

Women in Technology

Key strategies to retain
and attract diverse talent

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Executive summary

Introduction

Jobs reports and daily headlines about the Great Resignation suggest that much of the U.S. workforce is on the move. Influenced by the COVID-19 pandemic and many other factors, people across the country have been reshaping their personal and professional lives over the last few years.

Meanwhile, organizations around the world are increasingly embracing the importance of making meaningful progress on diversity and inclusion, whether as part of a broader ESG strategy, as an added dimension of smart human capital management, as a way to enhance competitiveness in the digital economy, or all of the above.

Recognizing the potential impacts of these forces at play in labor markets and the ESG landscape, S&P Global Market Intelligence collaborated with the California Technology Council and WE Global Studios to conduct a fourth-quarter 2021 survey of U.S. women working in technology. Our respondents come from a variety of industries, but all work in technology roles — either as information technology (IT) practitioners or in tech-aligned line-of-business roles. We wanted to investigate key drivers of career satisfaction and dissatisfaction for women in tech and to help companies identify strategies for creating more inclusive and productive cultures.

Our survey results were in some ways surprising. Between the recent discourse around the Great Resignation and years of anecdotes highlighting the challenges facing women working in tech, we did not anticipate the high levels of job satisfaction that our survey respondents reported.

However, it was also surprising (and disappointing) to see the extent to which otherwise satisfied women in tech still experience day-to-day inequities, microaggressions and outright hostility in the workplace.

This leads to another set of questions. What are companies doing right when it comes to attracting and retaining tech talent? Where is there room for improvement? In which areas of tech are the prospects most promising for women? What experiences — positive and negative — shape the landscape for women in tech today? Which of those experiences seem most likely to make or break a woman's relationship with her employer?

Our study aims to help organizations dig deeper to identify the action items and strategies that will help them stand out in a competitive market for highly skilled tech talent. As the economy (along with our work and personal lives) becomes ever more digital, business success requires digital transformation. Therefore, the people building the technology, developing the applications, and designing the user interfaces must reflect the diversity of the target customers whom digital businesses seek to engage.

Methodology

The 2021 inaugural Women in Technology survey provides a better understanding of the nuances of gender in the workplace, specifically in the IT sector. S&P Global Market Intelligence conducted the study in partnership with the California Technology Council and WE Global Studios.

Data points from the survey include companies' formal commitments or programs for increasing workplace diversity and inclusion, job satisfaction, retention and representation of women in IT and senior leadership roles. The survey results illustrate the structural and cultural factors that influence women's ability to achieve their full potential as technology industry leaders. Analysis of the survey results yields action items companies can implement to tap into an increasingly diverse pool of IT talent and create a more inclusive and equitable workplace environment for women in tech.

This online survey of 626 U.S. women working in technology was conducted from November 2 to December 20, 2021. The margin of error for topline statistics is +/- 4 pts at the 95% confidence level.

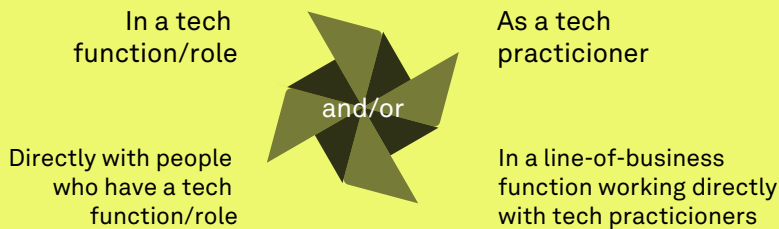
Base sizes below n=30 should be interpreted anecdotally.

Due to survey routing, qualification criteria, attrition and other factors, some questions were not answered by the full sample of respondents.

Women in tech by the numbers

Survey overview

626 U.S.-based women working in the tech field:



Average respondent estimates of women's representation in...

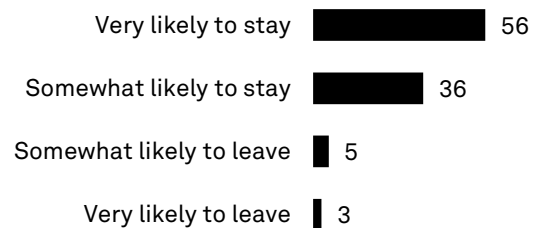
IT roles at their organization
39%

Senior IT leadership at their organization
32%

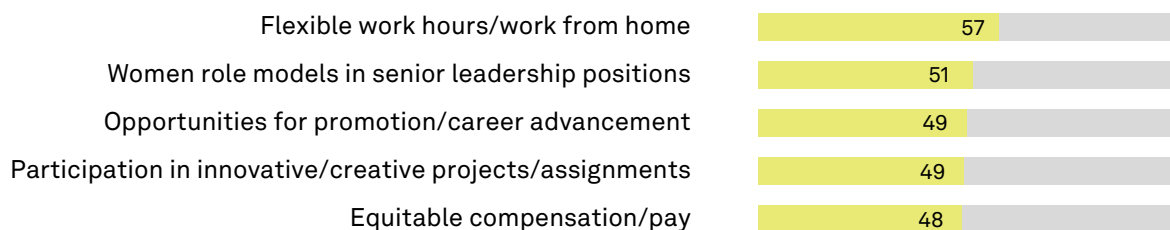
Levels of satisfaction in current position (%)



Plans to stay at current organization (%)



Top 5 factors influencing career satisfaction (%)



Women who have experienced...

