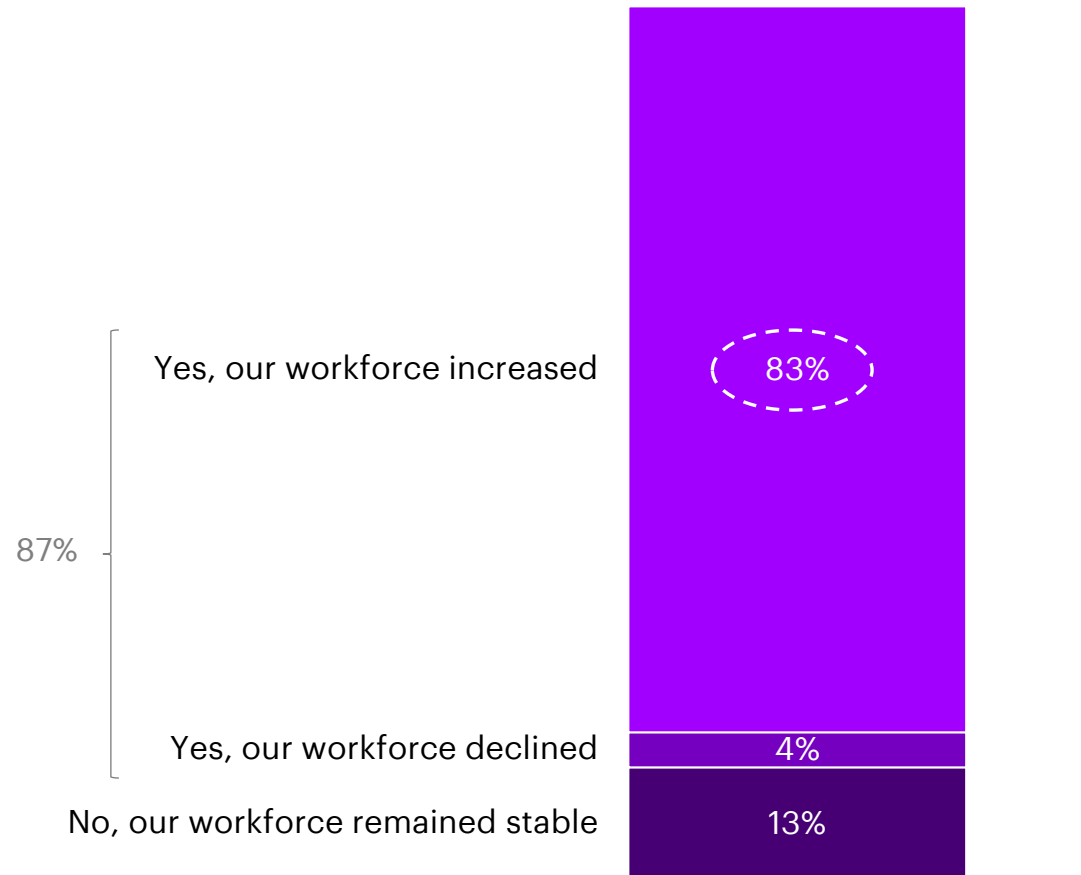
Significantly more medium revenue sized organizations increased their number of employees compared with the larger ones (86% vs. 72% increases, respectively).

Manhattan and Queens increased their workforce significantly more than The Bronx (87% and 89% vs. 69% increases, respectively).

Capital Markets (94%), Insurance (91%) and Consumer Goods/Retail/Fashion (91%) saw the greatest increases in their workforce numbers, while Education (25%) suffered significantly bigger decreases in their employee numbers, compared with the other industries.
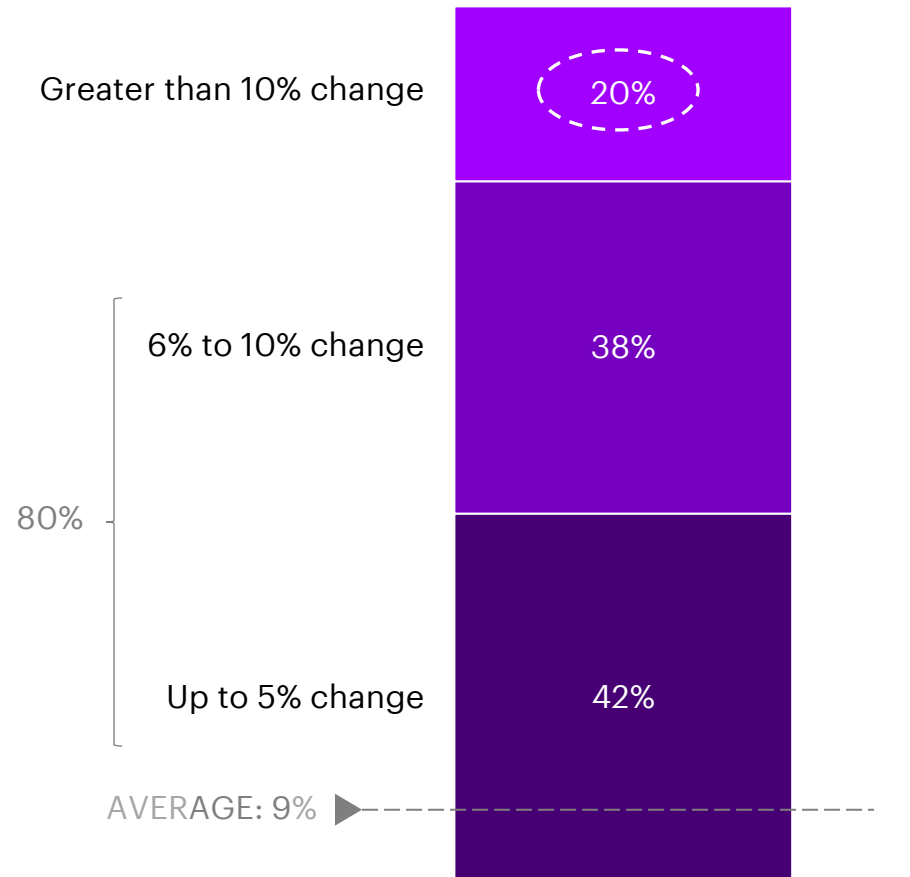
Base = Total sample; n=350

Of those who changed their workforce, one in five (20%) applied changes greater than 10% across their employees.

By what approximate percentage did your organization change* its workforce in 2022?

*Change refers to increases or decreases in workforce

Greater than 10% change — **20%**

6% to 10% change — **38%**

Up to 5% change — **42%**

80%

AVERAGE: 9% ▶ - - - - - - - - - - - - - - - -

Organizations with more than 5,000 full-time employees based in NYC changed their workforce (on average) by 11.6%, significantly more than those with fewer employees (i.e., 9.9% by those with between 501 and 5,000 employees, 6.5% of changes applied by organizations with less than 500).

Significantly larger and medium revenue size organizations changed their workforce, on average, by 9.3% and 10.3%, respectively, compared with the smaller organizations who applied an average change of 5.6% in their workforce.

Significantly greater changes, on average, were applied to the workforces in Manhattan (10.4%) and Brooklyn (10.3%), compared with The Bronx (6.2%).

Healthcare Providers (16%) and Communications, Media & Entertainment (13.8%) applied more changes, on average, to their workforce, compared with the other industries. State and Local Government applied the least changes (5.4%).

Base = Organizations that changed (increased or decreased) their workforce; n=302 (Also excludes Don't know/Unsure responses of n=4)

Most organizations (83%) plan to increase their overall workforce in 2023.

Does your organization plan to increase/decrease its workforce in 2023?

Those who increased their workforce in the past plan to continue growing these numbers more in the future.

Considering only those organizations who increased their number of full-time employees in 2022, significantly more (88%) plan to further increase the number of full-time employees in 2023.

Increase

83%

Stay the same

17%
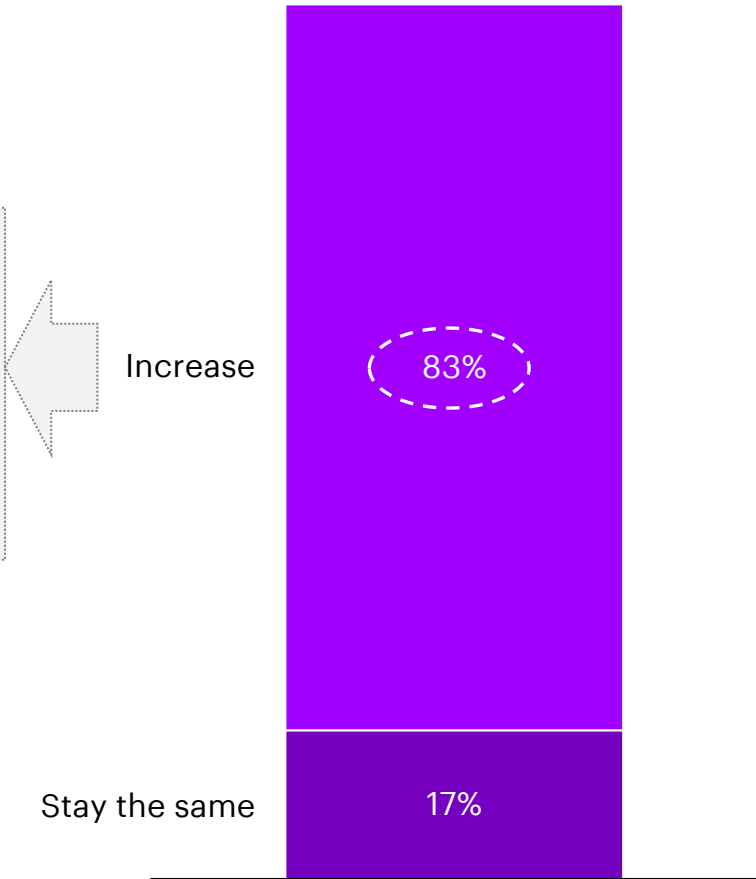
Significantly more (89%) organizations with between 501 and 5,000 full-time employees based in NYC plan to increase their workforce in 2023 (compared with 75% of those with less than 500 employees).

Significantly more medium revenue organizations plan to further increase their workforce, compared with the smaller revenue size organizations (87%, vs. 70%, respectively).

Significantly more organizations in Brooklyn (90%) plan to increase their workforce in 2023 compared with 79% of those in Manhattan.

Significantly more (97%) organizations within the Banking industry plan to increase their workforce compared with the rest.

Base = Total sample; n=350

More than half organizations (59%) plan to increase the number of tech hires in 2023, with around one in two (51%) planning an increase of up to 20% more than in 2022.

Is your organization planning to increase, maintain, or decrease the number of <u>tech hires</u> in 2023 compared to 2022?

