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Equality. It's about time.

SYSTEM UPDATE:
ADDRESSING THE GENDER GAP IN TECH

Virgin media · O2

SYSTEM UPDATE

Addressing the gender gap in tech

Fawcett Society October 2023

Lizzie Ville

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About us

The Fawcett Society is the UK's leading membership charity campaigning for gender equality and women's rights at work, at home and in public life. Our vision is a society in which women and girls in all their diversity are equal and truly free to fulfil their potential creating a stronger, happier, better future for us all. We publish authoritative research to educate, inform and lead the debate; we bring together politicians, academics, grassroots activists and wider civil society to develop innovative, practical solutions and we campaign with women and men to make change happen.

Acknowledgements

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A note on language

This report uses the term *Black and minoritised.* The term *minoritised,* coined by sociologist Yasmin Gunaratnam, implies that 'people are actively minoritised by others rather than naturally existing as a minority'. Other often-used terms, and which we would find broadly comparable include *Global Majority and People of Colour*. Where different language is used by a secondary study that we refer to, the same language is used in this report for consistency.

In addition, mindful of the nuances in the terminologies and the differences between various groups, where possible we refer to specific ethnicities. We feel that it is important to provide disaggregated data wherever possible to be able to better understand the experiences of women of different ethnicity groups.

FOREWORD

The tech sector has an image problem. For too long, it struggled to throw off the 'tech bro' culture depicted in David Fincher's film *The Social Network* which charts Mark Zuckerberg's rise. In the movie, young men drink beer in dorm rooms while writing code as they build multi-billion-dollar tech companies. Women are, by and large, relegated to consumers – rather than the creators of these new products.

The film reflects how many people outside of tech perceive the industry, and why many women choose to work elsewhere. Understandably, they feel it's not a place for them.

This toxic "tech bro" culture is leading to worse outcomes for women, perpetuating the gender pay gap and allowing the pernicious narrative that certain roles are better suited to men to go unchallenged. It's also leading to worse outcomes for businesses. From product design to service delivery, diversity is proven to drive innovation and facilitate more inclusive and sustainable business growth. Without diversity in tech, we all suffer.

At Virgin Media O2, we're on a digital transformation journey and key to our success is attracting and retaining diverse talent with the digital skills and potential we need both now and in future. It's why we've launched our DE&I strategy *All In* aimed at creating an inclusive, flexible, and empowering culture. And why we set bold ambitions to achieve gender parity and increase the number of employees from global majority groups across the organisation by 2027.

However, to achieve this – we need to address the reasons that women continue to be significantly underrepresented in tech businesses like ours.

We commissioned the Fawcett Society to investigate this issue and provide an in-depth understanding of the state of the nation by exploring the lived experiences of those working in tech, those who have left, and those who have avoided the sector despite having STEM qualifications.

As this research reveals, the experiences of women – whether in or out of the tech sector – is varied. However, from a lack of information about tech careers to being discouraged from pursuing STEM subjects at school; or from daily exclusion to inflexible working practices experienced by women in tech, it's clear that work is required at every level to tackle exclusion and create an inclusive culture people want to work in.

Particularly concerning were the experiences shared by women from the global majority. Exclusion, harassment, direct racism: all were reported by women working in tech. While painful and difficult to read, it is thanks to these women so generously sharing their experiences that we have an opportunity to change and do better.

By listening and learning we can better understand where we should focus our attention and change. One thing is clear: the onus should not be on women to do things differently. It's incumbent on businesses, schools, universities, and government to change and create an inclusive culture where everyone can thrive.

This report provides a comprehensive review of what the tech sector needs to do to address inequalities from recruitment right through to retention. We hope that by holding up a mirror to businesses like ours it kickstarts an urgent conversation on the structural issues and barriers that the sector needs to address. Many of the report's recommendations are not radical, many are free to implement, but collectively can make a big difference to millions of working women.

For all the stark and depressingly predictable findings, there are many parts of this report that leave me feeling optimistic about the future. From the personal accounts of women who have seen the industry shift throughout their career through to the support networks women have built and the messages of hope to the next generation, there are reasons to believe change is possible.

Technology is, and will remain, one of the most exciting places to work. It touches and shapes our lives in countless ways every single day. But it must change. Together we can create an environment where anyone who wants to work in tech feels welcome and supported. That journey starts now.

**Jeanie York,
Chief Technology Officer at Virgin Media O2**

EXECUTIVE SUMMARY

Technology is integral to the ways we live, work, and structure society. But estimates of the proportion of women working in tech roles are dire – less than one third – **29%** – of roles in the digital sector are held by women,[1] with figures dropping to less than **1 in 5** for STEM occupations within the digital sector.[2] At the intersection of gender and race, estimates indicate a shortfall of at least **20,000** Black women in the industry, if it were to be representative of the population.[3]

An estimated **£1.5 billion** is lost annually due to a shortage of STEM skills in the UK workforce.[2] Not only does this reflect a huge pool of untapped talent, but when exclusion on the basis of gender and race occurs, bias seeps into the tech products and systems we rely on every day. What's more, low numbers of women in highly paid industries like tech serves as a major contributor to the gender pay gap.

This research included a survey of **1438** people and in-depth conversations with **21** women who either currently work in a tech role, have left tech, or work outside of tech. This latter group held STEM qualifications equivalent to A Level or above, thus with untapped potential to enter the occupation. By triangulating these perspectives, we sought to understand how experiences and attitudes from within match up to perceptions (and misconceptions) from without. The key findings were as follows.

A lack of careers advice was perceived as a barrier to entering tech, with women in tech roles highlighting an often-misunderstood diversity of entry routes and types of role. For women outside of tech (with STEM qualifications), a lack of careers advice was perceived as a barrier to entry, with **53%** agreeing that they did not know how to get a tech role or enter the field. **32%** of women outside of tech believed there to be a university degree requirement for working in a tech role, whilst women in tech roles had entered via a variety of routes – including without a degree – and were keen to highlight the diversity of entry routes to the sector.

Gendered and racialised stereotypes are a barrier to women entering tech, but resources, support and encouragement can counter these. Gendered self-perceptions and societal messaging acted as a barrier, but opportunities when young to explore and play with technology, alongside support and resources from family and others around them served to counter this messaging and facilitate entry to tech roles for women. Similar stereotyped attitudes permeate tech, with **19%** of men in tech roles giving 'women are naturally less well suited to tech roles than men' as a reason why fewer women work in the profession, whilst just slightly more – **26%** – of men give gender bias in recruitment as a reason.

Many had experienced fair hiring processes for their current role – but this differed significantly by ethnicity and by size of organisation. Black and minoritised women outside of tech – but with STEM qualifications equivalent to A Level or above – were more interested in working in tech roles than white women (**59%**, compared to **31%**). Despite this interest, those who had entered tech roles faced condescension at interview, unexplained rejections, and were significantly less likely than white women to report experiencing fair and unbiased processes in their most recent application (**57%** vs **67%**), whilst **18%** reported being made to feel uncomfortable in relation to their ethnicity during an application. People working in smaller organisations were also significantly less likely to have experienced fair and unbiased hiring processes (**49%** of those in organisations with less than 10 employees compares to **70%** for organisations with 250+ employees).

1   UK Government. Economic Estimates: Employment in the Digital Sector, January 2022 to December 2022 [Internet]. 2023. Available from: https://www.gov.uk/government/statistics/economic-estimates-employment-in-dcms-sectors-and-digital-sector-january-2022-to-december-2022/economic-estimates-employment-in-the-digital-sector-january-2022-to-december-2022

2   Hu Y, Tarafdar M, Alshehabi Al-Ani J, Rets I, Hu S, Denier N, Hughes KD, Konnikov A, Ding L. Gendered STEM Workforce in the United Kingdom: The Role of Gender Bias in Job Advertising. 2022.

3   Coding Black Females & BCS, The Chartered Institute for IT. The experiences of Black women in the information technology industry. 2022.

Experiences of the culture in tech roles were mixed, with Black women and young women at the sharpest end of exclusion. Overall, **73%** women and **75%** men who currently or had recently worked in a tech role agreed that they felt comfortable in the culture at their workplace. However, broken down further, Black and minoritised women, disabled women, and lesbian and bisexual women were significantly less likely to agree. Furthermore, **72%** of Black and minoritised women having experienced at least one form of racism, **72%** of women overall reported experiencing at least one form of sexism, and **73%** disabled women having experienced ableism in a tech role. The most commonly reported form of sexism or discrimination by women working in tech roles was being paid less than colleagues who do the same or a very similar job, experienced by **22%**.