Sexual harassment



Bullying



Everyday microaggressions



Numbers indicate percentages of survey respondents. N=626.
Source: S&P Global Market Intelligence Women in Technology survey, conducted November 2021-December 2021
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Key Findings

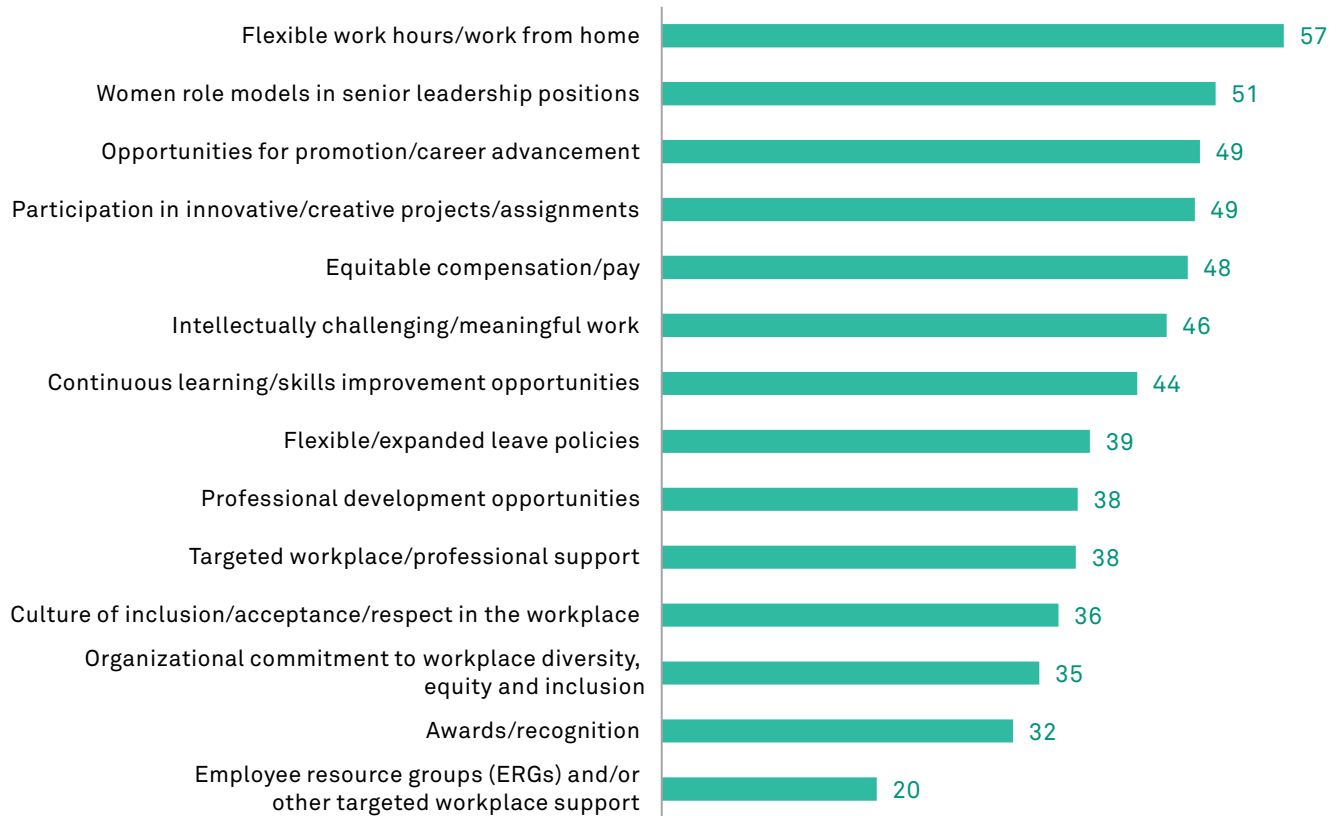
- More than 57% of survey respondents identified flexible work hours and remote work as a key driver of job satisfaction.
- Respondents estimated, on average, that women hold about 39% of IT roles in their organizations. That compares to the 27% average reported by respondents in the Voice of the Enterprise: Digital Pulse survey conducted in the second quarter of 2019 by 451 Research, which is part of S&P Global Market Intelligence.
- Overall job satisfaction is high among women in tech, with 53% of respondents reporting that they are very satisfied in their current positions, while 39% say they are somewhat satisfied.
- Just over half of respondents expect things to get better for women at their organizations in the next year. Younger women were more likely than those aged 45 or older to be optimistic about the changes on the horizon and to think that conditions for women had improved over the previous year.
- More than 50% of respondents said that seeing women role models in senior leadership positions is an important factor in career satisfaction.
- Women in transformational IT roles (e.g. software development and engineering, data and application management) were more likely than those in non-transformational IT roles (e.g. IT infrastructure operations and end-user help desk) to strongly agree that men and women are paid equally and have equal access to projects likely to advance career and professional development opportunities. But other aspects of respondents' identities also seemed to play a role here, as white respondents, for instance, were more likely than women of other races to say that men and women were paid equally.
- Despite the high satisfaction levels, there is still work to do to improve company culture. One in three respondents has experienced sexual harassment at work, and more than half have experienced inequitable pay and advancement opportunities, exclusion from important projects and/or men receiving credit for their ideas.