59%

51%

41%

7%

1%

Increase number of tech hires in 2023 by more than 50% above 2022

Increase number of tech hires in 2023 by 21%-50% above 2022

Increase number of tech hires in 2023 by up to 20% above 2022

Maintain the same number of tech hires in 2023 as 2022
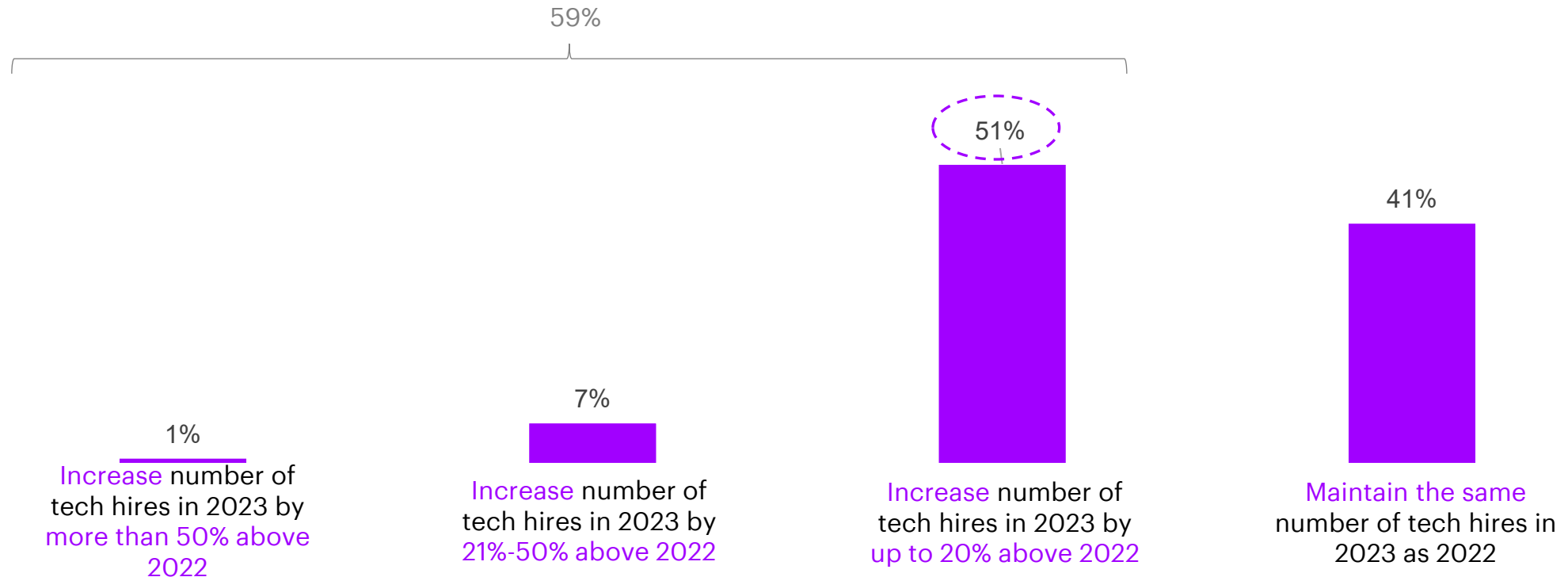
Significantly more organizations within the Insurance (78%), State & Local Government (75%), Banking (72%) and Technology / High Tech / FinTech (69%) plan to increase their tech hires more than those in Education (44%), Healthcare Payers (42%), and Healthcare Providers (39%).

Organizations in The Bronx (84%) and Queens (76%) plan to increase their tech hires in 2023 significantly more than organizations in Manhattan (52%).

Significantly more (67%) organizations with more than 5,000 full-time employees based in NYC plan to increase their number of tech hires in 2023 (compared with 51% with less than 500).

Base = Total sample; n=350

Despite most (69%) primarily operating on-site, almost all (99%) do not intend to restructure their employee work location in 2023.

How is your organization primarily operating?

Does your organization plan to restructure how it operates in 2023 regarding employee work location?

Hybrid on-site and remote

31%

69%

On-site

Yes

1%

99%

No
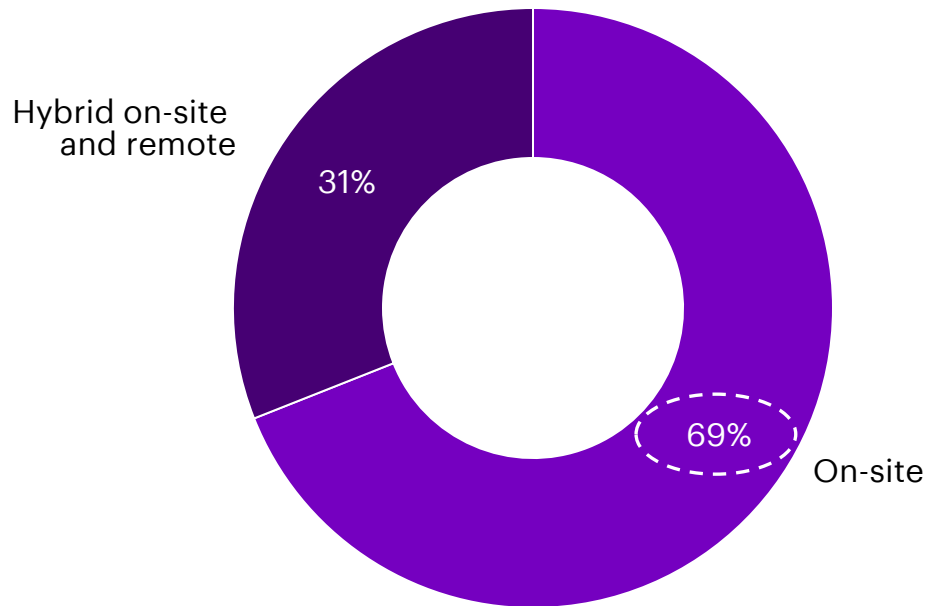
Significantly more larger and medium revenue organizations operate on-site (76%, 73%), while smaller organizations operate more hybrid (54%).

Base = Total sample; n=350
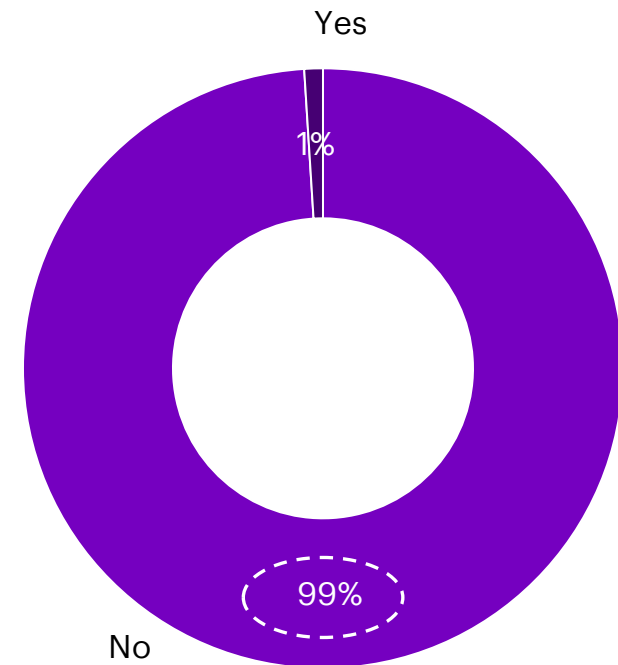
Base = Total sample; n=348
(Excludes Don't know/Unsure responses of n=2)

Over four in five have increased/enhanced benefits, made efforts to change their culture, and set compensation in response to living wage rates or other market demands as part of their talent efforts.

Please answer the following questions about your organization's talent efforts.

Has your organization increased/enhanced other benefits? Larger revenue organizations (96%), Queens (97%), Staten Island (95%), Banking (100%), Education (94%), Capital Markets (91%), Consumer Goods/Retail/Fashion (91%)

85% | 15%

Is your organization making efforts to change organization culture? Larger revenue organizations (94%), Queens (97%), Staten Island (95%), Education (100%), Healthcare Payer (94%), Technology/High Tech/FinTech (94%), Banking (91%).

83% | 17%

Does your organization set compensation in response to living wage rates or other markets demands? Larger revenue organizations (90%), Manhattan (88%), Staten Island (86%), Healthcare Payer (94%), Pharmaceuticals/Biomedical (91%)

82% | 18%

Has your organization changed work hours/created more flexible schedule options in the last year/6 months? Larger revenue organizations (78%), Medium size organizations (69%), Brooklyn (72%), Technology/High Tech/FinTech (81%), <500 NYC employees (56%), Between 501-5000 NYC employees (74%)

65% | 35%

Has your organization reduced or removed degree requirements in the last year/6 months Smaller revenue organizations (44%), The Bronx (31%), Manhattan (29%), Healthcare Provider (42%), Consumer Goods/Retail/Fashion (38%), Government (38%), <500 NYC employees (31%)

23% | 77%

Has your organization considered synchronized office closures (e.g., closed for the first week of June)? Smaller revenue organizations (33%), Manhattan (26%), Communications, Media & Entertainment (38%), Healthcare Provider (32%), <500 NYC employees (30%)

21% | 79%

■ Yes ⬚ No

Two in three (64%) organizations selected all three talent efforts

More efforts have been implemented by organizations with larger revenues in Staten Island.

Although not actioned by many, changes to degree requirements and synchronized office closures have been a greater consideration / action item of smaller revenue organizations with fewer NYC employees.

NOTE: Differences highlighted are reflecting YES responses.

Base = Total sample; n=350

Less than half (42%) have formal diversity, equity, and inclusion (DEI) hiring goals in place. Of these, one in five have publicly announced goals.

Does your organization have formal diversity, equity, and inclusion (DEI) hiring goals?

42% {
Yes, internal DEI hiring goals — 22%

Yes, public externally announced DEI hiring goals — 20%
}

No — 58%

Of these 42% who have formal DEI hiring goals in place, 48% have announced them externally (versus 52% who have not).

Significantly more (51%) organizations with less than 500 full-time employees based in NYC have formal DEI hiring goals in place (versus 66% of those with more than 5,000 employees that don't).

Significantly more organizations in Queens (68%), The Bronx (67%), and Staten Island (57%) have formal DEI hiring goals in place.

Significantly more organizations within Banking (66%), Education (59%), State & Local Government (56%), and Communications, Media & Entertainment (53%) have formal DEI hiring goals in place.

Of those companies that have formal DEI hiring goals in place, around two in three (63%) have changed them since 2021...

Since 2021, have your organization's DEI hiring goals changed?

Yes 63%

No 37%
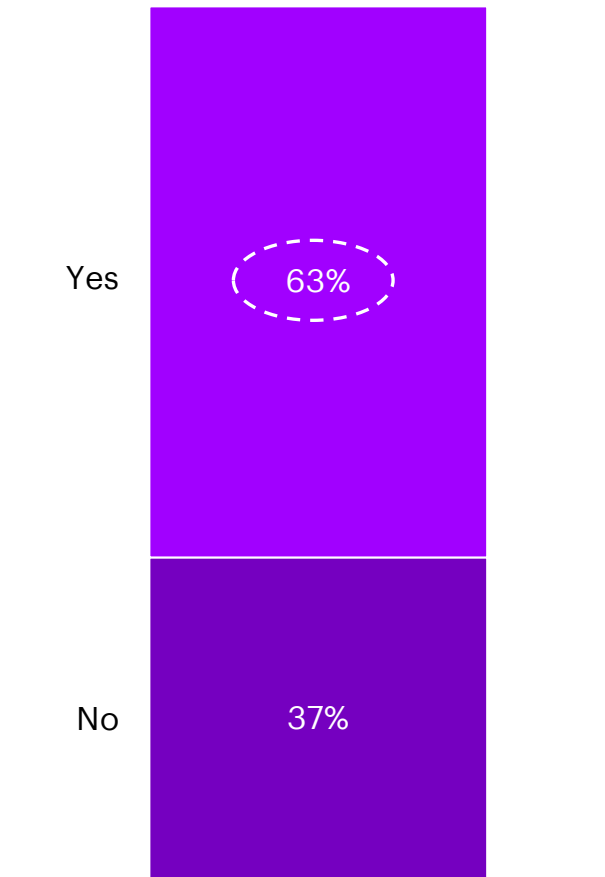
Significantly more organizations in The Bronx (93%) have changed their DEI hiring goals since 2021.

... and changed their hiring practices to meet these new DEI goals ...

Did your organization change hiring practices to meet these DEI goals?