Assumptions about technical capabilities, including being blamed for male colleagues' mistakes and perceived as the 'diversity hire' led to women feeling a heightened pressure to prove themselves in the workplace, with Black women significantly more likely to have experienced the assumption that they do not hold a technical role (**33%**) than white (**19%**) or Asian women (**19%**). Younger women spoke of experiences of exclusion from Hackathon events, and access to interesting work and clear training plans in the workplace.

These experiences were matched by perceptions from women outside tech – with STEM qualifications – of a 'laddish' or misogynistic corporate culture, with **26%** in the survey agreeing that there is more sexist behaviour in tech work than in other types of work.

Workplace equality, diversity, and inclusion initiatives, whilst sometimes pushing real progress, could also be perceived as performative when not combined with concrete action. Whilst women who had worked in tech for more than 10 years spoke of progress over time, albeit slow, others spoke of performative 'diversity' cultures and an over-emphasis on outreach and education, sometimes at the cost of not fixing internal workplace practices. There were mixed views on the phrase 'women in tech' – women associated it with togetherness and collaboration, as well as highlighting how it could make them feel separate from the norm and patronised.

Flexible work was important to women across the board, with a need to normalise this in workplace cultures. Whilst many were happy with the flexibility offered by their role, with **68%** women and **69%** men working in tech agreeing that their employer provides options for flexible work that suit them, women in the interviews had been forced to leave their role due to a lack of flexible or part-time work options after a return from maternity leave. And for those who were able to access part-time or flexible work, this was often not normalised in the workplace culture. Just one third of women (**36%**) and men (**33%**) in tech roles had seen flexible working advertised in job descriptions in their most recent job search, and a similar proportion (**33%** of women and **32%** of men) had discussed flexible working options during application processes, with those in larger organisations significantly more likely to have done so.

Women who were interviewed left tech roles due to flexible and part-time work requests being denied, a lack of investment in their skills, a toxic culture, or wanting to spend time with their family. Whilst in the survey, over the past 12 months, **43%** women and **42%** men had considered leaving their tech role weekly or more often. People with caring responsibilities were significantly more likely to have considered leaving weekly or more, as were young women under 24 (**57%**), bisexual and lesbian women (**51%**), and disabled women (**59%**). Of those who had left, Black and minoritised women were significantly more likely to cite the working culture not being inclusive as a reason (**22%**) than white women (**8%**). Whilst the top reason for leaving for both men and women was to start a new role in a different type of work, the next most common reason for women was to look after children or others they have caring responsibilities for (**22%**), whilst just **15%** of men chose this option. The second most common reason for men leaving was to study something new and unrelated to tech (**22%**) or a lack of opportunity for progression (**22%**).

The next section outlines a series of recommendations for employers, government, schools, and universities, to address the gender gaps in both recruitment and retention of women in tech roles. These include steps to counter stereotypes and broaden access to tech, reduce bias in recruitment, promote an inclusive social culture, normalise and expand flexible and part-time work and parental leave, and provide equitable training, pay, and progression. We must tackle the structural issues which continue to lock women out of tech roles.

RECOMMENDATIONS

The recommendations that follow have been developed in response to the findings in this report, and include suggestions from women in the focus groups and interviews. The women were asked what they would like to see changed, either to improve their current experiences in a tech role or to enable more women to enter the field.

Recruiting women

1. Reducing bias at application

Black and minoritised women spoke about challenging experiences of job applications, suggesting that a strong anti-racist recruitment strategy is a central element of tackling the underrepresentation of women in tech roles. The women in the focus groups and interviews also pointed out that job advertisements need to appeal to women, by signposting the availability of flexible work, using gender neutral language, and encouraging underrepresented groups to apply.

Employers should:

- Adapt job advertisements to:
  - Advertise all reasonable flexible work options available to applicants, such as flexible hours, compressed hours, job sharing, remote working, or part-time work – with flexibility as the default. This shifts responsibility away from applicants to make requests (which can prejudice an application) and toward employers to consider what is possible in their workplace.
  - Highlight or link to organisational policies around parental leave.
  - Always include a salary.
  - Only state essential person criteria, and encourage applications from individuals even if they do not meet all the criteria, especially degree requirements which can be replaced with equivalent work experience.
  - If training is available as part of the role, clearly state this – to help tackle any misperceptions that particular previous qualifications are required.
  - Explicitly encourage members of demographic groups which are under-represented in the organisation to apply.
  - Use tools (like gender checkers, widely available online) to identify and remove gender-biased language in job advertisements.
- Not ask salary history questions at any point during the application or negotiation process, as this perpetuates pay disparities by gender, ethnicity, and other characteristics.
- Ensure interview panels reflect the diversity of the organisation.
- Ensure that assessments in application processes are only used where directly relevant to the job role (e.g. not based on personality tests, which can embed bias).
- Explain in advance what is required from applicants e.g. by providing interview questions or details of assessments.
- Remove names from CVs during shortlisting.

- Set targets to improve the proportion of women, and Black and minoritised women at all levels of the organisation, with built-in accountability.
- Partner with external organisations to facilitate inclusive recruitment beyond existing social networks.

Government should:

- Require employers to advertise the reasonable flexible work options available to applicants during recruitment, such as flexible hours, compressed hours, job sharing, remote working, or part-time work. Roles should be advertised as flexible by default, unless there is a legitimate business reason not to.
- Launch public campaigns to raise awareness of the benefits of flexibility to employers in the tech industry.
- Ban salary history questions at application and require the publication of salary ranges on job descriptions.

2. Countering stereotypes and broadening access to tech

Across the interviews and focus groups, women spoke about the important role of employers tackling the gender disparity in tech roles. They strongly wished they had had been given a greater understanding of the types of tech roles available and opportunities to learn skills such as coding from a young age.

Employers should:

- Expand and support programmes which teach tech skills to people of all ages – particularly women and Black and minoritised people – including STEM returner programmes for career changers or those returning to tech after parental leave or a period of absence. Whilst also acknowledging the value of women-only and 'women in tech' initiatives, ensure that women are included in broader initiatives for everyone regardless of gender, and that these foster an inclusive culture.
- Expand and support programmes which offer careers information and advice to people of all ages, to:
  - Broaden understandings of the wide range of sectors and types of roles within tech.
  - Bust myths around narrow entry routes and qualification requirements to tech roles.
  - Counter gender and racial stereotypes around who is capable and interested in tech work.
  - Make sure this is not an isolated one-off event but features regularly at career days and advice sessions, to go some way toward countering the stereotyped messaging received everyday by girls and young women.
- Expand and support programmes which support and develop the tech knowledge of teachers and educational staff.

Government should:

- Provide funding for innovative practices such as STEM returner programmes and incentivising people working in tech to teach part-time.
- Embed the active countering of gender stereotypes, particularly around subject skills, in the core of the early years and primary school curricula. Ensure that tech skills are central to these curricula.
- Provide greater funding and incentives for individuals with expertise in computing or tech to teach, in order to narrow the gap in access to this knowledge among boys and girls.

Schools, colleges, and universities should:

- Work with technology employers to ensure teachers are trained in offering careers advice to young people, which, as above:
  - Counters gender and racial stereotypes throughout everyday discussions with young people, in addition to careers events.
  - Broadens understandings of the opportunities available and entry routes.
  - Ensures careers advice does not discourage girls from considering tech careers.

Retaining women

1. Promoting an inclusive social culture

As highlighted by the interview findings, equality, diversity, and inclusivity initiatives could often be perceived as performative. It is crucial that employers address the culture in their organisation, to ensure the retention of the women who already work there. This work must separate the issue of retention from that of recruitment, and importantly, be conducted by organisations of all sizes, particularly smaller organisations. Further to the recommendations below, actions to promote an anti-racist culture can be found in Fawcett and Runnymede's *Broken Ladders* report.[4]

Employers should:

- Develop an anti-racism and misogyny action plan with measurable actions that are a) reported on at senior level, and b) reflected in managers' performance evaluations.
- Clearly communicate the organisations' values, by setting clear expectations regarding acceptable and unacceptable behaviour, and promote understanding via communications of what racism and misogyny look like in the workplace.
- Have a clear and transparent reporting mechanism for grievances and harassment, including racism and misogyny, and ensure that outcomes are made as independently as possible with careful consideration of the effects of hierarchies and power dynamics within the organisation.
- Collect data on experiences of racism and misogyny in the workplace, including monitoring complaints and whether these are upheld, by gender and ethnicity. Follow through with action plans to address any inequities.
- Conduct exit interviews when employees leave their roles, particularly women and Black and minoritised people, and use this data to identify and address any organisational issues.
- Acknowledge the impact of workplace racism and misogyny on physical and mental health and provide support to employees that is trauma-informed.[5]
- Create opportunities and ensure equitable access to tech events (e.g. Hackathons, conferences, and not just 'women in tech' events) for women, particularly Black and minoritised women, and for people of all levels of seniority in the organisation. Monitor this and follow through with action to address any inequities.
- De-gender team social events by ensuring that these are varied, reflect diverse interests and do not exclude people.
- Celebrate diversity in the organisation, throughout the year as well as at significant points in the calendar such as religious holidays and pride events.