The Take

Flexibility should be at the top of the list for companies seeking to attract and retain a diverse tech workforce. Diversity, compensation and a healthy company culture are also very important for women in tech. But tradeoffs in other categories might be acceptable to employees for whom flexibility, remote work options and work-life balance are key determinants of job satisfaction. These factors have an even more universal appeal than one might expect. Far from being limited to women with children at home, workplace flexibility is a top priority across the board for women in tech.

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Drivers of job/career satisfaction among US women in tech (%)



Based on 623 responses to the following question: Which of the following are most important to you with regard to your career/job satisfaction? (Select all that apply)

Source: S&P Global Market Intelligence Women in Technology survey, conducted November 2021-December 2021

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Job satisfaction and outlook

Our survey results suggest a relatively high sense of optimism among women in tech. More than 51% of respondents said they expect things to improve for women at their organizations over the next year, compared to 39% who saw improvement in the past year. However, levels of optimism varied by age. In the under 45-year-old age group, 44% of women were positive about changes over the past year, while 56% were optimistic about the coming year. That compares to 23% and 36%, respectively, for women aged 45 or older.

The COVID-19 experience likely influences what we heard from Women in Tech survey respondents. The survey took place at a relatively hopeful point in the pandemic. The U.S. was between the peaks of the Delta and Omicron variants, although cases were already beginning to climb rapidly as the survey wrapped up. Also by that time, many U.S. adults had long since received COVID-19 vaccines, and many children were beginning the vaccination process. Meanwhile, pandemic-era measures such as remote work were still in place at many companies.

The top driver of job satisfaction among our respondents was flexible working hours and the ability to work remotely. That tech employees prize workplace flexibility is not surprising, particularly as we enter the third full year of the COVID-19 pandemic. One might even expect women, who tend to bear more caregiving responsibilities at home, to especially favor flexible work arrangements.

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But our study showed that flexible working conditions are not just important for caregivers. In fact, women without children at home were more likely to identify flexible work hours and working from home as one of the most important drivers of job satisfaction, at 64%, versus 53% for respondents with at least one child living in their household.

As companies explore return-to-office scenarios, our survey results suggest that decision makers should consider both the importance of workplace flexibility across the entire employee population and the extent to which pandemic-era changes should become the new normal.

More seats at the tech table

The COVID-19 pandemic accelerated digital transformation by making all of our lives (and the economy) more digital. Workforce diversity in tech is not negotiable because the people developing the apps, building the technology and designing the UIs need to reflect the diversity of what is increasingly becoming a digital world.

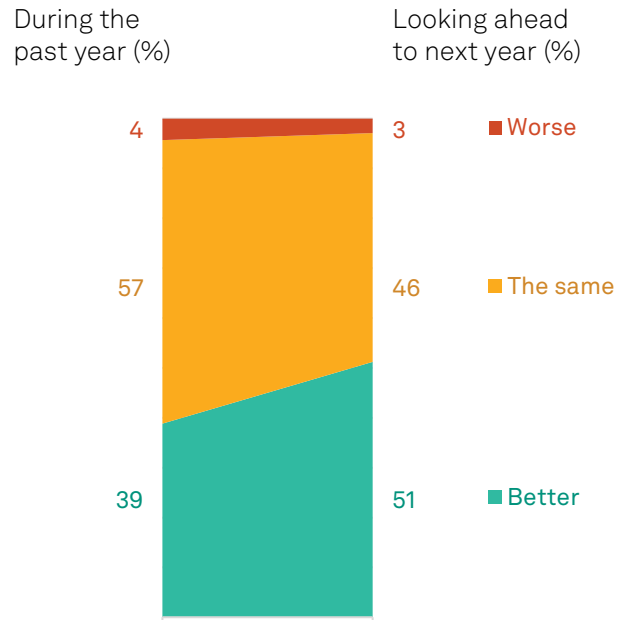
Survey results suggest real progress in IT gender diversity over the last few years. This is helpful context for understanding the levels of satisfaction and optimism detected in our recent study.