Yes 85%

No 15%
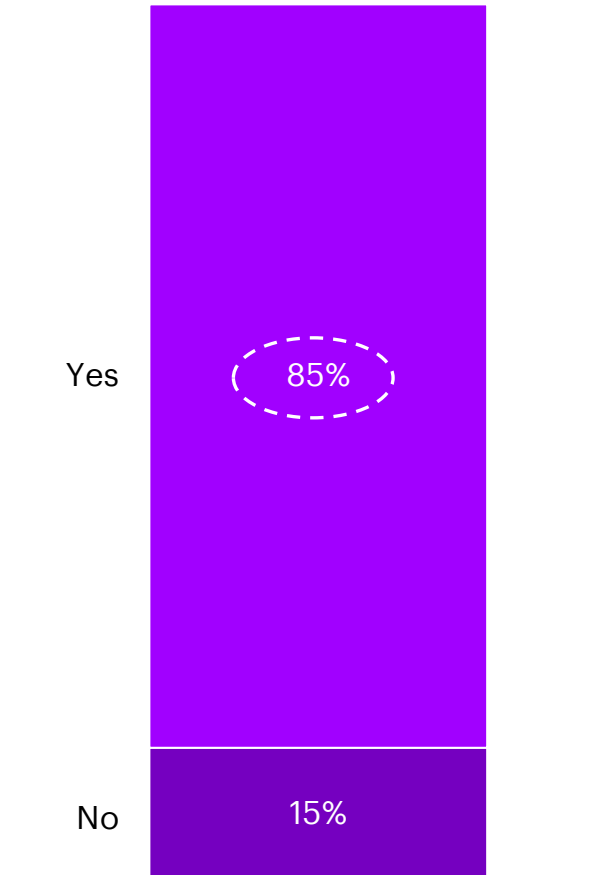
... such as adopting new internal programs/training, new sources of candidates and sourcing channels, amongst others.

Which of the following hiring initiatives did your organization adopt to meet DEI hiring goals?

New internal programs/training	58%
New sources of candidates	53%
Sourcing channels	51%
New geographic location of candidates	37%
Increased/Added Employee I&D referral bonuses/perks	37%
Easing degree requirements	31%
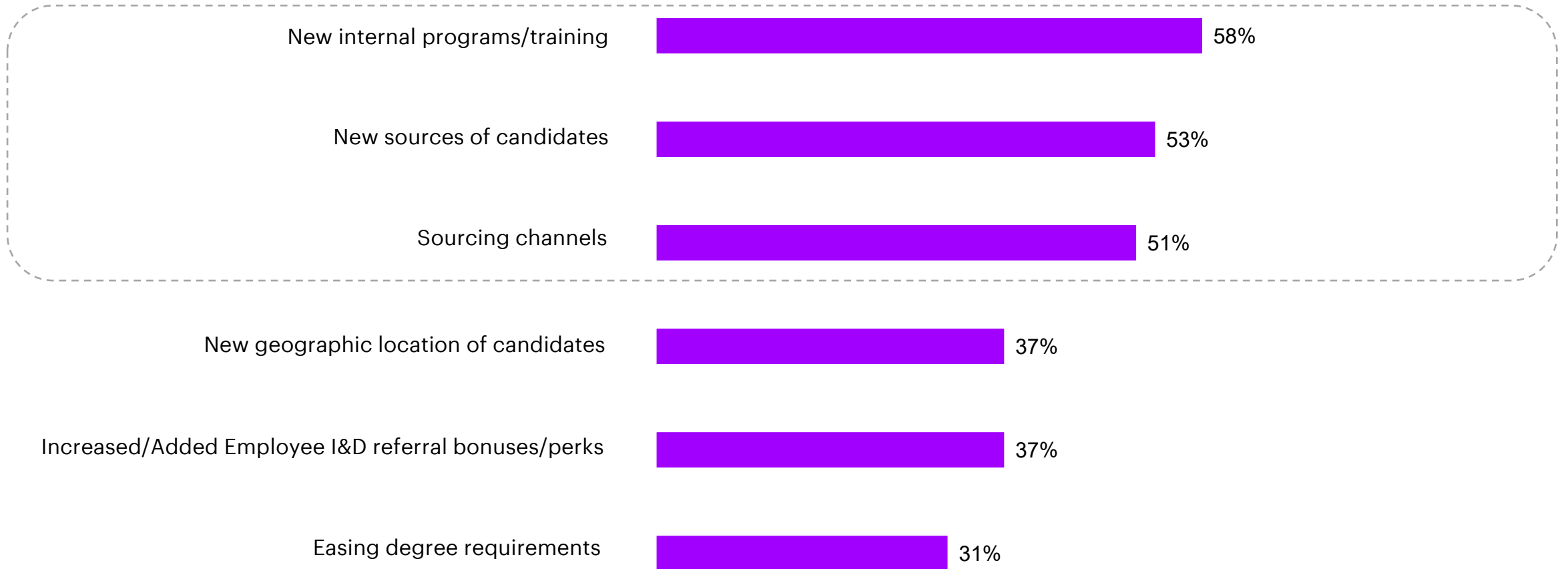
Base = Organizations who changed their hiring practices to meet their DEI goals, n=78

>

Almost all (99%) are confident/very confident that their organization will be able to secure the tech skills needed in 2023 from the talent pool in NYC.

How confident are you that your organization will be able to secure the tech skills needed in 2023 from the talent pool in New York City?

Very confident — (19%)

99%

Confident — 80%

Somewhat confident — 1%
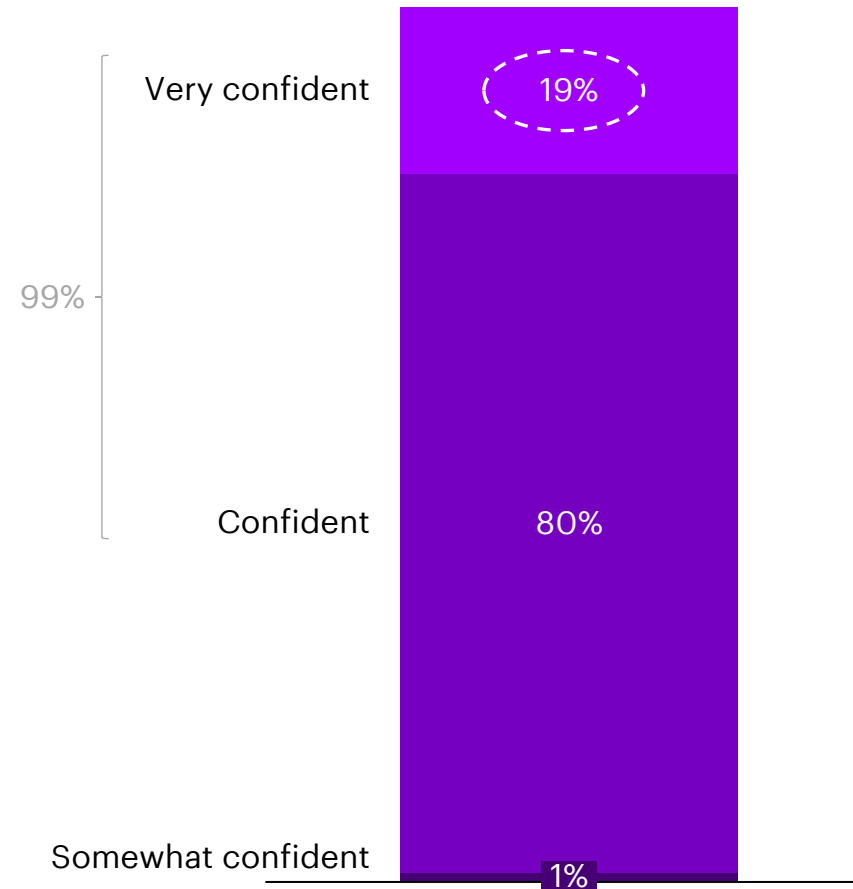
Larger revenue organizations are less certain than medium size ones in terms of their ability to secure the tech skills needed in 2023, with 8% very confident, versus 23% of medium organizations.

Significantly more organizations within Pharmaceuticals/Biomedical (34%) and Consumer Goods/Retail/Fashion (31%) are very confident that they will be able to secure the tech skills needed in 2023 from the talent pool in New York City. Significantly less Healthcare Providers and State & Local Government organizations feel the same, with 6% and 3% respectively reporting that they are very confident.

Base = Total sample; n=350

Organizations are confident that they have what is necessary to attract, develop and retain the required skill sets.

To what extent do you agree with the following statements?

Statement	Strongly agree	Agree	Agree + Strongly agree
My HR organization is prepared to recruit and retain technology workers. Communications, Media & Entertainment (59%), Pharmaceuticals/Biomedical (59%), Consumer Goods/Retail/Fashion (59%)	50%	48%	98%
We have invested in the right learning and skills development tools for our employees. Manhattan (56%), Healthcare Payer (74%)	49%	50%	99%
We have evaluated our qualification criteria for roles and have made the right changes to broaden our talent pool. Consumer Goods/Retail/Fashion (63%), Healthcare Providers (58%), Banking (56%), Capital Markets (53%), Communications, Media & Entertainment (53%), Technology/High Tech/FinTech (53%)	49%	49%	98%
Our leadership is evaluated partly on team participation in learning and skills development.	49%	49%	98%
My C-Suite is clear on the tech skills required to drive our future business. Healthcare Provider (61%), Education (59%)	47%	51%	98%
We have made needed changes to our recruiting tactics to attract tech talent. Manhattan (47%), Technology/High Tech/FinTech (59%), Pharmaceuticals/Biomedical (56%)	42%	56%	98%

Legend: ■ Strongly agree ■ Agree

Base = Total sample; n=350

NOTE: Differences highlighted are reflecting STRONGLY AGREE responses.

Most are prioritizing hiring tech employees in 2023 with expertise in Cloud, Security, and AI (including machine learning).

In 2023, my organization's priority is to hire tech employees with the following expertise:
Multiple mention

Category	Percentage
Cloud	78%
Security	77%
Artificial Intelligence (including machine learning)	75%
Data Technology	59%
Software engineering	33%
Metaverse (Web 3, Blockchain, Virtual Reality / Extended Reality)	21%
Robotics	21%
Quantum computing	14%
Science Tech (Bio Innovation, Materials & Energy, Earth & Space)	13%
Design thinking	11%
Product engineering	11%

Base = Total sample; n=350

In 2023, which expertise areas is your organization prioritizing hiring for?

BY Revenue	Overall	Larger revenues	Medium revenues	Smaller revenues
Cloud	78%	78%	80%	72%
Security	77%	74%	78%	74%
AI	75%	74%	77%	69%
Data Technology	59%	50%	64%	48%
Software engineering	33%	36%	34%	23%
Metaverse	21%	22%	23%	15%
Robotics	21%	20%	22%	15%
Quantum Computing	14%	16%	16%	5%
Science Tech	13%	14%	14%	8%
Design Thinking	11%	12%	11%	13%
Product engineering	11%	16%	12%	5%

BY # NYC Located Employees	Overall	< 500	501 - 5000	>5000
Cloud	78%	71%	83%	75%
Security	77%	76%	77%	79%
AI	75%	78%	77%	66%
Data Technology	59%	51%	65%	54%
Software engineering	33%	27%	37%	26%
Metaverse	21%	11%	20%	41%
Robotics	21%	13%	20%	34%
Quantum Computing	14%	8%	17%	16%
Science Tech	13%	9%	15%	11%
Design Thinking	11%	8%	12%	15%
Product engineering	11%	10%	10%	18%

Base = Total sample; n=350

BY Borough	Overall	Manhattan	Queens	Brooklyn	Staten Island	The Bronx
Cloud	78%	75%	86%	82%	81%	78%
Security	77%	72%	76%	82%	79%	82%
AI	75%	67%	84%	90%	74%	71%
Data Technology	59%	51%	54%	74%	55%	67%
Software engineering	33%	41%	59%	37%	17%	11%
Metaverse	21%	24%	8%	22%	24%	22%
Robotics	21%	24%	5%	20%	19%	18%
Quantum Computing	14%	19%	8%	10%	10%	18%
Science Tech	13%	14%	16%	15%	17%	4%
Design Thinking	11%	15%	16%	8%	7%	
Product engineering	11%	19%	8%	7%	5%	2%

Significantly more organizations in Queens (84%) and Brooklyn (90%) are prioritizing hiring tech employees with expertise in AI in 2023.