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4   Gyimah M, Azad Z, Begum S, Kapoor A, Ville L, Henderson A, Dey, M. Broken Ladders: The myth of meritocracy for women of colour in the workplace. The Fawcett Society & The Runnymede Trust; 2022. Available from: https://www.fawcettsociety.org.uk/broken-ladders

5   Manning K. We Need Trauma-Informed Workplaces [Internet]. Harvard Business Review. 2022. Available from: https://hbr.org/2022/03/we-need-trauma-informed-workplaces

Government should:

- Ensure that initiatives to support the tech industry carefully consider the equality impact. This includes ensuring that financial support is provided to women, particularly Black women.

2. Normalising and expanding flexible and part-time work and parental leave

The ability to choose how and when they work was highly important to women in exploring the possibility of entering tech, whilst a lack of flexibility meant some were forced to leave the tech roles that they enjoyed, particularly after becoming a new parent. To recruit and retain more women it is critical that flexible and part-time work options are made available, but in addition – are normalised for people regardless of gender within workplace cultures, particularly by leadership.

Employers should:

- Ensure that flexible work is made the default working practice by embedding this into organisational policy – to include options such as compressed hours, job sharing, and flexible hours in addition to remote working (without mandated office days). As above, ensure these options are advertised on job descriptions.
- Ensure clear, fair and transparent processes for flexible and part-time work requests are embedded throughout organisational policy, with decisions not at the behest of individual managers.
- Monitor the outcomes of flexible work requests by gender, ethnicity and parenthood. Follow through with action plans to address any inequities in outcomes.
- Normalise flexible and part-time working patterns through example-setting among senior leaders and by ensuring that all employees are informed of the options available to them.
- Encourage men in particular to take paternity leave through example-setting among senior leaders and improve the available offers beyond the statutory amounts.
- Ensure options for flexible and part-time work are discussed with men as well as women after returning from parental leave, without gendered assumptions about either women or men deciding to alter or not alter their working pattern.

Government should:

- Reform and expand the parental leave system so that both parents are individually supported and remunerated.

3. Providing equitable training, pay and progression

Women in the focus groups and interviews spoke about experiences of earning less than their male counterparts for the same work, of unequal access to support and training, and of a lack of pay transparency clarity over promotion criteria.

Employers should:

- Increase access to training, particularly for junior employees, and ensure that this is part of a comprehensive and ongoing training plan.
- Increase access opportunities for women and underrepresented groups e.g. through apprenticeships and other salaried training positions.
- Ensure pay transparency by having documented salary grades.

- Implement a pay and bonuses audit to determine whether pay and bonuses are fair among employees by gender and ethnicity.

- Ensure clarity in promotion criteria by documenting this and informing employees, with transparent and fair application processes that reduce bias in the ways described above in '*Recruiting women: 2. Reducing bias at application*.'

- Ensure consistency and clarity in the ways in which bonuses are provided across the organisation, by documenting this and informing employees.

- Collect data, report on, and publish ethnicity and gender pay gaps, and link this to an action plan to address disparities with accountability built in.

Government should:

- Legislate for mandatory ethnicity pay gap reporting for organisations with 100+ employees.

- Require employers to publish action plans to tackle pay gaps by gender and ethnicity.

- Legislate to provide employees with the Right to Know what a male colleague is earning if they suspect pay discrimination.

- Take urgent steps to address disparities in pay, by ensuring that any support to the tech industry considers the gender pay gaps in organisations.

INTRODUCTION

The implications of women's underrepresentation in tech are broad. Digital technology underpins societal functioning. It is central to almost every facet of our working and daily lives, particularly communication and information sharing. Not only does technology suffer from missing talent when women and Black and minoritised people are excluded from its development, but without a diverse, gender-balanced workforce, existing biases can be further propagated and amplified. Indeed, a 2023 survey from 'Women in tech' finds that **90%** of tech workers believe that the tech sector would benefit from a gender equal workforce.[6]

For example, as large language models and other applications of Artificial Intelligence (AI) begin to become mainstream, gender bias can also be exacerbated by a lack of representativeness in the data that is used to train these models. This often means that their outputs can be inaccurate or tailored to white, male or narrow demographic groups.[7] Examples of this include facial recognition technology being 99% accurate for white Western men but dropping dramatically for women of colour, or the default use of male pronouns by Google Translate.[8] Women working in AI have highlighted a need for reducing stereotypes, intersectionality, and for developers to not make assumptions about the needs of particular technology users, such as LGBTQ+ women and women of colour.[8]

Furthermore, the occupational segregation of women out of high paid roles, like tech, and into lower paid roles is a major driver of the gender pay gap.[9] The underrepresentation of women at senior levels also drives a gender pay gap within tech itself. ONS figures for 2022 put the gender pay gap for the Information and Communication sector at 11% for mean hourly earnings for full-time employees (14% median). However, this does not account for bonuses which are common in tech – the mean bonus gap between men and women in the information and communication sector sits at 31%.

Finally, STEM industries and occupations are critical to the UK's economic growth, with an estimated **£1.5 billion** lost annually due to a shortage of STEM skills.[10] The lack of women in tech roles specifically reflects an enormous pool of missing talent, whose participation would mean a boost for the industry as well as a move toward more equitable practice. The technology on which we all depend can only benefit when the voices and expertise of a diverse range of people play a central role in developing, maintaining, and regulating it.

Representation in tech: what does the data tell us?

How many women work in tech roles? The UK Government defines the 'digital sector' to include computer programming and consultancy as well as publishing, telecommunications, film, TV, video, radio, software publishing, and the manufacture, wholesale, and repair of electronics. In 2022, there were 1.9 million filled jobs in this sector (around 1 in 20 UK jobs overall) and **29%** of these were held by

6   Women in Tech. Women in tech survey. [Internet]. 2023. Available from: https://www.womenintech.co.uk/women-in-tech-survey-2023

7   López Belloso M. Women's Rights Under AI Regulation: Fighting AI Gender Bias Through a Feminist and Intersectional Approach. InLaw and Artificial Intelligence 2022 (pp. 87-107). TMC Asser Press, The Hague.

8   Schulenberg K, Watkins H, Hauptman AI, Schlesener EA, Freeman G . "I Felt Like I Wasn't Really Meant to be There": Understanding Women's Perceptions of Gender in Approaching AI Design & Development. Hawaii International Conference on System Sciences. 2023.

9   Olsen W, Gash V, Kim S, Zhang M. The gender pay gap in the UK: evidence from the UKHLS. 2018.

10   Hu Y, Tarafdar M, Alshehabi Al-Ani J, Rets I, Hu S, Denier N, Hughes KD, Konnikov A, Ding L. Gendered STEM Workforce in the United Kingdom: The Role of Gender Bias in Job Advertising. 2022.

women.[11] However, there is substantial variation within the different parts of the digital sector. Of 1.0 million jobs within the largest subdivision – 'computer programming, consultancy and related activites' – just **23%** of roles were held by women (**Figure 1**). Furthermore, analysis of Labour Force Survey data by the British Computer Society (BCS) and Black Coding Females indicates that women are particularly poorly represented among IT directors (at just 17%) and programmers or software developers (16%).[12]