Respondents to the Women in Tech survey estimated, on average, that women hold about 39% of IT roles in their organization. That compares to the 27% average reported by respondents to 451 Research's Voice of the Enterprise (VoTE): Digital Pulse survey conducted in the second quarter of 2019. These studies surveyed different populations, but the difference in the numbers seems to indicate a clear trend toward greater representation of women in IT. Women in Tech survey respondents who indicated dissatisfaction in their positions were more likely to work for companies where women's estimated representation in IT roles was 10% or less.

Women in Tech survey respondents estimated, on average, that women hold 32% of senior IT leadership roles at their organizations, compared to an average of 23% reported in 451 Research's VoTE: Digital Pulse, Organizational Dynamics survey in 2019. More than half of our respondents indicated that seeing women role models in senior leadership positions is a key driver of job satisfaction.

Respondents expect conditions for women to continue improving

Changes for women at respondents' organizations...



Based on 623 responses to the following questions: During the past year would you say things have gotten better, stayed the same, or gotten worse for women at your organization? Looking ahead to next year, do you think things will get better, stay the same or get worse for women at your organization? Source: S&P Global Market Intelligence Women in Technology survey, conducted November 2021-December 2021 © 2022 S&P Global Market Intelligence. All rights reserved.

For companies that do not already have many — or any — women in senior leadership positions, the question arises of how to rectify that. Successful organizations will reap the benefits of diversity that stem from wider ranges of ideas, assumptions and lived experiences among their employees. Organizations that do so are likely to be those that create a virtuous cycle by building a diverse talent pipeline at various levels, rather than bemoaning the lack of “diverse” candidates for senior positions.

More than 28% of Women in Tech survey respondents said their organizations had formal diversity and inclusion-related commitments or programs in place; another 31% said their organizations were developing such initiatives. Women in our study were much more likely to be highly satisfied in their positions if they worked at organizations where diversity and inclusion initiatives were at least in the development stage.

In tech for the long haul

More than two-thirds of our survey respondents appear likely to stay in the tech field, either remaining with their current employer, seeking another IT-related job elsewhere, starting their own IT-related business or leaving to pursue further IT-related education.

About 22% of respondents said they were passively looking to change employers, while nearly 18% said they were actively looking. We asked those respondents, along with those who were willing to change but not currently looking at other jobs, what their next career move might be. More than half (53%) were likely to stay in the IT field, either moving to another organization, starting their own IT business or pursuing further IT-related education.

This could be both good news and not-so-good news for companies seeking to retain talented women in tech. The good news is the relatively high retention rate implied by our study, with more than 82% of respondents not actively looking for a change in employment. The less than good news is that most women who do leave are likely to take their expertise to a competitor, or even become competitors themselves.

In all, about 61% of respondents said that they were either unwilling to change employers or that they were willing to change but not looking for other jobs. We asked those respondents about why they were likely to stay with their current employers. More than half (51%) identified work-life balance as a factor influencing that decision. No other factor was chosen by a majority of women in response to this question, although close to 46% pointed to respect from colleagues and customers as being important.

Workplace culture: Lingerin g problems

While women are more present than ever in technology roles and report high levels of job satisfaction, the prevalence of problematic workplace cultures and persistence of inappropriate behavior indicate that there is still work to be done for women to feel valued and safe at work. Getting a seat at the

Higher satisfaction levels at organizations where women are well represented in IT

Overall, how satisfied or unsatisfied are you in your current position? (%)

	At organizations where women make up...	
	Less than or equal to half of IT staff	More than half of IT staff
Very satisfied	51	63
Somewhat satisfied	41	31
Somewhat unsatisfied	6	5
Very unsatisfied	2	1

	Less than or equal to half of IT leadership	More than half of IT leadership
Very satisfied	51	63
Somewhat satisfied	40	32
Somewhat unsatisfied	6	5
Very unsatisfied	2	1

Based on responses to the following questions: Based on your best estimate, what percentage of IT roles at your organization are filled by women? Based on your best estimate, what percentage of senior IT leadership roles at your organization are filled by women?

Source: S&P Global Market Intelligence Women in Technology survey, conducted November 2021-December 2021
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63% of respondents at companies where women hold a majority of IT leadership roles were “very satisfied” in their positions, compared to where women represent less than half of IT leadership

table is only half the battle — the other half involves making sure everyone’s table manners meet certain standards.