Significantly more organizations in Banking (91%), Capital Markets (91%), Healthcare Payer (90%) are prioritizing hiring tech employees with expertise in Security in 2023.
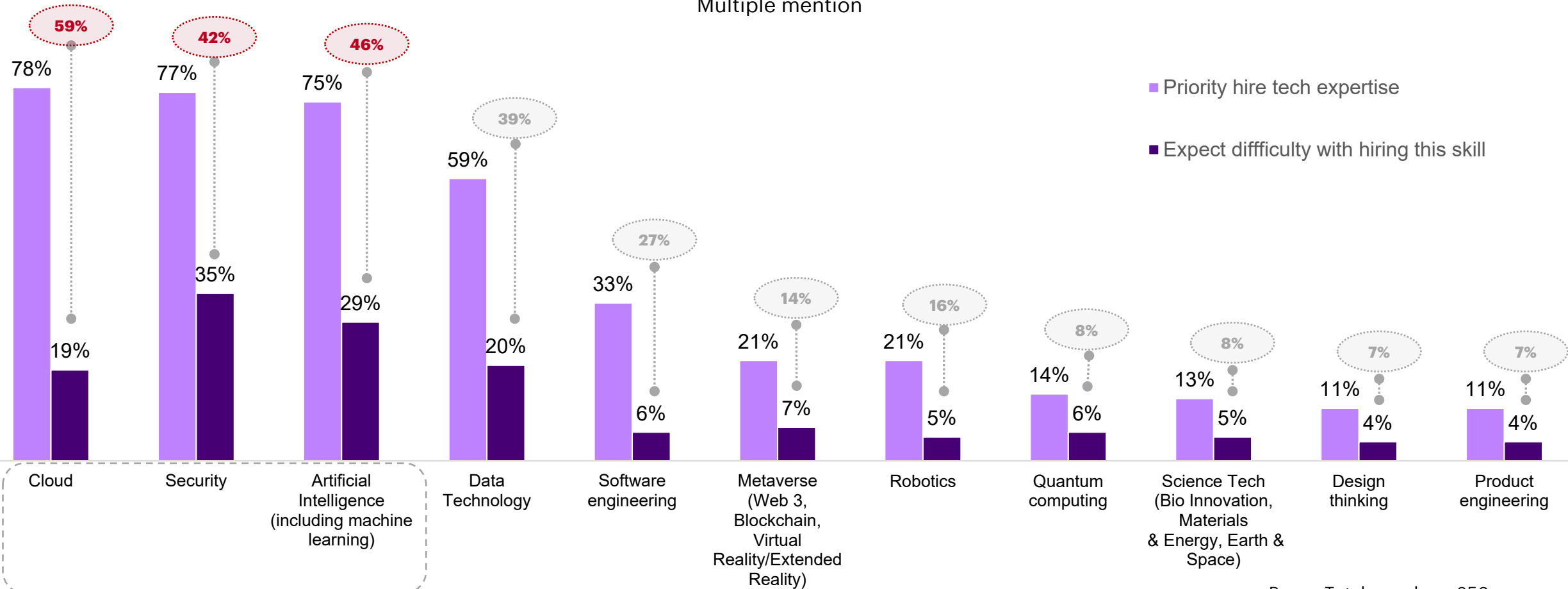
90% of Healthcare Providers are prioritizing employing tech experts in Cloud.

NOTE
Statistically significant differences

BY Industry	Overall	Banking	Capital Markets	Communications, Media & Entertainment	Education	Healthcare Payer	Healthcare Provider	Insurance	Pharmaceuticals / Biomedical	Consumer Goods / Retail / Fashion	Technology / High Tech / FinTech	State & Local Government
Cloud	78%	72%	88%	75%	72%	81%	90%	84%	69%	75%	78%	78%
Security	77%	91%	91%	75%	81%	90%	68%	56%	66%	84%	63%	81%
AI	75%	84%	78%	88%	81%	68%	58%	75%	66%	75%	78%	72%
Data Technology	59%	81%	59%	66%	44%	35%	81%	69%	59%	63%	53%	41%
Software engineering	33%	47%	28%	19%	28%	52%	39%	28%	25%	28%	50%	16%
Metaverse	21%	31%	19%	28%	6%	23%	10%	22%	19%	31%	31%	13%
Robotics	21%	9%	13%	34%	3%	32%	19%	28%	19%	6%	34%	28%
Quantum Computing	14%	9%	13%	6%	3%	32%	19%	25%	19%	6%	19%	6%
Science Tech	13%		16%	13%	13%	3%	26%	13%	34%	9%	16%	
Design Thinking	11%	6%	3%	9%	6%	13%	13%	16%	22%	16%	22%	
Product engineering	11%	9%	6%	9%	3%			23%	16%	28%	13%	19%

26

The three areas from which most organizations are prioritizing hiring tech employees in 2023 are also those expected to prove more difficult when hiring.

In 2023, my organization's priority is to hire tech employees with the following expertise:
For which areas of expertise that you selected in the prior question do you expect to have difficulty hiring in 2023?
Multiple mention

- ■ Priority hire tech expertise
- ■ Expect diffficulty with hiring this skill

Category	Priority hire tech expertise	Expect difficulty	Highlighted
Cloud	78%	19%	59%
Security	77%	35%	42%
Artificial Intelligence (including machine learning)	75%	29%	46%
Data Technology	59%	20%	39%
Software engineering	33%	6%	27%
Metaverse (Web 3, Blockchain, Virtual Reality/Extended Reality)	21%	7%	14%
Robotics	21%	5%	16%
Quantum computing	14%	6%	8%
Science Tech (Bio Innovation, Materials & Energy, Earth & Space)	13%	5%	8%
Design thinking	11%	4%	7%
Product engineering	11%	4%	7%

Base = Total sample; n=350

Of the 91% of organizations that expect difficulty hiring tech talent in 2023, they are most concerned about Security (35%) and AI (29%).

For which areas of expertise that you selected in the prior question do you expect to have difficulty hiring in 2023?
Multiple mention.

Area	%
Security	35%
Artificial Intelligence (including machine learning)	29%
Data Technology	20%
Cloud	19%
Metaverse (Web 3, Blockchain, Virtual Reality/Extended Reality)	7%
Software engineering	6%
Quantum computing	6%
Robotics	5%
Science Tech (Bio Innovation, Materials & Energy, Earth & Space)	5%
Design thinking	4%
Product engineering	4%
We do not expect to have any difficulties	9%

91%
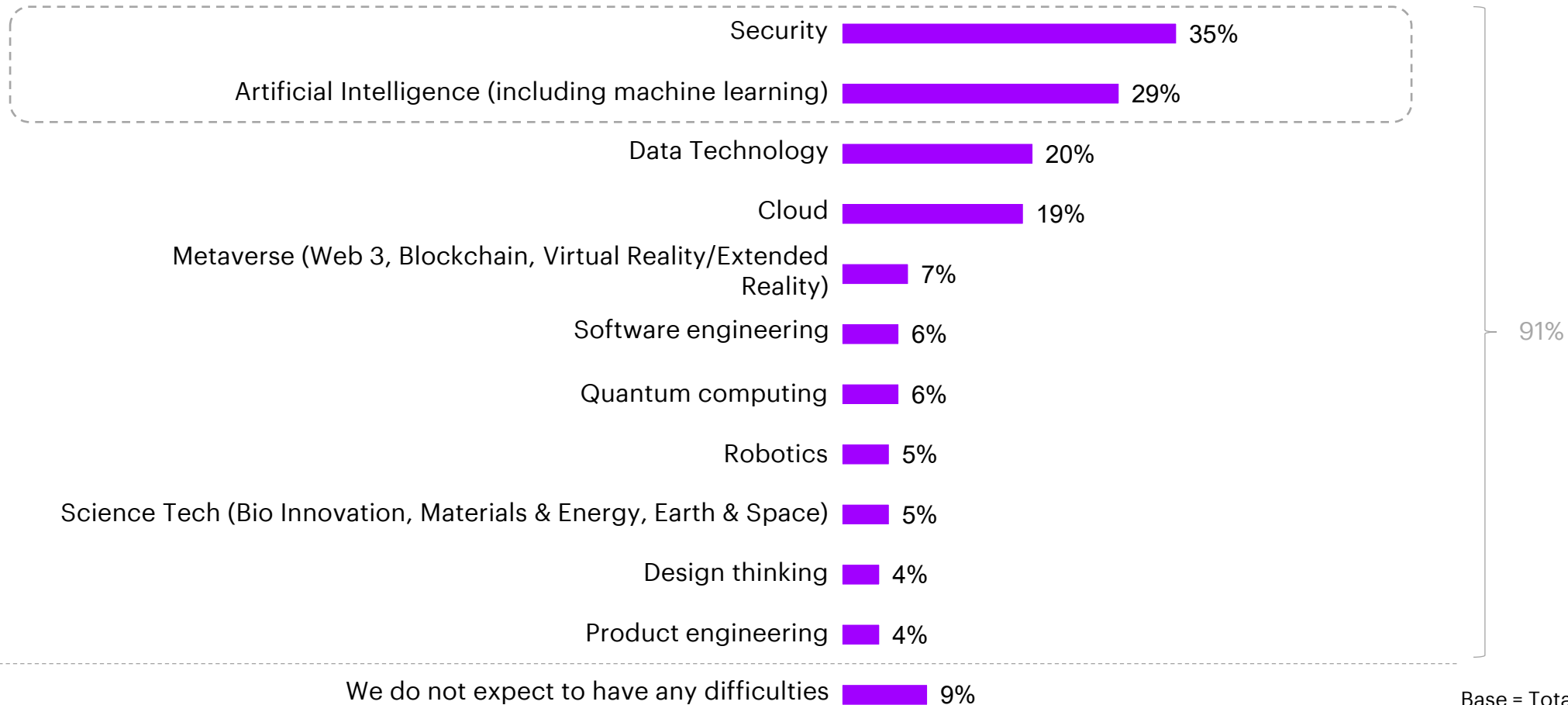
For which areas of expertise that you selected in the prior question do you expect to have difficulty hiring in 2023?