Figure 1. % roles filled by women in the digital sector, by division

Division	%
All divisions	29%
Publishing	50%
Information service activities	39%
Film, TV, video, radio and music	37%
Manufacturing of electronics and computers	34%
Wholesale computers and electronics	34%
Telecommunications	33%
Software publishing	27%
Computer programming, consultancy and related activities	23%
Repair of computers and communication equipment	15%
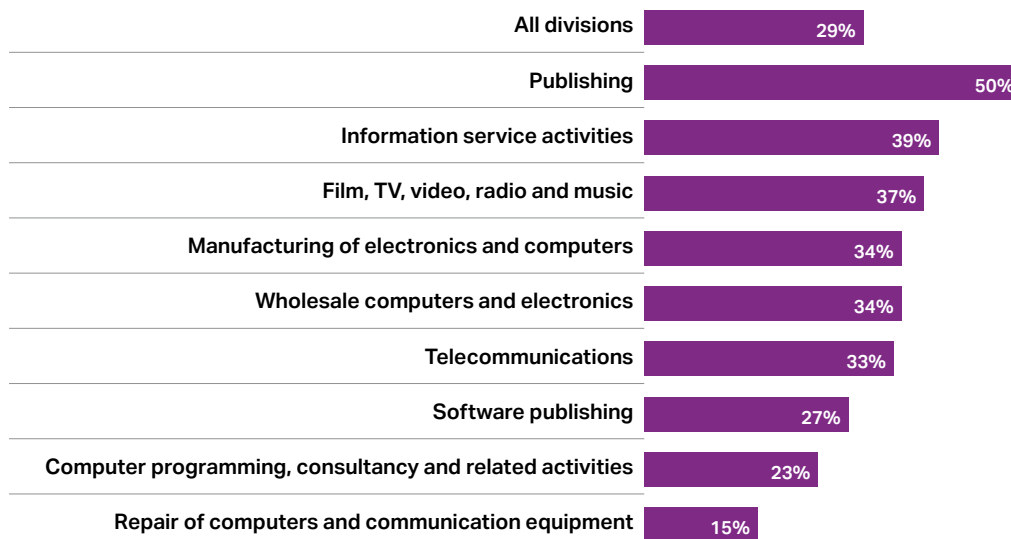
Source: UK Government, 2023. Economic Estimates: Employment in the Digital Sector, January 2022 to December 2022.

Disabled people are also underrepresented in the digital sector, at **12.5%** of jobs (compared to the 16% of roles held by disabled people overall in the UK workforce).[11] Whilst overall, Black and minoritised people are slightly overrepresented in the digital sector (holding 18% of digital roles, compared to 14% UK roles overall), disaggregating further by ethnicity tells a more nuanced story. There were slightly more people of Asian or Asian British ethnicity in digital roles than in the UK workforce overall (9.9% vs 7.5%), and slightly more people of Mixed or multiple ethnicities (1.8% vs 1.5%), but fewer people of Black, African, Caribbean, or Black British ethnicity (**2.9%** digital roles, compared to 3.4% of the UK workforce).[11] Black women in particular are significantly underrepresented: with just 12,000 Black women currently working in the IT workforce, Coding Black Females estimate there to be a shortfall of at least **20,000** Black women, if the industry were to be representative of the population.[12]

Exploring figures by occupation as well as industry brings the representation of women down further still, with women who do work in the digital sector being less likely to hold roles that involve STEM (science, technology, engineering, or maths) than men. Indeed, from 2018-2020, within the digital sector, 81.5% of STEM occupations were held by men,[10] suggesting that approximately, just **18.5%** of STEM occupations within the digital sector were held by women.

11   UK Government. Economic Estimates: Employment in the Digital Sector, January 2022 to December 2022 [Internet]. 2023. Available from: https://www.gov.uk/government/statistics/economic-estimates-employment-in-dcms-sectors-and-digital-sector-january-2022-to-december-2022/economic-estimates-employment-in-the-digital-sector-january-2022-to-december-2022

12   Coding Black Females & BCS, The Chartered Institute for IT. The experiences of Black women in the information technology industry. 2022.

The disparity is reflected in inventorship and funding gaps by gender and ethnicity. Just 16% of inventors on patent applications are women[13] and just 0.24% of the 1.7% of venture capital funding in the UK from 2009 – 2019 went to Black entrepreneurs, and just one Black woman received funding during this time (0.02%).[14]

Not just a 'leaky pipeline'?

Many researchers and organisations have used the analogy of a 'leaky pipeline' to reflect each stage in a career in technology where women are 'filtered out'. This narrative follows a life trajectory, from stereotypes and norms reducing young girls' interest and confidence in STEM disciplines, continuing through to lowers numbers of young women accessing higher education courses in STEM subjects (just **19%** of university students studying STEM subjects are women), barriers at recruitment into tech roles, and finally, lower numbers of women progressing into leadership (just **5%** of senior tech roles are held by women).[15]

These statistics are important, and clearly education and societal messaging plays a crucial role in shaping career decisions. Much important work has been done in this area, including outreach programmes to encourage girls and young women to enter tech roles. However, the pipeline does not reflect the experience of everyone, and does not acknowledge the large numbers of people (almost half) who enter STEM roles via alternative routes.[16] Indeed, many careers in tech do not require STEM degrees or backgrounds, and interests can develop at any life-stage. Seemingly, there are contrasting implications of this: whilst on one hand, many roles may be more accessible (at least in terms of qualifications) than assumed, research by Alfrey et al. in 2022[17] also notes that:

> **When the educational pipeline is framed as the primary barrier to tech jobs, the reality of how most tech workers get hired – through referrals, social networks, and cultural capital – is masked."**
>
> **[Alfrey et al., 2022]**

This is supported by evidence suggesting that women and Black and minoritised people rely more heavily on educational pipelines. For example, Black Coding Females and British Computer Society (BCS) finding that ethnic minority IT specialists are more likely to hold a degree in an IT-related discipline (13%), compared with 11% of IT specialists from white ethnic groups.**[12]**

Not only can an over-emphasis on the educational pipeline mask exclusionary practices at the point of recruitment, it can sometimes redirect attention from fixing the workplace practices which can lead to women's departure. For this reason, researchers have highlighted the need for a clear distinction between the issues of recruitment and retention of women.[18] Indeed, evidence from the UK Labour Force Survey from 1997 to 2021 points to a retention issue in STEM. For people with master's degrees in a STEM subject, the gap between the numbers of men and women working in STEM fields starts off relatively small (at 4%), then widens to 20 percentage points 15 years after graduation (controlling

13   WIPO. Intellectual Property, Gender, and Diversity [Internet]. 2023. Available from: https://www.wipo.int/women-and-ip/en/#:~:text=Disparities%20exist%20in%20the%20use,are%20rising%2C%20progress%20is%20slow

14   Tech Nation. Diversity and inclusion in UK tech. https://technation.io/diversity-and-inclusion-in-uk-tech/. 2021.

15   PwC. Women in Tech: Time to close the gender gap [Internet]. 2023. Available from: https://www.pwc.co.uk/who-we-are/her-tech-talent/time-to-close-the-gender-gap.html

16   Cannady MA, Greenwald E, Harris KN. Problematizing the STEM pipeline metaphor: Is the STEM pipeline metaphor serving our students and the STEM workforce?. Science Education. 2014; 98(3):443-60.

17   Alfrey LM. Diversity, Disrupted: A Critique of Neoliberal Difference in Tech Organizations. Sociological Perspectives. 2022; 65(6):1081-98.

18   Drury BJ, Siy JO, Cheryan S. When do female role models benefit women? The importance of differentiating recruitment from retention in STEM. Psychological Inquiry. 2011; 22(4):265-9.

for degree subject).[19] Whilst this gap is larger for women with children, motherhood does not entirely explain this difference.

Tech organisations can also use the pipeline framing to focus their efforts externally to the workplace – presenting the issue as society, or education's problem. Research into the views of top Silicon Valley executives, indicated that they often understood the sources of inequality in an individualistic (individual people as the source of bias) or societal (based in broader society) way.[20] As one executive put it:

> **" The question I have is: do we really have a problem? Does [our company] have a problem? From the data I've seen, I don't think so. I think the industry and this country potentially has a problem."**

[Silicon Valley executive, Research by Wynn, 2020]

This perspective can sometimes come at the cost of reflecting on and changing their own organisations' practices (**Table 1**). Whilst of course, each of these sources of inequality exist, a solely individualistic or societal perspective from leadership can lead to a lack of action within workplaces. This is despite there being much that is controllable, including processes around recruitment, promotion, parental leave, part-time and flexible work.

Table 1: Individualistic, Societal, and Organisational Change Ideologies identified by Wynn, 2020[20]

	Individualistic	Societal	Organisational
Sources of inequality	Individual men and/or women	The broader society	Organisational processes
Gender differences	Men and women are fundamentally different (internalised)	Boys and girls are socialised differently by the larger society (cultural)	Men and women are treated differently by the organisation (structural)
Target of change	Individuals should try not to be biased	The broader culture must be changed	The organisation is responsible for mitigating bias
Change efforts	Mentorship, development, and training programs	Outreach beyond the company	Changing hiring / promotion procedures
Ownership of change	Change agents	None	Organisation

Recruitment practices

A range of evidence highlights the real impact that recruitment practices can have on the gender balance of an organisation. The first point of contact between a potential employee and employer is usually the job advertisement, and the content of this can do much to determine who applies. Evidence suggests that men will apply for roles when they meet, on average, 60% of requirements outlined on the job advertisement, whilst women are more likely to apply only when they meet all of the requirements – due to a belief that they would not be hired otherwise (rather than they would not be capable of the job).[21] This provides a case for employers to be selective about posting only the

19   Delaney JM, Devereux PJ. Gender differences in STEM persistence after graduation. Economica. 2022.

20   Wynn AT. Pathways toward change: Ideologies and gender equality in a Silicon Valley technology company. Gender & society. 2020; 34(1):106-30.