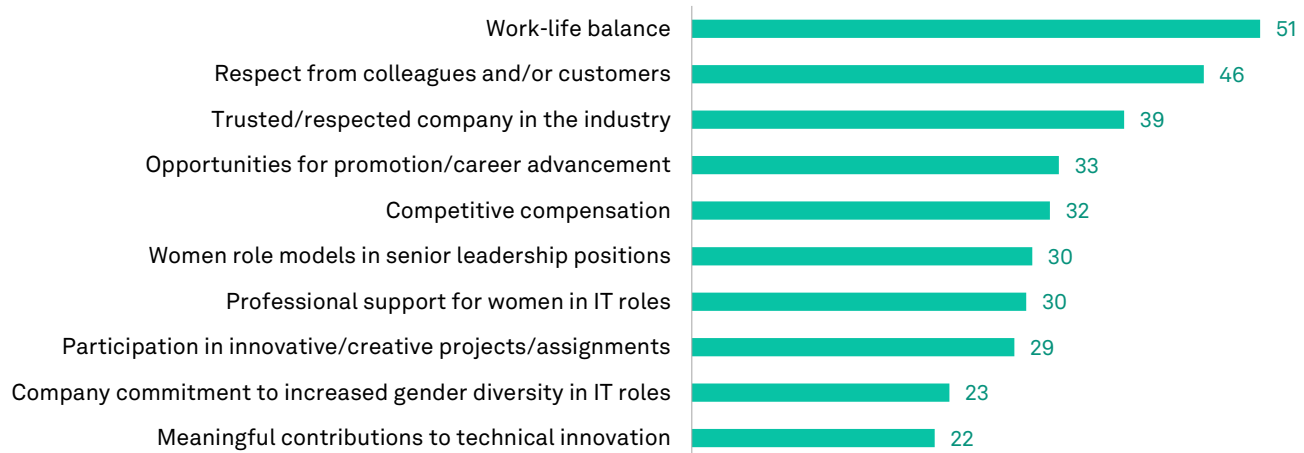
We asked respondents whether they had experienced certain behaviors/situations during their careers and asked about the frequency (often/occasionally/seldom/never). One in three of our survey respondents has experienced sexual harassment at work, and

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a similar proportion has had to deal with bullying at some point. Fewer than half of respondents (48%) say they are very comfortable speaking up if they see or experience discrimination or harassment at work. Other behaviors related to compensation and advancement were also worryingly common: similar proportions (around 55%) of women surveyed reported having the experience of men being paid more for doing the same job, men receiving credit for women's work and ideas, and exclusion from key strategic projects. More than half of women in our survey also reported having had to deal with day-to-day microaggressions and inappropriate language at some point in their careers. This is the case across all age cohorts, but particularly for respondents in the 45-to-54-year-old demographic.

Because we do not have pre-pandemic data as a benchmark, it is difficult to gauge precisely whether the experience of virtual workplace culture for U.S. women in tech has been better or worse than the physical workplace equivalent when it comes to problematic behaviors and situations. Our assumption is that the events of 2020 in their totality — the global pandemic as well as racial/social justice, political, and economic issues — served as a call to action for many companies, leading to expanded or intensified commitments to diversity and inclusion initiatives. As employees start to return to the office (for some of the time at least), we will see what “return to normal” really looks like.

Top 10 factors influencing women's plans to remain with current employer (%)



Based on 379 responses to the following question: You mentioned that you plan to remain with your current employer. Which of the following factors play a role in this decision? (Select all that apply)

Respondents answered this question if they indicated that they are willing to change employers but not looking at this time, or are unwilling/uninterested in changing employers at this time.

Source: S&P Global Market Intelligence Women in Technology survey, conducted November 2021-December 2021

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Implications

The last few years have been difficult on many levels for people and organizations worldwide, but they have also led to conditions that partly explain relatively high job satisfaction levels among U.S. women working in technology. The global pandemic has made flexible and remote work arrangements common in the tech space, normalizing one of the factors that can lead to improved work-life balance. The women we surveyed value flexible working options very highly, and as the so-called Great Resignation continues, our survey results confirm a trend of organizations recognizing the employee retention impact of improved support for working parents and caregivers.