Base = Total sample; n=350

NOTE Statistically significant differences

BY Revenue	Overall	Larger revenues	Medium revenues	Smaller revenues
Security	35%	28%	38%	30%
AI	29%	22%	26%	46%
Data Technology	20%	20%	21%	18%
Cloud	19%	18%	18%	23%
Metaverse	7%	10%	8%	3%
Software engineering	6%	8%	6%	5%
Quantum Computing	6%	6%	7%	
Robotics	5%	2%	6%	3%
Science Tech	5%	6%	5%	3%
Design Thinking	4%	6%	3%	5%
Product engineering	4%	4%	4%	2%
We do not expect to have any difficulties	9%	6%	10%	7%

BY # NYC Located Employees	Overall	< 500	501 - 5000	>5000
Security	35%	34%	35%	39%
AI	29%	42%	25%	25%
Data Technology	20%	13%	21%	26%
Cloud	19%	16%	20%	21%
Metaverse	7%	3%	6%	16%
Software engineering	6%	3%	8%	7%
Quantum Computing	6%	1%	8%	7%
Robotics	5%	2%	5%	10%
Science Tech	5%	4%	6%	2%
Design Thinking	4%	2%	3%	10%
Product engineering	4%	1%	4%	8%
We do not expect to have any difficulties	9%	7%	13%	

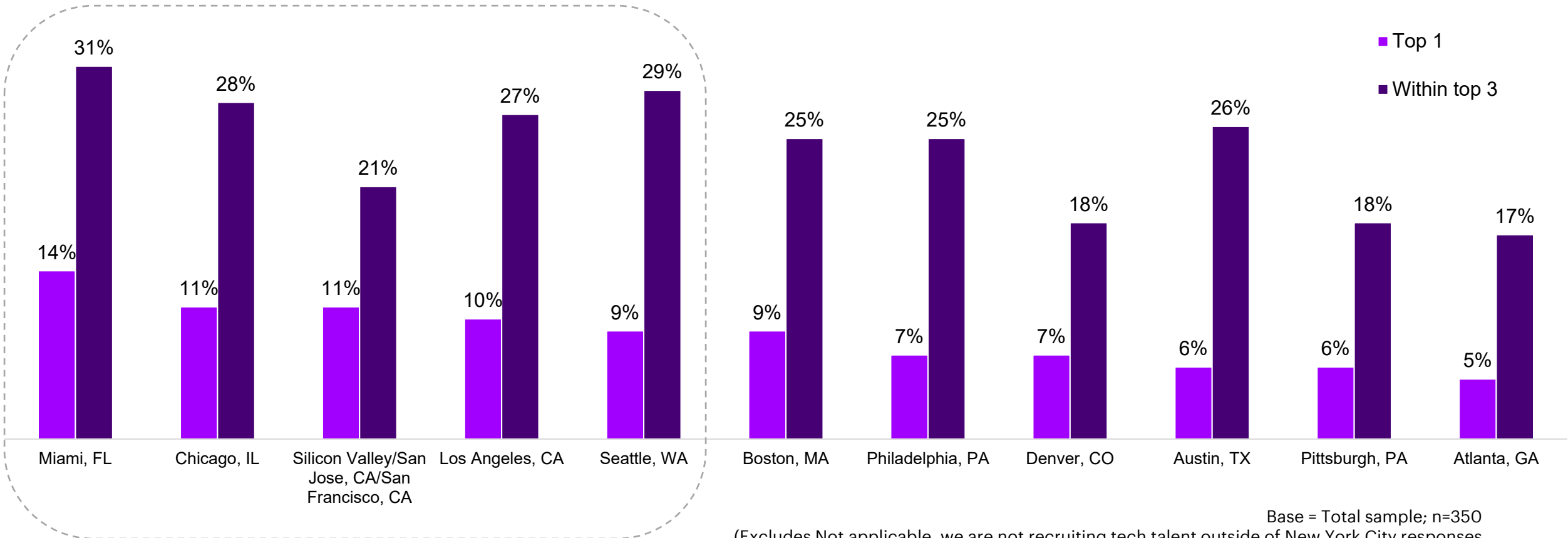| BY Borough	Overall	Manhattan	Queens	Brooklyn	Staten Island	The Bronx
Security	35%	38%	35%	32%	40%	27%
AI	29%	26%	43%	31%	26%	33%
Data Technology	20%	24%	30%	15%	12%	18%
Cloud	19%	18%	16%	23%	17%	20%
Metaverse	7%	12%	5%	6%	5%	7%
Software engineering	6%	8%	8%	5%	10%	
Quantum Computing	6%	8%	5%	6%	2%	4%
Robotics	5%	8%		6%		2%
Science Tech	5%	6%	14%	6%	2%	2%
Design Thinking	4%	6%	5%	2%		
Product engineering	4%	8%	3%	1%		
We do not expect to have any difficulties	9%	4%	5%	17%	5%	13%

Significantly more organizations with smaller revenues (46%) and fewer NYC located employees (42%) expect greater difficulties with hiring tech experts in AI. Organizations in Queens (43%) also expect more challenges with hiring these experts. Similarly, organizations in Communications, Media & Entertainment (50%) and State & Local Government (50%) also anticipate greater challenges with recruiting experts with AI skills.

Experts with Security skills are considered more difficult to recruit by organizations in Capital Markets (47%), Healthcare Payers (48%), and Healthcare Providers (55%).

BY Industry	Overall	Banking	Capital Markets	Communications, Media & Entertainment	Education	Healthcare Payer	Healthcare Provider	Insurance	Pharmaceuticals / Biomedical	Consumer Goods / Retail / Fashion	Technology / High Tech / FinTech	State & Local Government
Security	35%	31%	47%	34%	44%	48%	55%	22%	41%	19%	28%	22%
AI	29%	16%	28%	50%	34%	19%	10%	28%	28%	28%	28%	50%
Data Technology	20%	22%	9%	19%	13%	6%	45%	44%	22%	19%	19%	3%
Cloud	19%	9%	22%	16%	19%	6%	19%	34%	19%	19%	22%	25%
Metaverse	7%	3%	9%	6%	3%	16%		6%	6%	9%	16%	3%
Software engineering	6%	6%		3%	9%	13%	6%	9%	3%	6%	6%	6%
Quantum Computing	6%	3%	9%		16%	3%	13%	6%	3%	9%		
Robotics	5%		9%	13%		13%	10%			3%	9%	
Science Tech	5%		9%	3%	3%		10%	3%	22%		3%	
Design Thinking	4%			6%	3%	6%		9%	6%	9%	3%	
Product engineering	4%		3%	3%				6%	13%	6%	9%	
We do not expect to have any difficulties	9%	28%		13%	3%	10%	13%	6%	3%	19%	6%	

Of those (95%) who are recruiting tech talent outside of NYC, they are sourcing from Miami, Chicago, Silicon Valley, Los Angeles, and Seattle.

Since 2021, from which of the following cities are you recruiting tech talent outside of New York City?
Rank up to five.

■ Top 1

■ Within top 3

City	Top 1	Within top 3
Miami, FL	14%	31%
Chicago, IL	11%	28%
Silicon Valley/San Jose, CA/San Francisco, CA	11%	21%
Los Angeles, CA	10%	27%
Seattle, WA	9%	29%
Boston, MA	9%	25%
Philadelphia, PA	7%	25%
Denver, CO	7%	18%
Austin, TX	6%	26%
Pittsburgh, PA	6%	18%
Atlanta, GA	5%	17%

Base = Total sample; n=350
(Excludes Not applicable, we are not recruiting tech talent outside of New York City responses 5%, n=19)

BY Revenue

BY Revenue	Overall	Larger revenues	Medium revenues	Smaller revenues
Miami, FL	14%	12%	15%	10%
Chicago, IL	11%	6%	13%	8%
Silicon Valley/San Jose, CA/San Francisco, CA	11%	14%	9%	13%
Los Angeles, CA	10%	4%	11%	11%
Seattle, WA	9%	8%	9%	7%
Boston, MA	9%	6%	8%	13%
Philadelphia, PA	7%	10%	7%	5%
Denver, CO	7%	10%	6%	10%
Austin, TX	6%	8%	7%	2%
Pittsburgh, PA	6%	14%	5%	2%
Atlanta, GA	5%	6%	5%	3%
NA, not recruiting tech talent outside NYC	5%	2%	3%	16%

BY # NYC Located Employees

BY # NYC Located Employees	Overall	< 500	501 - 5000	>5000
Miami, FL	14%	9%	18%	8%
Chicago, IL	11%	6%	13%	16%
Silicon Valley/San Jose, CA/San Francisco, CA	11%	10%	13%	3%
Los Angeles, CA	10%	13%	10%	8%
Seattle, WA	9%	10%	8%	10%
Boston, MA	9%	13%	7%	8%
Philadelphia, PA	7%	9%	6%	8%
Denver, CO	7%	7%	9%	5%
Austin, TX	6%	4%	6%	10%
Pittsburgh, PA	6%	7%	4%	10%
Atlanta, GA	5%	3%	4%	11%
NA, not recruiting tech talent outside NYC	5%	8%	6%	2%

Since 2021, from which of the following cities are you recruiting tech talent outside of New York City?

Base = Total sample; n=350

NOTE Statistically significant differences

BY Borough

BY Borough	Overall	Manhattan	Queens	Brooklyn	Staten Island	The Bronx
Miami, FL	14%	8%	8%	20%	14%	22%
Chicago, IL	11%	12%	8%	13%	5%	11%
Silicon Valley/San Jose, CA/San Francisco, CA	11%	10%	32%	7%	19%	2%
Los Angeles, CA	10%	11%	5%	10%	10%	9%
Seattle, WA	9%	9%	19%	9%	10%	7%
Boston, MA	9%	8%	3%	10%	2%	16%
Philadelphia, PA	7%	8%	5%	6%	10%	7%
Denver, CO	7%	10%	8%	5%	7%	4%
Austin, TX	6%	6%	3%	7%		11%
Pittsburgh, PA	6%	8%		3%	7%	2%
Atlanta, GA	5%	6%	5%	5%	2%	2%
NA, not recruiting tech talent outside NYC	5%	4%	3%	6%	14%	7%

Significantly more organizations from Queens (32%) are sourcing talent from Silicon Valley/San Jose, CA/San Francisco, CA.

Talent from Miami is being sourced by organizations from Brooklyn (20%) and The Bronx (22%).

Significantly more organizations in Banking (22%), Capital Markets (22%), Education (25%), and Consumer Goods/Retail/Fashion (19%) are sourcing relevant talent from Silicon Valley/San Jose, CA/San Francisco, CA.
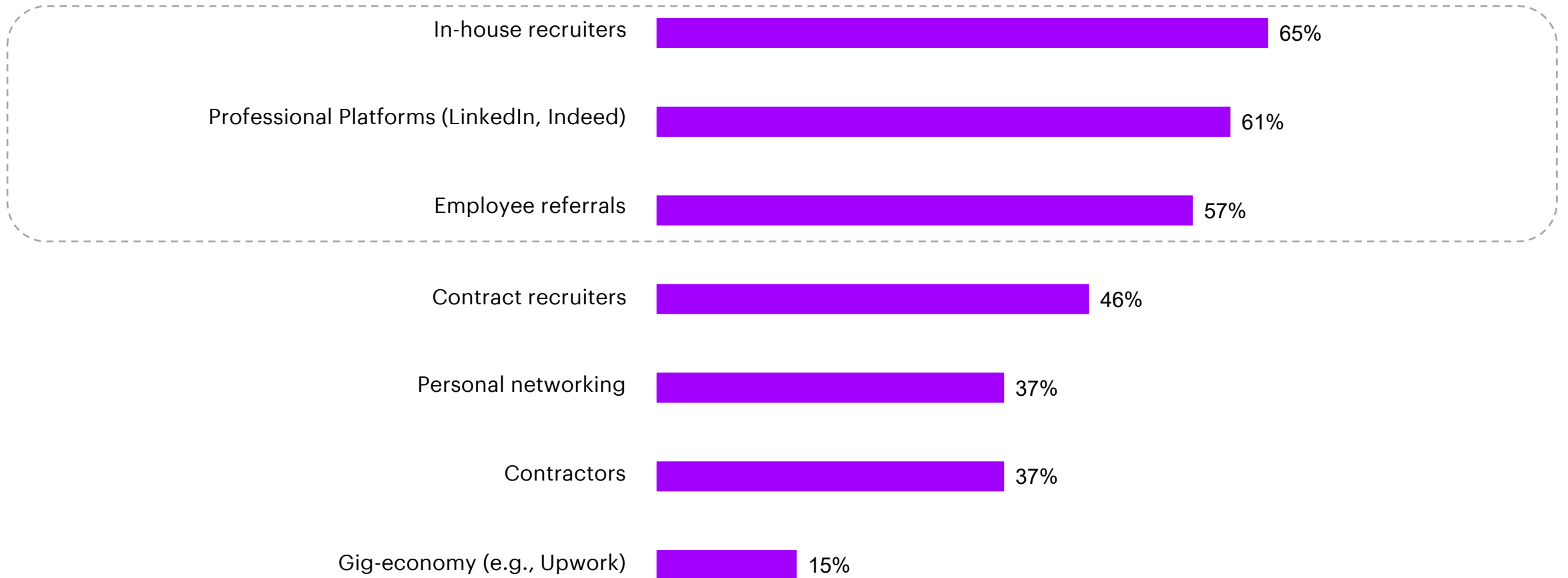
19% of Pharmaceuticals/Biomedical organizations are recruiting skills from Los Angeles, CA.