21   Mohr TS. Why Women Don't Apply for Jobs Unless They're 100% Qualified. Harvard Business Review [Internet]. 2014; Available from: https://hbr.org/2014/08/why-women-dont-apply-for-jobs-unless-theyre-100-qualified

essential requirements for the roles (and clarity over which skills are 'desirable' and able to be trained), particularly for tech roles which often post a significant number of technical skills, beyond what the job requires.

In their BIAS project, Hu et al. used the language in the adverts, that is, gendered 'social-psychological cues', to produce a gender bias score for 11.2 million job postings in the UK between 2018 and 2020. They found that most job postings (65%) and most industries display male bias in their wording, but this bias increases for male-dominated industries. For information technology/telecommunications roles, almost 80% of job postings were male-biased. Other researchers have highlighted how job postings for tech roles often list perks associated with "bro culture", such as table football and sports outings.[22] This has important implications: evidence suggests that this gendered language can actively deters women from applying,[23] whilst gender-neutral language increases the numbers of women applying.[24]

Furthermore, case studies demonstrate that a more gender-balanced workforce is very achievable for tech where there is full-organisational support and concerted effort from leadership. AirBnB increased the proportion of women in their data science department from 15% in 2015 to 44% in 2019 via a number of measures, including centring diversity on their website careers page, removing names from job applications for hiring managers (a practice that is well-evidenced to reduce hiring bias by ethnicity and gender), and ensuring hiring panels include at least one woman.[22]

Retaining women: the culture of tech.

Once women have entered a tech role, organisational policy, practice, and culture can have a significant impact on their decisions to stay or leave. Equal pay, promotion opportunities, flexible work, and parental leave options have all been cited as important factors in women's experience of the tech workplace. A case study of the company Ultimate Software found that the organisation achieved 50% gender parity among employees through expanding their parental leave entitlements for employees, as well as covering adoption fees and fertility treatments. In addition, they implemented a policy for gender pay equity, monitored their gender pay gap, placed a central focus on developing their culture and introduced leadership development programmes for women.[22]

Flexible working is also a key draw for women, who continue to hold the majority of caring and domestic responsibility in the UK. A 2023 survey from Women in Tech found that 63% of women place flexible working in their top three benefits which would attract them to a job, followed by remote working and training within a company.6 Whilst remote working is becoming more common, options such as part-time work are unusual among tech roles, with just 6% of IT specialists working part-time, compared with 23% of workers overall.[12]

Stereotypes run deep in tech settings, and are racialised as well as gendered. in Tech's survey found that 76% tech workers had experienced gender bias or discrimination in the workplace at least once.[6] And even when women do encounter success, such as promotions, these can be along stereotyped lines. For example, perceptions of white women's strong 'people skills' from their supervisor can often mean they are moved out of technical roles and towards business and management.[25] In contrast, Black and minoritised women are much less likely to be promoted at all, but instead are frequently entirely excluded from social networks within tech workplaces. Research from Black Coding Females highlights Black and minoritised women's experiences of needing to work twice as hard to prove themselves, due to a lack of 'fit' with the tech archetype.[12] Experiences of ideas not being

22   Ly-Le TM. Hiring for gender diversity in tech. Journal of Management Development. 2022; 41(6):393-403.

23   Gaucher D, Friesen J, Kay AC. Evidence that gendered wording in job advertisements exists and sustains gender inequality. Journal of personality and social psychology. 2011; 101(1):109.

24   Del Carpio L, Fujiwara T, Welcome PD. Do Gender-neutral Job Ads Promote Diversity? 2023.

25   Alegria S. Escalator or step stool? Gendered labor and token processes in tech work. Gender & Society. 2019; 33(5):722-45.

acknowledged, men dominating conversations, and women's exclusion from often heavily gendered social activities serve to facilitate this.[8]

Tech is often framed as somehow outside of societal bias, that is, as concerned with empiricism and therefore value-neutral, rigorous, and objective. However, across interviews with tech workers, research highlights how tech workers often made implicit claims of a meritocracy, suggesting that those already in the room – who are predominantly white – are the best and the brightest. This understanding is at odds to the structural racism and exclusion evidently present in tech.[17] In coding cultures in particular, this narrative, and ideas of a natural difference in technical ability by gender serves to maintain inequality.[26] Tech "brogrammers" are framed as white, male, nerdy, anti-social, and as Brooke (2020) puts it, are narrated as having "moved from a youthful socially marginalised position to become rich and powerful through technological prowess and entrepreneurship".

As highlighted above, some tech companies have made efforts to improve the representation of women and Black and minoritised people in their organisations with some positive success. Yet tech remains among the least diverse sectors overall. Researchers stipulate that in some cases, companies have adopted diversity and inclusion initiatives because of public pressure but have not, as yet, committed to the hard work required in addressing structural issues.[22] Critiques of the phrase 'Women in Tech' itself – often used in conjunction with recruitment drives, networking or leadership initiatives for women – note that it narrates women as the 'out-group' in tech rather than part of the default.[26,27]

Thus, this research explored women's perspectives on the phrase 'women in tech' among a broader exploration of the everyday culture of tech work in relation to retention, and separately, recruitment. Uniquely, the aim was to triangulate perspectives of women who have left tech, women currently working in tech roles, and women outside tech through interviews and focus groups. There is limited understanding of perspectives of tech work from without, especially of assumptions around tech work, including its culture, the requirements for entry (educational or otherwise) and the perceived barriers to participation. In addition, to make real change in tech, buy-in from people regardless of gender, about the need for structural and cultural change is critical. Thus, via a survey, this research sought to understand the prevalence of the key issues identified, and both women and men's perspectives on them.

26   Brooke S. Breaking gender code: visibility, power, and gender in creative coding cultures. [University of Oxford]; 2020.

27   Hardey M. The Culture of Women in Tech: An Unsuitable Job for a Woman. Emerald Group Publishing; 2019.

METHODS

This project followed a mixed-methods design. Interviews and focus groups were conducted first to explore and identify key themes, followed by a large survey to understand the prevalence of the emerging views and experiences identified. These methods were used together to answer the following research questions.

RQ 1. What do women who either currently work in a tech role, have left a career in tech, or have not worked in tech (but hold relevant skills or qualifications to do so) experience or perceive as the key barriers and facilitators to entering tech roles?

RQ 2. What do these groups of women experience or perceive as the key barriers and facilitators to remaining in tech roles? This includes the workplace culture, employer practices and policies, and promotion and progression.

RQ 3. What changes to the sector would these groups of women like to see to enable themselves or more women like them, to remain or work in tech roles?

RQ 4. How do views and experiences on these topics differ by key demographic factors, including ethnicity, sexual orientation, disability, and caring responsibilities?

RQ 5. What is the prevalence of these views and experiences, and how do they compare to the views and experiences of men who have worked or currently work in tech roles?

Focus groups and interviews

Focus groups and interviews were conducted between April and June 2023 by the Fawcett research team. A total of 21 women participated. **Table 2** summarises the participants' characteristics. Recruitment was conducted by the research agency Leftfield,[28] via a network of locally based panels. Recruiters used a screening questionnaire to identify participants who met the inclusion criteria for the following groups.

8 women who currently work in a tech role (2 focus groups).

Tech roles were defined as those involved in the design, research, building, managing or maintaining of technology products and services, including software and hardware. To understand a variety of experiences, this included UK tech roles both within and beyond the digital sector, in industries including finance, public services, and telecoms. Two 90-minute focus groups were conducted with 4 women in each. Participants in the first group had less than 10 years' experience in tech roles, whilst the second group had 10 or more years' experience.

8 women who have not worked in a tech role, but hold a STEM qualification (2 focus groups).

Two 90-minute focus groups were conducted with 4 women in each. Participants had never worked in a tech role but held a qualification in a STEM (science, technology, engineering, or maths) subject at Level 3 (equivalent to AS/A Level) or above. Participants in the first group were aged 18-25 years whilst the second group were aged 26 or above.

5 women who have left tech roles (5 one-to-one depth interviews).