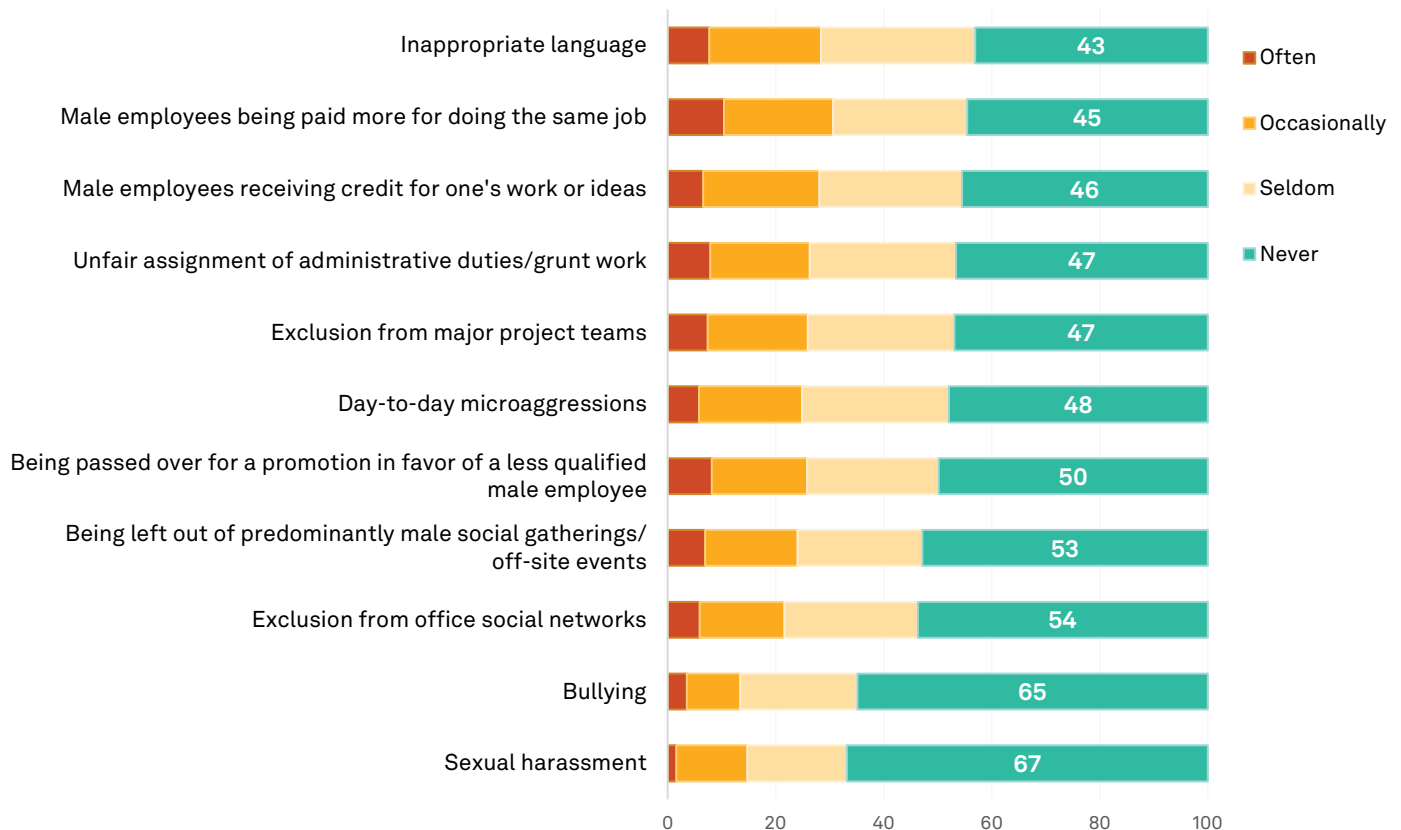
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The pandemic years have also accelerated digital transformation, which has elevated the importance of diversity at the tech table. Advances in gender diversity in IT leadership ranks reflect improved representation of women in tech overall, particularly in transformation-oriented IT areas that drive the digital economy. Those areas include software development and engineering, as well as data and application management. Since customer experience rules in the digital economy, organizations may be making good on a realization that the people developing and implementing the technology should better reflect the composition not just of society, but also potential customers, partners and suppliers.

It will be up to individual organizations to accelerate the trends that drive tech employees' career satisfaction and optimism for the future, while continuing to root out negative aspects of workplace culture. Work-life balance is a primary consideration for women who plan to stay with their current tech roles, and for some people that balance is easier to maintain while working remotely. As companies across industries vie for tech talent and strive to accelerate innovation, they should pay close attention to the policies and cultural factors that create the best possible conditions for enthusiastic employee engagement.

Experiences of everyday inequities and microaggressions (%)

During your career, how often – if at all – do you experience any of the following while at work, including business trips, organized events, and work-related activities outside the office (e.g., dinners, drinks, golf)?