BY Industry

BY Industry	Overall	Banking	Capital Markets	M&E	Education	Healthcare Payer	Healthcare Provider	Insurance	Pharmaceuticals/ Biomedicals	Cons Goods	Tech/High Tech/FinTech	State & Local Government
Miami, FL	14%	19%	9%	16%	13%	19%	6%	16%	19%	9%	9%	16%
Chicago, IL	11%	3%		13%	6%	13%	16%	9%	9%	19%	25%	13%
Silicon Valley/San Jose, CA/San Francisco, CA	11%	22%	22%	9%	25%	3%		6%	3%	19%	6%	
Los Angeles, CA	10%	9%	3%	9%	9%	16%	10%	6%	19%	9%	6%	16%
Seattle, WA	9%	3%	6%	9%	9%	6%	6%	9%	6%	13%	16%	9%
Boston, MA	9%	6%	9%	16%	6%	3%	13%	9%	9%	3%	6%	13%
Philadelphia, PA	7%	6%	9%	6%	6%	13%	6%	3%	6%	6%	3%	13%
Denver, CO	7%	3%	9%	13%	3%	3%	13%	13%	9%		6%	9%
Austin, TX	6%	13%	13%			6%	3%	16%	6%	13%		
Pittsburgh, PA	6%		9%	3%	6%	13%	3%	3%	6%		13%	6%
Atlanta, GA	5%	3%	6%	6%			10%	3%	3%	6%	9%	6%
NA, not recruiting tech talent outside NYC	5%	13%	3%		16%	3%	13%	6%	3%	3%		

Top 1 responses shown

31

To help fill their tech talent, over half of organizations leverage in-house recruiters (65%), professional platforms (61%), and employee referrals (57%).

Which of the following would your organization use to help fill your tech talent?
Multiple mention.

Category	Percentage
In-house recruiters	65%
Professional Platforms (LinkedIn, Indeed)	61%
Employee referrals	57%
Contract recruiters	46%
Personal networking	37%
Contractors	37%
Gig-economy (e.g., Upwork)	15%

Base = Total sample; n=350

Which of the following would your organization use to help fill your tech talent needs?

Base = Total sample; n=350

NOTE Statistically significant differences

BY Revenue

BY Revenue	Overall	Larger revenues	Medium revenues	Smaller revenues
In-house recruiters	65%	56%	69%	54%
Professional Platforms (LinkedIn, Indeed)	61%	62%	62%	52%
Employee referrals	57%	56%	58%	52%
Contract recruiters	46%	48%	46%	44%
Personal networking	37%	30%	39%	34%
Contractors	37%	46%	36%	34%
Gig-economy (e.g., Upwork)	15%	18%	13%	20%

BY # NYC Located Employees

BY # NYC Located Employees	Overall	< 500	501 - 5000	>5000
In-house recruiters	65%	61%	69%	57%
Professional Platforms (LinkedIn, Indeed)	61%	44%	65%	72%
Employee referrals	57%	46%	58%	67%
Contract recruiters	46%	45%	44%	54%
Personal networking	37%	35%	37%	39%
Contractors	37%	35%	38%	38%
Gig-economy (e.g., Upwork)	15%	12%	13%	26%

BY Borough

BY Borough	Overall	Manhattan	Queens	Brooklyn	Staten Island	The Bronx
In-house recruiters	65%	69%	78%	71%	55%	47%
Professional Platforms (LinkedIn, Indeed)	61%	60%	76%	68%	67%	47%
Employee referrals	57%	58%	62%	55%	55%	62%
Contract recruiters	46%	48%	76%	36%	43%	47%
Personal networking	37%	40%	41%	41%	29%	36%
Contractors	37%	38%	51%	28%	55%	29%
Gig-economy (e.g., Upwork)	15%	21%	11%	10%	19%	7%

Significantly more organizations with larger number of employees (72%) located in NYC would use Professional Platforms (e.g., LinkedIn, Indeed) to help fill their tech talent needs.
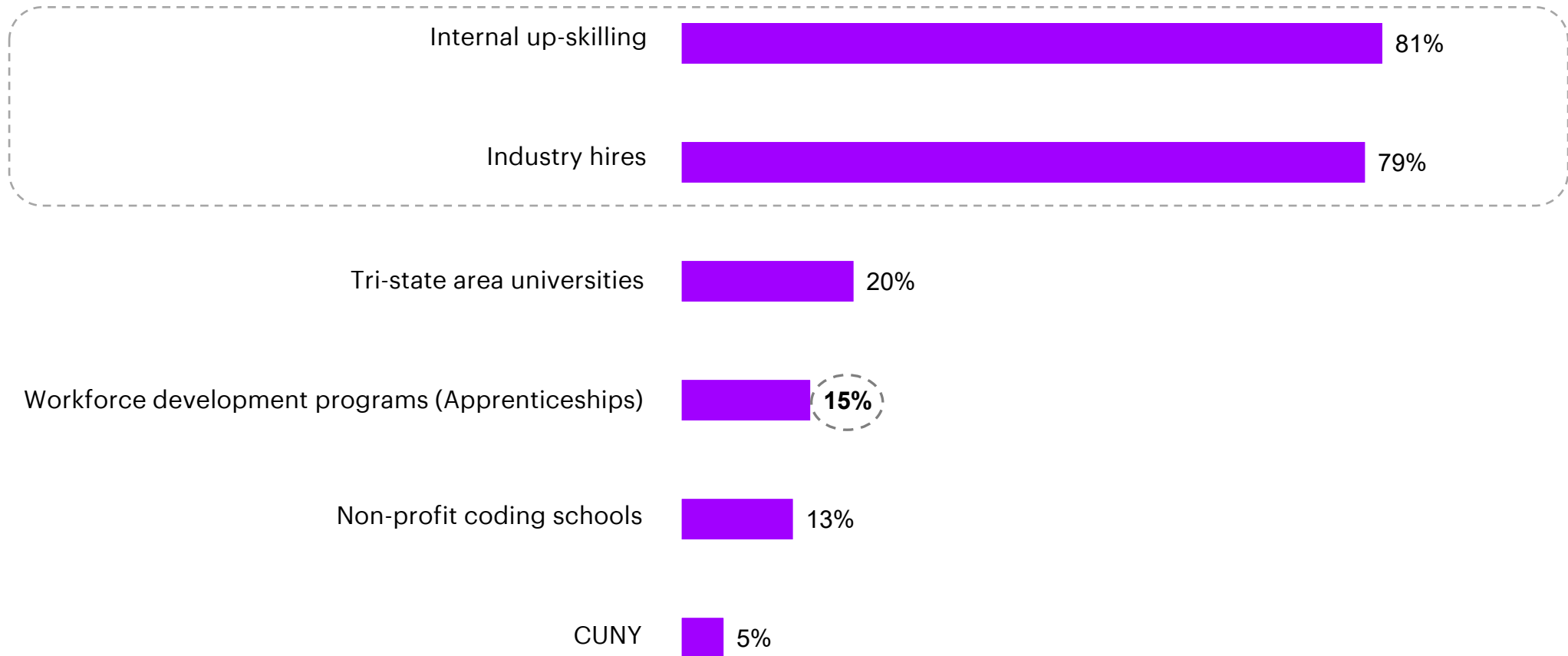
More organizations in Queens are likely to use in-house recruiters (78%), Professional Platforms (76%), and contract recruiters (76%) to fill their recruiting needs.

More organizations in Banking, Capital Markets, Healthcare Payers, Consumer Goods/Retail/Fashion and Technology/High Tech/FinTech are willing to use in-house recruiters to help fill their tech talent gaps. Professional platforms are also likely to be leveraged by more organizations in Banking, Capital Markets, Consumer Goods/Retail/Fashion and Technology/High Tech/FinTech , while Healthcare providers are relying on using employee referrals.

BY Industry

BY Industry	Overall	Banking	Capital Markets	Communication, Media & Entertainment	Education	Healthcare Payer	Healthcare Provider	Insurance	Pharmaceuticals/ Biomedical	Consumer Goods/ Retail /Fashion	Technology/ High Tech/FinTech	State & Local Government
In-house recruiters	65%	72%	78%	66%	66%	77%	48%	59%	53%	75%	78%	38%
Professional Platforms (LinkedIn, Indeed)	61%	84%	75%	59%	59%	61%	42%	63%	53%	75%	69%	25%
Employee referrals	57%	72%	38%	66%	50%	45%	71%	53%	50%	69%	53%	56%
Contract recruiters	46%	53%	47%	34%	47%	58%	39%	44%	50%	47%	50%	38%
Personal networking	37%	38%	38%	41%	25%	35%	42%	34%	34%	53%	38%	28%
Contractors	37%	25%	53%	22%	59%	23%	55%	31%	38%	38%	25%	38%
Gig-economy (e.g., Upwork)	15%	6%	9%	19%	16%	3%	23%	19%	28%	13%	22%	6%

33

Four out of five organizations leverage internal upskilling and external industry hires to fulfill tech talent needs. Less than one in five source through apprenticeships.

What sources is your organization targeting for your tech talent needs?
Multiple mention.

Source	Percentage
Internal up-skilling	81%
Industry hires	79%
Tri-state area universities	20%
Workforce development programs (Apprenticeships)	**15%**
Non-profit coding schools	13%
CUNY	5%

BY Revenue	Overall	Larger revenues	Medium revenues	Smaller revenues
Internal up-skilling	81%	84%	81%	80%
Industry hires	79%	76%	80%	79%
Tri-state area universities	20%	24%	20%	15%
Workforce development programs (Apprenticeships)	15%	14%	15%	15%
Non-profit coding schools	13%	16%	14%	8%
CUNY	5%		5%	10%

BY # NYC Located Employees	Overall	< 500	501 - 5000	>5000
Internal up-skilling	81%	82%	83%	75%
Industry hires	79%	76%	83%	70%
Tri-state area universities	20%	18%	20%	23%
Workforce development programs (Apprenticeships)	15%	9%	16%	21%
Non-profit coding schools	13%	9%	13%	23%
CUNY	5%	7%	5%	5%