Eight 60-minute interviews were conducted with women who previously worked in a tech role, but 3 of these interviews were excluded from the dataset – one was a participant whose experience in a tech

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28   Leftfield is a member of the Market Research Society and is ISO20252 credited.

role was abroad, and two had left their tech roles more than 10 years ago. Interviews rather than focus groups were conducted for this group as it was anticipated that recruitment would be more difficult. Participants had left tech roles for a variety of reasons; however, this did not include retirement.

Table 2: Participant characteristics for the focus groups and interviews. N = 21

		Count
Ethnicity	Black and minoritised	5
	White British	15
	White Other	1
Disability	Yes	3
	No	18
Sexual orientation	Lesbian, gay, bisexual, or other orientations	3
	Straight	17
	Prefer not to say	1
Caring responsibilities	Yes	6
	No	15
Years of experience in a tech role	None	8
	Less than 5 years	5
	5-10 years	4
	More than 10 years	4
Age	Age range 19-48 years	
	Mean age 29.5 years	

Semi-structured discussion guides were used to maintain consistency across data collection for each of the three groups, whilst providing the interviewer flexibility to explore responses further as and when deemed necessary. All sessions were conducted online and video recorded via Microsoft Teams with participants' consent.

The study was explained to participants prior to participation and the interviewer let them know that they could skip questions, stop or pause the interview at any time, as some of the questions concerned sensitive topics. Participants were provided with a list of support organisations and a privacy notice detailing how their personal data would be stored and processed. Personal data was stored securely on Fawcett's file systems – to which only core researchers had access – and in accordance with GDPR.

Framework, a thematic approach developed at the National Centre for Social Research, was used to manage and analyse the interviews and focus groups. This involved charting and coding data by topic and by participant, to triangulate experiences of women who work in tech roles, have left tech, or have not worked in tech, and draw out key themes.

Survey

In May 2023, 1438 people took part in an anonymous online survey designed by Fawcett, with data collection and analysis conducted by the research agency Survation[29]. This included the following samples.

- **555 women** and **523 men** who currently or have recently left a tech role (less than 4 years ago),
- **360 women** who have not worked in tech, but hold a qualification in a STEM subject at Level 3 or above.

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29   Survation is a member of the British Polling Council. Data analysis included cross-tabulation and hypothesis tests.

These samples were chosen to mirror the focus group and interview samples, with the additional of men in tech to understand the gendered differences in views and experiences. **Table 3** summarises the respondent characteristics for each sample.

Table 3: Participant characteristics for the survey. N = 1438.30

		Women in tech roles (or recently left) N = 555	Men in tech roles (or recently left) N = 523	Women outside tech N = 360
Ethnicity	Asian / Asian British	14%	8%	9%
	Black / African / Caribbean / Black British	13%	12%	4%
	Mixed / Multiple ethnic groups	5%	4%	2%
	Other ethnic group	0.5%	0.4%	1%
	White	67%	75%	84%
Disability	Yes	29%	29%	18%
	No	67%	68%	79%
Sexual orientation	Lesbian, gay, or bisexual	16%	14%	8%
	Straight	81%	84%	91%
Caring responsibilities	Yes	66%	63%	59%
	No	31%	36%	39%
Years of tech experience	10 or fewer	90%	78%	N/a
	More than 10	10%	22%	N/a
Age	18-34	62%	44%	41%
	35-54	34%	47%	49%
	55+	4%	8%	10%
Country	England	90%	88%	85%
	Northern Ireland	1%	1%	5%
	Scotland	5%	7%	8%
	Wales	4%	4%	2%
Employment status	Full-time	70%	83%	65%
	Part-time	20%	10%	24%
	Self-employed / Other status	10%	7%	15%
Industry	Information, media, and communication	10%	17%	1%
	Health	10%	5%	29%
	Education	9%	5%	23%
	Professional, scientific, and technical	8%	13%	4%
	Finance	8%	10%	7%
	Retail and trade	8%	8%	6%
	Other industry	45%	40%	27%
Employer size (employees)	1-9	14%	10%	N/a
	10-99	43%	39%	N/a
	100-249	17%	20%	N/a
	250+	23%	29%	N/a

30   Where percentages do not add up to 100, this is due to rounding or the presence of a 'prefer not to say' category.

FINDINGS

This section outlines the findings from the focus groups and interviews – triangulating the perspectives of women who currently work in a tech role, have left tech, and have not worked in tech – alongside results from women and men in the survey. The numbered subheadings within each section (Entering tech, Workplace cultures, and Workplace practices) each reflect a theme identified from the findings.

Entering tech

The conversations began with an exploration of participants' pathways into their work, including their motivations, and the barriers and facilitators to entry into tech – from childhood experiences and interests through to application processes.

1. 'Tech is what runs the world.' (Motivators).

Longevity was consistently cited as a motivator for entry to a career in tech, with the word emerging multiple times across different interviews and focus groups. The sector's growth made it an exciting place to be, alongside a sense that tech would always be needed – as a central part of everyday life – and is therefore a well-paid and stable career whilst constantly developing and changing. This was reflected in the survey, in which **73%** women and **71%** men who currently work in (or recently left) tech roles agreed that working in tech provides many opportunities for career development and personal growth.

> **For me, tech has longevity because tech is what runs the world – like we're never gonna stop inventing things, we're never gonna stop improving on things, fixing things – so I just thought 'ok, that's the kind of role I want to go into'."**
>
> [Woman who left tech]

> **There's so much growth in the industry and I think to have longevity in a career it definitely seems like the best industry to go into."**
>
> [Woman working in a tech role]

Women were also motivated by the creativity involved in developing new technologies. They were excited to be at the cutting edge and have an impact on the world. However, some focus group participants outside tech perceived the work as non-creative, with an understanding of desk-based and numerical work being at odds to creativity.

The survey samples reflected an all-round perception of tech as creative work: **74%** of women and **76%** men who currently work in (or recently left) tech roles, and **73%** women outside tech roles (with STEM qualifications) agreed that working in tech is creative.

> **I just liked the idea of working with different technologies. I know this might sound cheesy but you know, it might change the world, and when I was… 20, 21 or 22, [type of tech] seemed like a new thing at the time, and it creates and develops so much."**
>
> [Woman working in a tech role]

2. A room of one's own. (Facilitators).

Some of the women currently or previously in tech roles had held a lifelong interest in tech, beginning as a child or teenager, but room to explore had been really important in pursuing this. Those working in tech roles had been encouraged and supported by others around them, particularly family members who shared their interest. This support alongside access to resources allowed them in turn to develop their interests in their spare time, through practising coding, using html to customise webpages, playing games, and fixing things.

> **I was always good at computers when I was little and I used to be the one that fixed everything. You kind of always get that one family member that you call to get the printer fixed, which was me. I really enjoyed games and creating stuff with a computer so I ended up doing my degree in [technology]."**
>
> [Woman working in a tech role]

Whilst some had had room to explore and encouragement from family, women across all the groups – those in tech, outside tech, and tech leavers – had experienced a lack of exposure to tech careers, computing and programming when they were younger. They said it was great that children now learn coding as part of the school curriculum, but expressed this alongside a shared sense of strong regret that they didn't have that experience themselves. In the survey, a lack of career information or advice about working in tech putting girls and young women off entering the field was given as a response to the question 'why do you think there are fewer women than men working in tech roles?' by significantly more women outside of tech (**43%**) than women in tech roles (**30%**) and men in tech roles (**30%**).

> **For me, all the stuff that they've included nowadays that they try to teach children – I think they're putting a big focus on coding, trying to make it fun. There's all sorts of new programmes and it's a bigger part of the curriculum. When I was at school, they didn't really do any of that... No one spoke to me specifically about tech, and I didn't learn specifically about coding'.**
>
> [Woman who has not worked in tech]

> **In schools now children are coding. Now I do not remember and can definitely say that was not accessible when I was a child…. I would love to have learnt how to code at school."**
>
> [Woman working in a tech role]

Those who had had particularly negative experiences at school, even talked about an understanding that their teachers had 'written them off' for a STEM career. Women outside of tech also said that they thought it would now be too late to pursue, either because they were settled and satisfied with their careers, or because they felt that there would be too much knowledge to catch up on, which was a daunting prospect.

> **I've always been good at computers, but like I don't have experience in coding and the more technical stuff... For me, I wish they'd started it earlier on, and maybe yeah I would have had the confidence to apply for those jobs, but I think where I am in this stage of life I wouldn't go into tech."**
>
> [Woman who has not worked in tech]

> **I really enjoyed STEM subjects when I was at school. And it could be something I'd consider going into but I feel like I'd have to go right back to the start… It just seems very out of reach, those kinds of jobs, in some ways."**
>
> [Woman who has not worked in tech]

Related to this was a perception from women outside of tech that there was a degree requirement for tech roles. In the survey, **32%** of women outside of tech agreed with the statement 'working in a tech role requires a university degree' and **53%** agreed that they did not know how to get a tech role or enter the field.