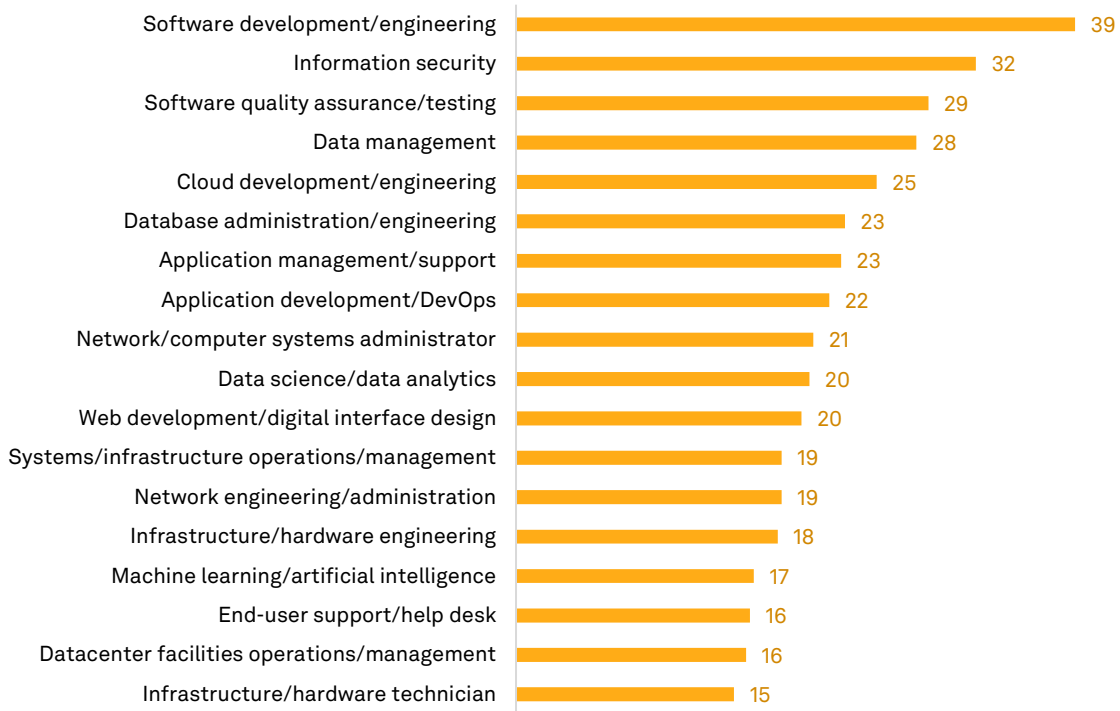
Based on 624 responses to the following question: During your career, how often – if at all – do you experience any of the following while at work, including business trips, organized events, and work-related activities outside the office (e.g., dinners, drinks, golf)?

Source: S&P Global Market Intelligence Women in Technology survey, conducted November 2021-December 2021

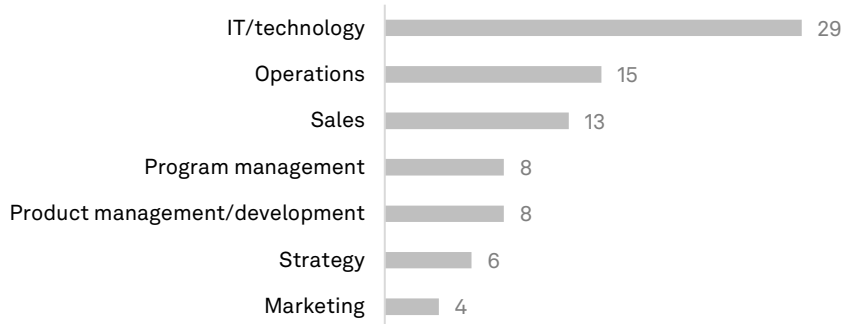
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Appendix

Primary IT job function (%)



Other primary job function (%)



Top chart is based on 362 responses to the following question: Which of the following best describes your (or your team's) primary IT job function(s)? (Select all that apply). Respondents answered this question if they indicated that they work in a technology function/role or are a technology practitioner.

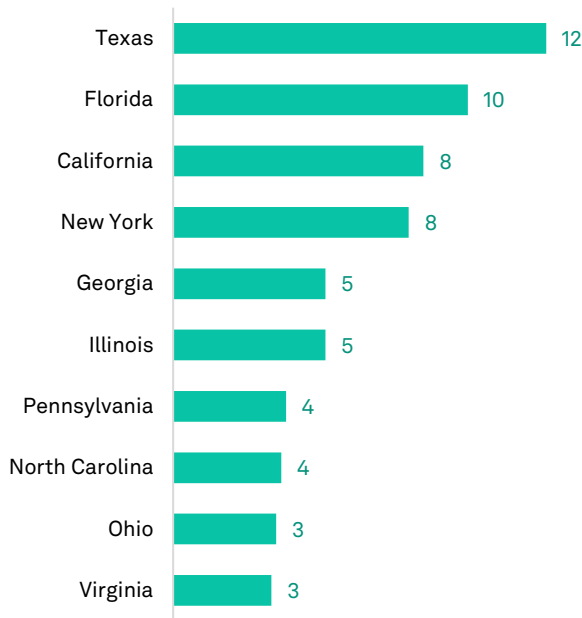
Bottom chart is based on 264 responses to the following question: Which of the following best describes your primary job function? Respondents answered this question if they indicated that they work directly with people who have a technology function/role or are in a line-of-business function working directly with technology practitioners.