Base = Total sample; n=350

NOTE Statistically significant differences

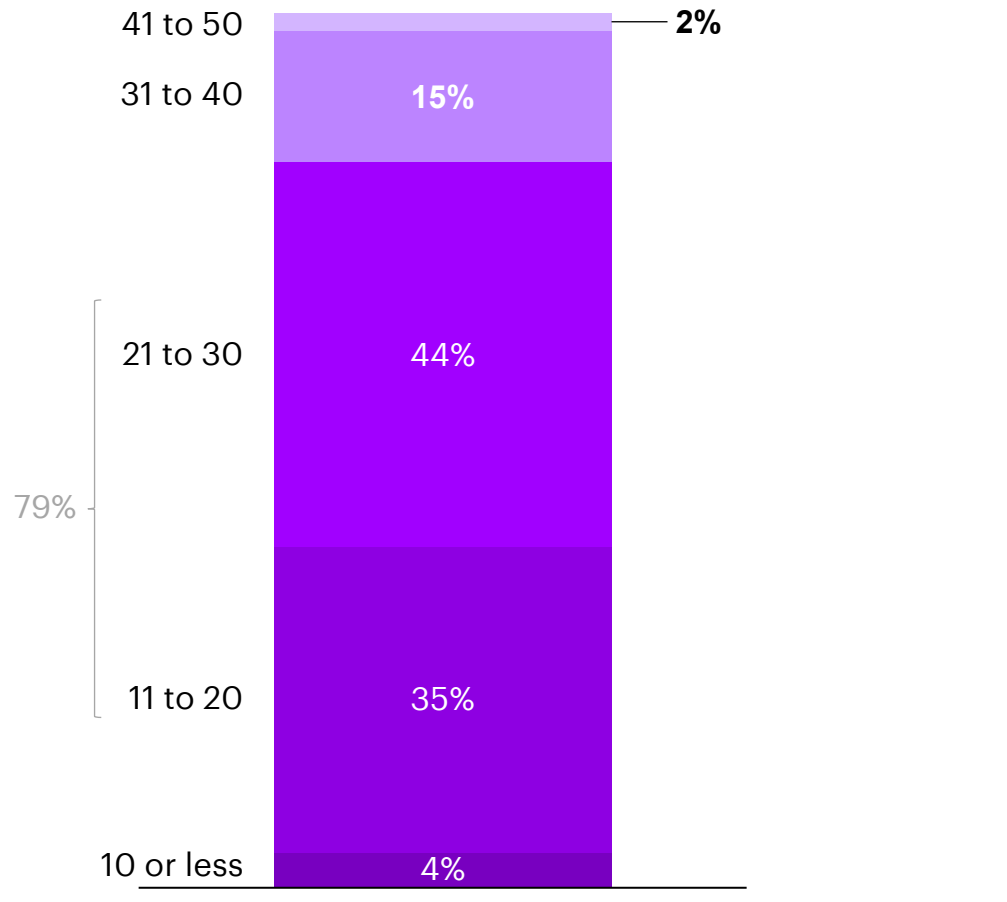| BY Borough	Overall	Manhattan	Queens	Brooklyn	Staten Island	The Bronx
Internal up-skilling	81%	81%	81%	83%	86%	76%
Industry hires	79%	74%	84%	86%	83%	80%
Tri-state area universities	20%	29%	14%	18%	7%	7%
Workforce development programs (Apprenticeships)	15%	20%	11%	13%	12%	16%
Non-profit coding schools	13%	19%	16%	15%	2%	2%
CUNY	5%	8%	22%	3%	2%	

Significantly more organizations in Banking (94%) and Consumer Goods/Retail/Fashion (91%) are targeting upskilling internally for their tech talent needs.

91% of organizations in Communications, Media & Entertainment are also recruiting industry hires.

BY Industry	Overall	Banking	Capital Markets	Communications, Media & Entertainment	Education	Healthcare Payer	Healthcare Provider	Insurance	Pharmaceuticals/ Biomedical	Consumer Goods/ Retail/Fashion	Technology/ High Tech/FinTech	State & Local Government
Internal up-skilling	81%	94%	78%	81%	84%	84%	58%	81%	81%	91%	84%	75%
Industry hires	79%	81%	88%	91%	75%	74%	84%	84%	69%	78%	72%	75%
Tri-state area universities	20%	16%	19%	19%	9%	16%	48%	25%	31%	25%	9%	
Workforce development programs (Apprenticeships)	15%	9%	3%		6%		55%	22%	28%	9%	25%	6%
Non-profit coding schools	13%	6%	9%	9%	9%	13%	26%	22%	16%	19%	19%	
CUNY	5%			16%	6%	3%	6%	6%	6%	9%	3%	

35

Of those who leverage apprenticeships for their tech talent needs, 79% typically host between 11 and 30 apprentices per year. Most also offer their apprentices mentorship/peer support and employability training.

How many apprentices does your organization typically host per year?

Category	Value
41 to 50	2%
31 to 40	15%
21 to 30	44%
11 to 20	35%
10 or less	4%

79%

Which of the following support services do your apprentices receive? Multiple mention.

Service	Value
Mentorship/peer support	71%
Employability training	67%
Career counseling	56%
Mental health services	35%
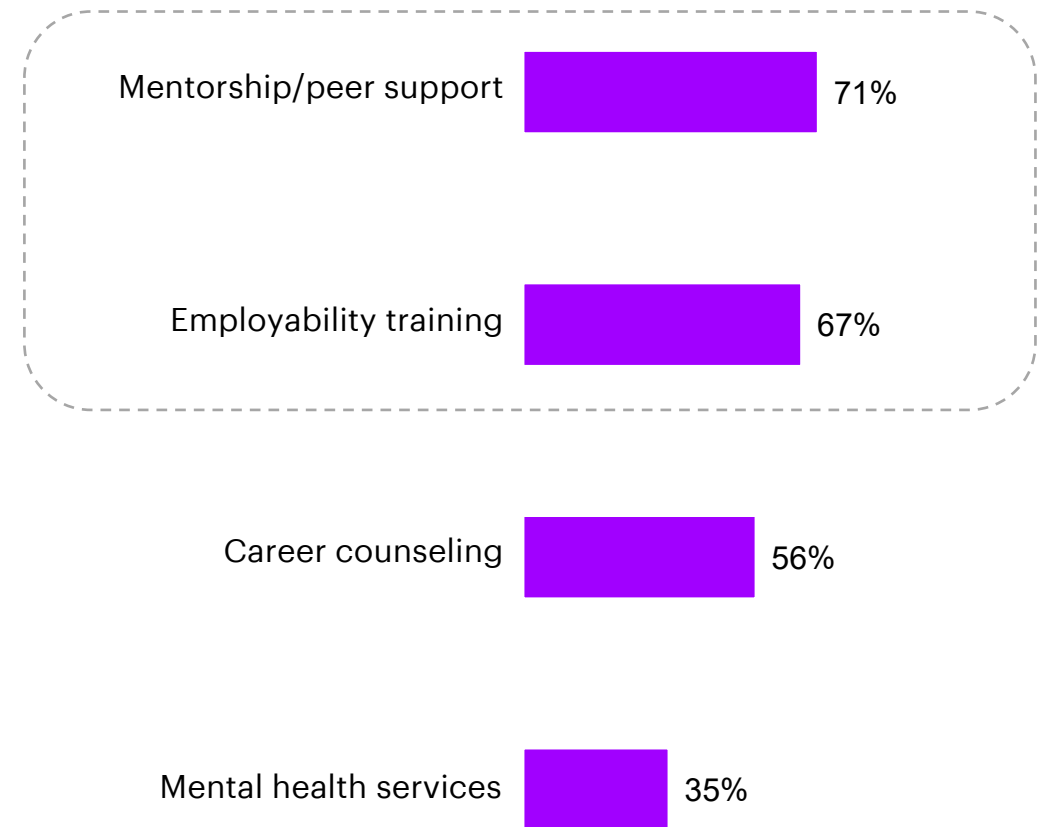
Base = Organizations who are leveraging apprenticeships for their tech talent needs, n=52

What typically triggers reskilling efforts in your organization?

BY Revenue	Overall	Larger revenues	Medium revenues	Smaller revenues
New technology adoption	63%	54%	66%	62%
Winning new business/clients	56%	52%	59%	48%
Shifts in industry/market trends	46%	56%	47%	34%
Employee departures	43%	48%	43%	39%

BY # NYC Located Employees	Overall	< 500	501 - 5000	>5000
New technology adoption	63%	62%	64%	66%
Winning new business/clients	56%	49%	59%	59%
Shifts in industry/market trends	46%	48%	47%	41%
Employee departures	43%	37%	47%	38%

Base = Total sample; n=350

NOTE Statistically significant differences

BY Borough	Overall	Manhattan	Queens	Brooklyn	Staten Island	The Bronx
New technology adoption	63%	64%	78%	59%	76%	53%
Winning new business/clients	56%	60%	62%	61%	50%	42%
Shifts in industry/market trends	46%	49%	62%	48%	43%	31%
Employee departures	43%	47%	49%	41%	31%	47%

Significantly more re-skilling efforts are triggered by the adoption of new technology for organizations in Queens (78%), Staten Island (76%). Shifts in industry/market trends is also reported to be a cause for re-skilling, for 62% of organizations in Queens.

When considering industry variations, the adoption of new technology is a catalyst for skills development for more organizations in Banking (81%) and Healthcare Providers (74%), while winning new business or clients is a trigger for more organizations in Capital Markers (78%), Communications, Media & Entertainment (69%), and Healthcare providers (71%). Shifts in industry or market trends result in the need for reskilling efforts for 63% of Pharmaceuticals/Biomedical organizations.

BY Industry	Overall	Banking	Capital Markets	Communications, Media & Entertainment	Education	Healthcare Payer	Healthcare Provider	Insurance	Pharmaceuticals/ Biomedical	Consumer Goods/ Retail/Fashion	Technology/ High Tech/FinTech	State & Local Government
New technology adoption	63%	81%	63%	50%	69%	61%	74%	66%	59%	66%	69%	41%
Winning new business/clients	56%	53%	78%	69%	44%	52%	71%	50%	47%	56%	53%	47%
Shifts in industry/market trends	46%	53%	50%	44%	59%	58%	42%	41%	63%	44%	28%	25%
Employee departures	43%	38%	25%	44%	38%	45%	48%	50%	38%	44%	53%	50%

BY Revenue	Overall	Larger revenues	Medium revenues	Smaller revenues
On-the-job training	74%	78%	76%	62%
Internal courses	53%	58%	56%	38%
External courses, e.g., at tech academies	39%	56%	38%	31%
Technical apprenticeships	37%	42%	34%	41%

BY # NYC Located Employees	Overall	< 500	501 - 5000	>5000
On-the-job training	74%	66%	80%	66%
Internal courses	53%	44%	58%	51%
External courses, e.g., at tech academies	39%	33%	40%	48%
Technical apprenticeships	37%	42%	33%	41%