This was in stark contrast to the women who currently or had previously worked in tech roles, who highlighted the variety of entry routes and types of roles they had seen or experienced and expressed a wish for this to be more widely known and advertised, to encourage more diversity in tech roles. Whilst some women in the focus groups and interviews had studied computer science or IT at university, others had entered tech through apprenticeships or through a move between departments in their workplace, or with support from an employment charity to enter an internship scheme. This difference between the perceived degree requirement from women outside tech and the variety of roles and entry routes highlighted by women working in tech roles, reflects critiques of the 'leaky educational pipeline' narrative.[31] The narrative reflects an over-emphasis on the reasons why women are less likely to enter tech (i.e. fewer female STEM graduates) at the cost of fixing the workplace cultures which can leave women to leave tech roles.

Those women who had entered tech at later stages sometimes spoke of unexpectedly or unintentionally 'falling into' the work, with one woman highlighting that this was odds to her gendered self-expectations.

> **Growing up, a lot of my [male family members] were really tech savvy and stuff, and I just thought it was like a bloke thing. You hear kind of engineering, and it's always males, so for me it was never something that I would go into or even foresee it… and so it wasn't until I was 18 or 19, was when I kind of fell into that. It's not something that I would really foresee myself in that position."**
>
> [Woman working in a tech role]

3. 'Oh sorry I'm no good with technology'. (Gendered self-perceptions).

The gendered expectations demonstrated above acted as a barrier to entering tech roles for women. They spoke of the impact of stereotypes and societal messaging in shaping their own experiences and self-perceptions when they were exploring their interests and potential career routes. There was a shared experience of a lack of role models, with some never having thought of or seen women in tech roles when they were a young person at school.

> **I think it starts from a young age, I think when I was at school you'd get like tech people in to fix things or whatever, never seen a female. It's always been men from a young age so that sort of sticks with you."**
>
> [Woman who has not worked in tech]

The stereotype that men and boys are more skilled and naturally inclined toward STEM subjects than women and girls was consistently highlighted as a barrier. This idea of a natural difference in ability

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31   Alfrey LM. Diversity, Disrupted: A Critique of Neoliberal Difference in Tech Organizations. Sociological Perspectives. 2022; 65(6):1081-98.

reflects the narrated 'wisdom' of technology as a 'masculine' discipline highlighted by researchers.[32] Indeed, in the survey significantly more women outside of tech selected 'stereotypes influence people's interests and behaviours from an early age' as a response to the question 'why do you think there are fewer women than men working in tech roles?' (**50%**) compared to women in tech roles (**31%**) and men in tech roles (**32%**). A smaller but sizeable minority also selected the response 'women are naturally less well suited to tech roles than men' to this same question, and significantly fewer women outside of tech (**10%**) did so compared with women in tech roles (**16%**) and men in tech roles (**19%**).

Women reflected on their personal relationship to those stereotypes. The quote below illustrates one woman questioning the extent to which her view of tech as boring and uncreative was related to societal conditioning. Whilst she doesn't subscribe to the view that 'boys are good at science and maths and girls aren't', she reflects on the impact (i.e. finding tech boring) – of living within a culture saturated by that idea.

> **For me the gender imbalance – it's always been a thing that boys are good at science and maths and girls aren't… it's always been 'oh I find that [tech] so boring because it's not creative' – while that is true, I can't help but wonder if there's an element of that because of the conditioning that I've received from society. That girls will go on to do creative, maternal-orientated jobs, and men will go on to do tech."**

[Woman who has not worked in tech]

Evidence suggests that this common stereotype has real-world outcomes, since workers choose careers that "fit their gendered understandings of themselves". (Cech 2015). Technical skills are often closely tied to identity, and hence gender. Research shows that by age six, girls avoid subjects they perceive as requiring them to be "really, really smart" as a result of gender stereotypes, leading to lower take-up of STEM subjects.[33] Women who had not worked in tech perceived technical topics to 'go over their head' (despite holding STEM qualifications) and discussed a frequent experience of feeling on the edges, or shut out of technical conversations.

Even women who had worked in tech – but had left – sometimes positioned themselves as 'no good with technology'. For one woman, the act of talking about stereotypes brought up an awareness of the way in which she often distances herself from technology skills to others, despite not actually being bad with technology. In the quote below she suggests that this is something new and perhaps related to the impact of her negative experience of working in tech (to be explored in the next section). She catches herself doing this during the conversation and then reflects:

> **When it comes to techy stuff, like if my laptop's not working or whatever, I automatically just default to my husband. But I never used to do that. I remember being quite interested in it, even before I did the role, but now I'm thinking about it and having this conversation with you, I always say to people 'oh sorry I'm no good with technology' but I don't know why I say that. I'm not terrible – I mean, I'm not amazing, but I'm better than [some others]."**

[Woman who left tech]

32   Brooke S. Breaking gender code: visibility, power, and gender in creative coding cultures. [University of Oxford]; 2020.

33   Bian L, Leslie SJ, Cimpian A. Gender stereotypes about intellectual ability emerge early and influence children's interests. Science. 2017; 355(6323):389-91.

This is indicative of women holding themselves to a higher standard than men before considering themselves to be skilled, acting as a barrier to professions that are considered more numerical or technical. For example, research shows that women are less likely than men to apply for a job where they do not meet all of the requirements on the job description.[34] This phenomenon does not occur in a vacuum, but rather as a result of women's experiences of strong stereotypes, messaging, norms, and exclusion around who in our society can or should be a 'technical' person.

Related to this is a perceived dichotomy between being mathematical or technologically minded and having 'soft skills' or being good with people which again, can be strongly tied to self-perception or identity. Women in the interviews and focus groups often identified themselves as either one thing or the other, implying that each are at odds or on either ends of a spectrum. This was also reflected in the survey, in which **47%** of women and **47%** of men in tech roles agreed that 'people working in tech roles tend to be less socially skilled than other people'. Interestingly, this was significantly more than the **27%** of women outside of tech who agreed with the statement.

> **"You know when you're at school and you're either really good at maths or really good at English. You can be good at both but it just feels like one that's more natural to you. English was mine, maths was my husband's… you're either really good at getting the things done, or you're really good at understanding the people that get the things done."**
>
> **[Woman who left tech]**

> **"There's an association I guess with soft skills and women, and I'm not very strong on my soft skills… And so I'm just trying to position myself into more like a technical [person] than anything else."**
>
> **[Woman working in a tech role]**

Whilst different women positioned themselves at either end of this, it often runs along gendered lines and also links to gendered assumptions and theories[35] – heavily critiqued for stereotyping – of neurodivergence. That is, autistic people have been suggested to be at the extreme end of 'maleness' holding stereotypically male interests and being gifted in mathematical or systemizing disciplines like computing or technology and lacking empathy (although more recently, researchers have debunked this[36]). Interestingly, this arose as a topic in a focus group with women outside of tech, amid a broader conversation about stereotypes. One woman, who was autistic, spoke of her experience of not being granted the same grace as men to be socially different.

> **"I feel like autistic men are seen as really quirky. I think they're given a lot more leeway than autistic women. I didn't get diagnosed until I was 24 because there is only one type of autism that we know and that's male autism. It presents so so differently in girls and society views autistic women as really quite rude… in men, it's 'hes just quirky' and when you're a woman, you're a cow for it."**
>
> **[Woman who has not worked in tech]**

34   Mohr TS. Why Women Don't Apply for Jobs Unless They're 100% Qualified. Harvard Business Review [Internet]. 2014; Available from: https://hbr.org/2014/08/why-women-dont-apply-for-jobs-unless-theyre-100-qualified

35   Baron-Cohen S. They just can't help it. The Guardian [Internet]. 2003; Available from: https://www.theguardian.com/education/2003/apr/17/research.highereducation

36   Fine C. Delusions of gender: The real science behind sex differences. Icon Books Ltd; 2005.

4. 'It's got this culture'. (Views from outside tech).

Some of the women who had not worked in tech held negative perceptions about its culture, which they understood to be unique to tech. One woman, an early-career academic in a STEM discipline, said that she had considered and explored the idea of entering tech, since she was suitably qualified and skilled. However, she had been put off by her perception of tech's exclusionary and 'laddish' culture. A sizeable minority in the survey also held this perception, with **26%** of women outside tech agreeing that there is more sexist behaviour in tech work than in other types of work. She acknowledged that her own field in academia was also male-dominated, and reflected upon why she held this view uniquely to tech.