Source: S&P Global Market Intelligence Women in Technology survey, conducted November 2021-December 2021

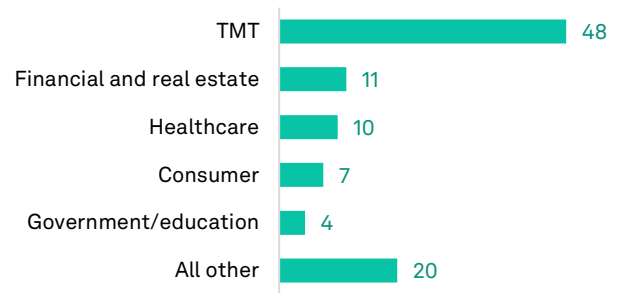
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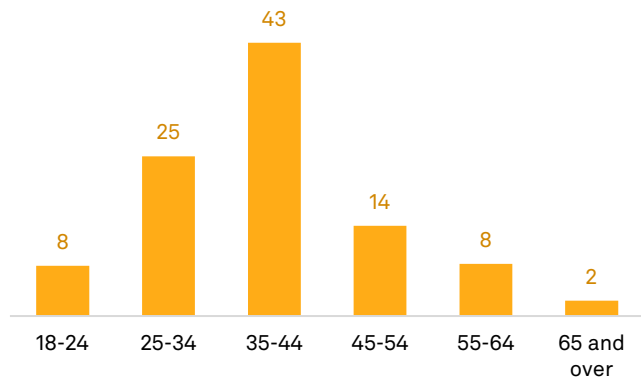
Top 10 states (%)



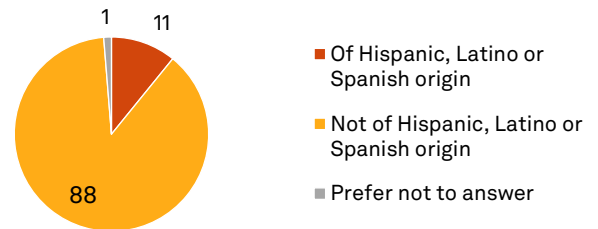
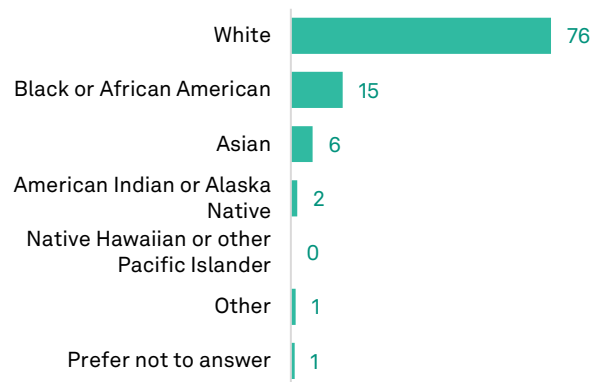
Industry (%)



Age (%)



Race and ethnicity (%)



Based on 626 responses to the following questions:

Which US state do you live in?

Which of the following best describes the industry or sector your organization operates in?

How old are you?

Which of the following best describe you? (Select all that apply)

Are you of Hispanic, Latino or Spanish origin?

TMT = Technology, media and telecommunications

Source: S&P Global Market Intelligence Women in Technology survey, conducted November 2021-December 2021

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Further Reading

[“Voice of the Enterprise: Digital Pulse, Diversity & Inclusion 2021 — Advisory Report,”](#) 451 Research, October 2021

[“Progress toward corporate diversity requires more than ticked boxes and token hires,”](#) S&P Global, February 2022

[“COVID-19 Could Rapidly Expand Family-Leave Policies; It Could Also Deal A Serious Blow To Women In The Workforce,”](#) S&P Global and AARP, October 2020

[“Companies Expand Family-Friendly Policies, But Focus Favors Parents Over Caregivers,”](#) S&P Global and AARP, December 2020

About the Authors

Melanie Posey is the Research Director for the Cloud & Managed Services Transformation at 451 Research, a part of S&P Global Market Intelligence. In addition to managing the research team, she focuses on analyzing the evolution of enterprise IT through the lens of cloud and the associated transformation of IT consumption and delivery models. Melanie also manages 451 Research’s Voice of the Enterprise: Cloud, Hosting & Managed Services offering.

Katie Darden is Research Director for the S&P Global Market Intelligence financial institutions industry research group, which covers the banking, insurance and financial technology sectors. As leader of S&P Global’s Diversity in the Markets Research Lab, Katie also specializes in research on diversity, equity and inclusion, particularly on topics related to gender diversity in the global business community.

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