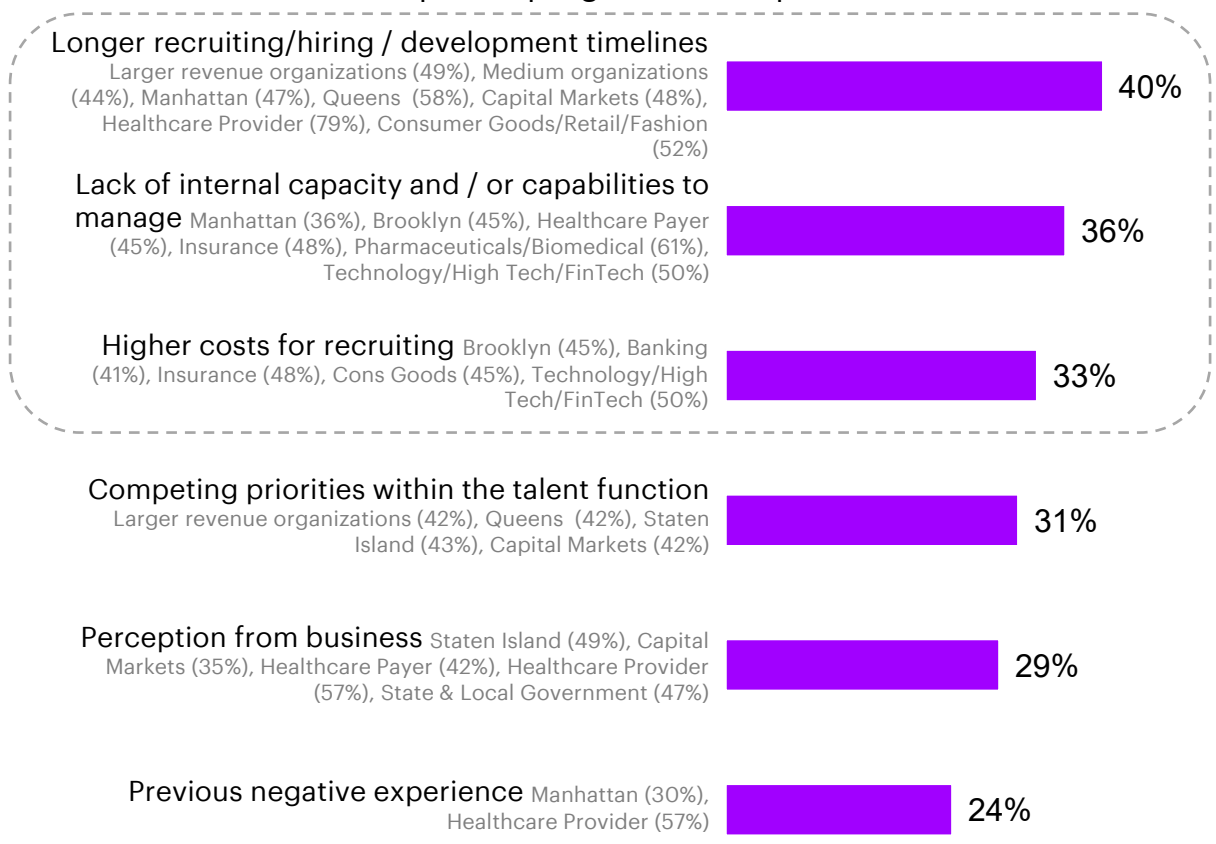| BY Borough	Overall	Manhattan	Queens	Brooklyn	Staten Island	The Bronx
On-the-job training	74%	76%	89%	77%	74%	51%
Internal courses	53%	58%	70%	49%	48%	36%
External courses, e.g., at tech academies	39%	48%	49%	32%	45%	22%
Technical apprenticeships	37%	42%	19%	28%	40%	47%

Significantly more organizations in Queens are leveraging on-the-job training (89%) internal courses (70%) and external courses (49%) to reskill their tech employees.

Organizations in Banking (94%), Capital Markets (81%), Healthcare Payers (81%), and Technology/High Tech/FinTech (81%) are using on-the-job training to reskill their tech employees. More of those in Communications, Media & Entertainment (63%) and Healthcare Providers (65%) are using internal courses.

BY Industry	Overall	Banking	Capital Markets	Communications, Media & Entertainment	Education	Healthcare Payer	Healthcare Provider	Insurance	Pharmaceuticals/ Biomedical	Consumer Goods/ Retail/Fashion	Technology/ High Tech/FinTech	State & Local Government
On-the-job training	74%	94%	81%	78%	72%	81%	74%	72%	59%	72%	81%	50%
Internal courses	53%	53%	53%	63%	59%	55%	65%	47%	53%	50%	56%	28%
External courses, e.g., at tech academies	39%	19%	56%	28%	44%	52%	48%	38%	34%	47%	44%	25%
Technical apprenticeships	37%	28%	28%	28%	31%	32%	52%	44%	53%	31%	25%	50%

Of those who <u>do not</u> leverage apprenticeships, reasons for this include the associated longer recruiting/hiring/development timelines and lack of internal capacity/capabilities to manage the process. However, despite not leveraging these, 98% still recognize that they are a good financial investment.

What barriers keep your organization from working with workforce development programs? Multiple mention.

Longer recruiting/hiring / development timelines
Larger revenue organizations (49%), Medium organizations (44%), Manhattan (47%), Queens (58%), Capital Markets (48%), Healthcare Provider (79%), Consumer Goods/Retail/Fashion (52%)
40%

Lack of internal capacity and / or capabilities to manage Manhattan (36%), Brooklyn (45%), Healthcare Payer (45%), Insurance (48%), Pharmaceuticals/Biomedical (61%), Technology/High Tech/FinTech (50%)
36%

Higher costs for recruiting Brooklyn (45%), Banking (41%), Insurance (48%), Cons Goods (45%), Technology/High Tech/FinTech (50%)
33%

Competing priorities within the talent function
Larger revenue organizations (42%), Queens (42%), Staten Island (43%), Capital Markets (42%)
31%

Perception from business Staten Island (49%), Capital Markets (35%), Healthcare Payer (42%), Healthcare Provider (57%), State & Local Government (47%)
29%

Previous negative experience Manhattan (30%), Healthcare Provider (57%)
24%

Rating of agreement/disagreement level with statement "Apprenticeships are a good financial investment for my business to train NEW workers."

98%

Strongly agree	**15%**
Agree	**83%**
Neither agree nor disagree	**3%**

More organizations in Communications, Media & Entertainment (19%) and Pharmaceuticals/Biomedical (30%) strongly agree that apprenticeships are a good financial investment to train NEW workers.

Significantly more organizations in The Bronx (26%) and Staten Island (22%) strongly agree that apprenticeships are a good financial investment to train NEW workers, compared with 14% in Brooklyn, 11% in Manhattan and 3% in Queens.

Significantly more medium revenue (17%) size organizations strongly agree that apprenticeships are a good financial investment to train NEW workers.

Base = Organizations who are <u>not</u> leveraging apprenticeships for their tech talent needs, n=298

Over half confirm that new technology adoption and winning new business/clients are typically responsible for triggering reskilling efforts within their organization. Less result from employee departures.

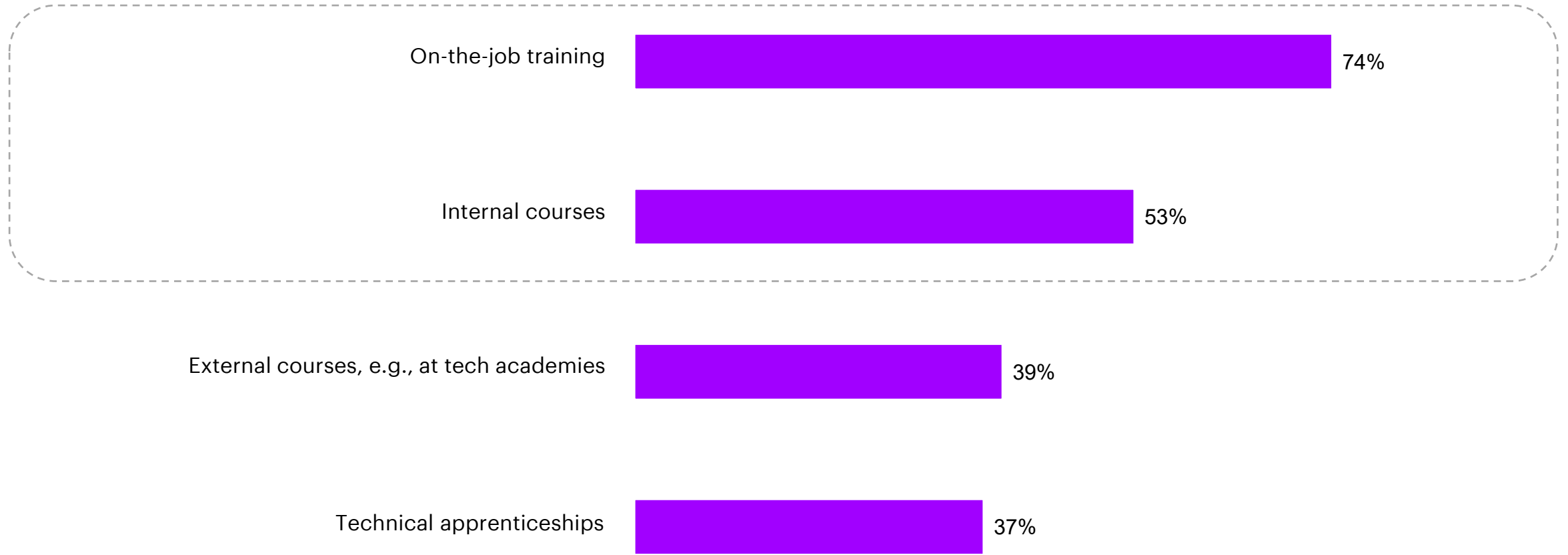What typically triggers reskilling efforts in your organization?
Multiple mention.

New technology adoption ▇▇▇▇▇▇▇▇▇▇ 63%

Winning new business/clients ▇▇▇▇▇▇▇▇ 56%

Shifts in industry/market trends ▇▇▇▇▇▇ 46%

Employee departures ▇▇▇▇▇ 43%
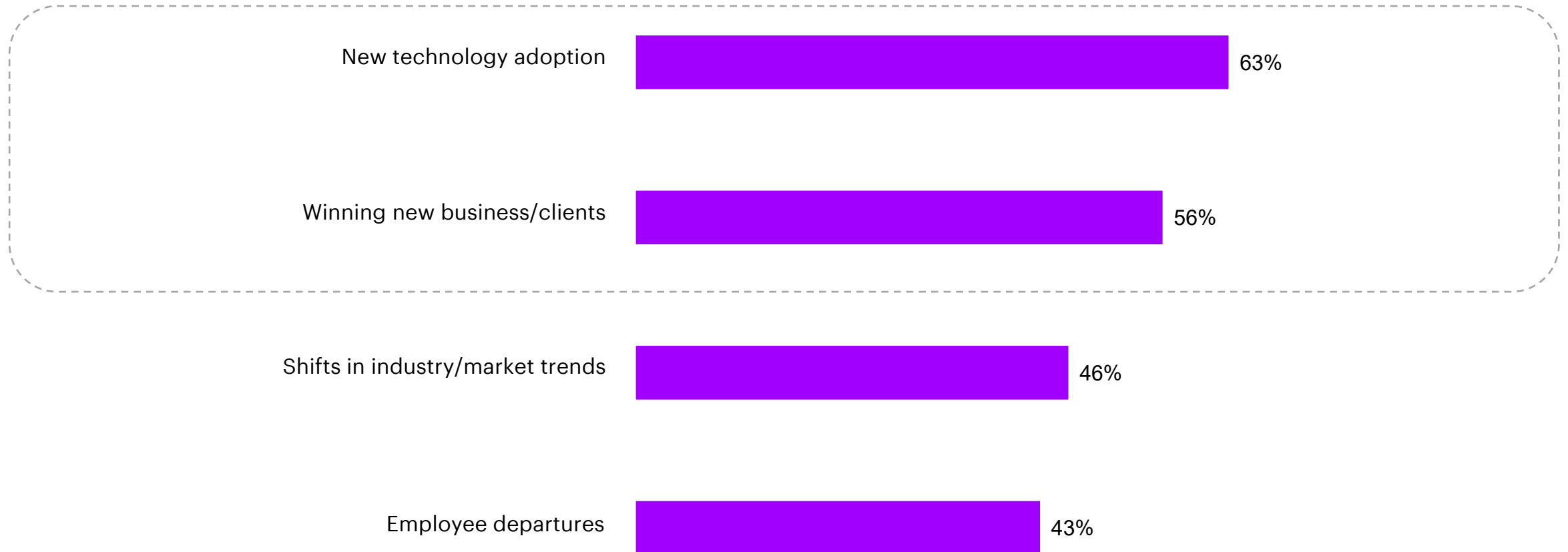
Around three quarters (74%) use on-the-job training to reskill tech employees and one in two leverage internal courses.

Which of the following are you using to reskill tech employees in your organization?
Multiple mention.

On-the-job training — 74%

Internal courses — 53%

External courses, e.g., at tech academies — 39%

Technical apprenticeships — 37%

Base = Total sample; n=350