> **For me, what makes tech different is… it's got this culture. For me, like if you don't have the same interests and hobbies… and want to go out in the evening drinking with a bunch of lads. I would be asking myself 'do I fit in with that?'"**
>
> **[Woman who has not worked in tech]**

Another woman in the focus group understood academia to not have the same atmosphere of 'male bravado'.

> **I don't find the academic setting as intimidating as corporate tech, because I feel like there is that culture of sort of male bravado, and going out and being a bit laddy, perhaps. Academics don't tend to have that reputation."**
>
> **[Woman who has not worked in tech]**

There was a consensus among women outside of tech that the industry was male-dominated, which was an off-putting factor for some more than others. Interestingly, one woman recalled it being suggested that it would be 'easier' for her to get a job in STEM due to the lack of women, but this had been an ineffective strategy in encouraging her. This was reflected by the survey, in which **77%** of women outside of tech perceived that 'there are more men in tech roles than women' – significantly more than the **60%** of women and **64%** of men working in tech roles who did so.

> **I just remember when I was at school I was always told – and this is what actually put me off ever kind of doing kind of STEM in some ways – 'oh, they really want women in the industry, like you'll definitely get a job… you can apply and they'll just give you the job because there are so little women in the industry. And I was like 'yeah you're not really selling it to me'."**
>
> **[Woman who has not worked in tech]**

Another major consideration was whether working in tech would fit around parenthood. Whilst some women without children who had not worked in tech thought it might be quite a flexible career choice with opportunities for working from home, the mothers in the groups highlighted that they would either not consider entering tech, or would think very carefully before entering a tech role, due to their perceptions of long and inflexible hours. This somewhat reflected the survey, in which there was greater agreement from women outside tech that 'there is a lack of flexible work in tech roles' (**29%**) than disagreement (**19%**), and similarly for 'there is a lack of part-time work in tech roles', **36%** agreed while **15%** disagreed.

Furthermore, in the survey, women in tech roles were significantly more likely to select 'it is more difficult for people with caring responsibilities to work in tech' (**28%**) compared to men in tech roles (**22%**) as a response to 'why do you think there are fewer women than men working in tech roles?' (**Figure 3**).

> **I'm a mum, and that is also a factor in why that would probably never ever be a career choice for me."**

[Woman who has not worked in tech]

> **I wouldn't apply for anywhere that had sort of standard maternity pay or wasn't flexible enough to allow me to look after my children like I need."**

[Woman who has not worked in tech]

Women's lived experiences of the culture in tech will be explored in more detail in the following chapter (*Workplace culture*).

5. 'Is it because I don't look the part?' (Applying for tech roles).

For women who had worked in tech, further barriers arose at the point of application. Black and minoritised women in particular recalled experiences of frequent, unexplained rejections during job searches for tech roles. One woman of Black African heritage spoke of her frustration at being suitably qualified and yet receiving lots of rejections – eventually finding a role with the support of a charity providing internship opportunities for Black and minoritised people and people from low-income backgrounds after a recommendation from a friend. She questioned whether the challenges in getting a role were because she didn't 'look the part' and highlighted the emotional impact of this.

> **Sometimes you'll apply and you don't hear anything, sometimes you'll get an interview and you think it goes well and then like you don't get the role. It was very disheartening, honestly. I started to feel like 'is it because I don't look the part', you know, because when you walk through the office to go to the interview room, you take a little look around and you're just like 'man'".**

[Woman who left tech]

This echoes the broader experiences of women of colour reflected by Fawcett and Runnymede's 2022 Broken Ladders report – of needing to have a 'face that fits' to succeed[37] – although is particularly apposite in tech's often heavily white and male-dominated workplaces. When they did reach interview, Black and minoritised women also experienced disinterest and condescension from panels. One woman of Indian heritage and nationality spoke of her experience moving to the UK and applying for tech roles, where she felt that the outcome of the interviews she attended could be pre-determined in the minds of the panel and linked to her background.

> **I came from India, I started in India – that could be another point – and when I went in for the interview I could see something is pre-determined in their mind, in their brain. It was just like 'you're here, so we'll ask the questions' but I could sense that ... I'm there so they have to do it for a formality, but they had decided ok, no, you won't be going through. So I could feel that."**

[Woman who left tech]

These assumptions about who can or should work in tech are at odds to the level of interest in the field, with Black and minoritised women outside of tech significantly more likely to agree that 'I am interested in working in tech' in the survey (**59%**) compared to **31%** white women (**36%** women

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37   Gyimah M, Azad Z, Begum S, Kapoor A, Ville L, Henderson A, Dey, M. Broken Ladders: The myth of meritocracy for women of colour in the workplace. The Fawcett Society & The Runnymede Trust; 2022. Available from: https://www.fawcettsociety.org.uk/broken-ladders

outside tech agreed overall). Furthermore, **18%** of Black and minoritised women working in tech roles reported having been made to feel uncomfortable in relation to their race, ethnicity, religious or cultural background during an application for a tech role (**Figure 2**).

Figure 2: % Black and minoritised women agreeing with the statement *'I was made to feel uncomfortable in relation to my race, ethnicity, religious or cultural background during the application process'* **(during most recent experience searching for a tech job).** N = 180.

Category	%
All Black and minoritised women	18%
Women of Mixed / Multiple ethnic groups	28%
Asian / Asian British women	21%
Black / African / Caribbean / Black British women	11%
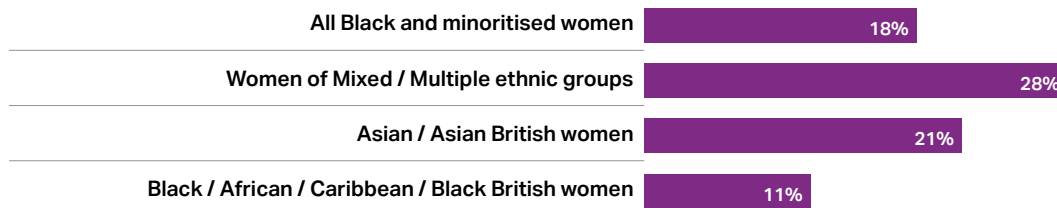
Furthermore, whilst a majority of Black and minoritised women agreed that during their most recent job search for a tech role hiring processes had been fair and unbiased (**57%**), this was significantly lower than the proportion of white women who agreed (**67%**). Interestingly, people working in smaller organisations were also significantly less likely to have experienced fair and unbiased hiring processes (**49%** of those in organisations with less than 10 employees, **61%** for 10-49 employees, and up to **70%** for organisations with 250+ employees), perhaps reflecting lower levels of formal recruitment procedures in smaller organisations.

Overall, **64%** of women and **65%** of men agreed that hiring processes had been fair and unbiased during their most recent job search for a tech role. **32%** of women and **26%** of men in tech roles, **36%** women outside tech, and selected gender bias during recruitment as a response to 'why do you think there are fewer women than men working in tech roles?' (**Figure 3**).

White women – particularly those who had reached senior positions – reflected mostly positively on application experiences or without much comment, noting that they had been straight forward, fair and unbiased, with a focus on their expertise. Women across ethnic backgrounds highlighted the notable lack of gender balance of interview panels across their experience, and in the survey **14%** of women overall had been made to feel uncomfortable in relation to their gender during an application.

Gender balance was an important factor in considering a potential workplace for women across the interviews, and for some had been the key reason that they had accepted or rejected roles that they had been offered. Indeed, in the survey the diversity of the interview panel reflecting that of the workplace was significantly more likely to important to women (**84%**) than men (**72%**) in the survey, with little difference between women by ethnicity.

However, searching for information about the ethnic diversity of a potential employer for a tech role was significantly more common among Black and minoritised women (**24%**) than white women (**16%**), with Black women being most likely to do so (**35%**). This reflects the additional labour that Black and minoritised women face at every stage of their careers, as identified in Fawcett and Runnymede's Broken Ladders work, including additional checks during job searches to reduce the risk of ending up in a harmful work environment.[37]

Women working in tech also described many rounds of tests being common to recruitment procedures, with a sense that this could often be too intensive and/or too prescriptive. This was noted particularly in relation to personality tests which weren't concerned with specific job-related skills or in cases where companies used AI or other software to scan applications for key words, which women felt could embed bias into hiring procedures. One woman described her experience of taking a personality test and being deemed 'too assertive'.

> **" I feel like the human aspect is gone, I feel like everybody is just trying to be like everybody else so that they can super-analyse who comes in so that they fit this mold, as opposed to actually getting to know who they are... The personality test basically told me that I was too assertive for the role that they wanted."**
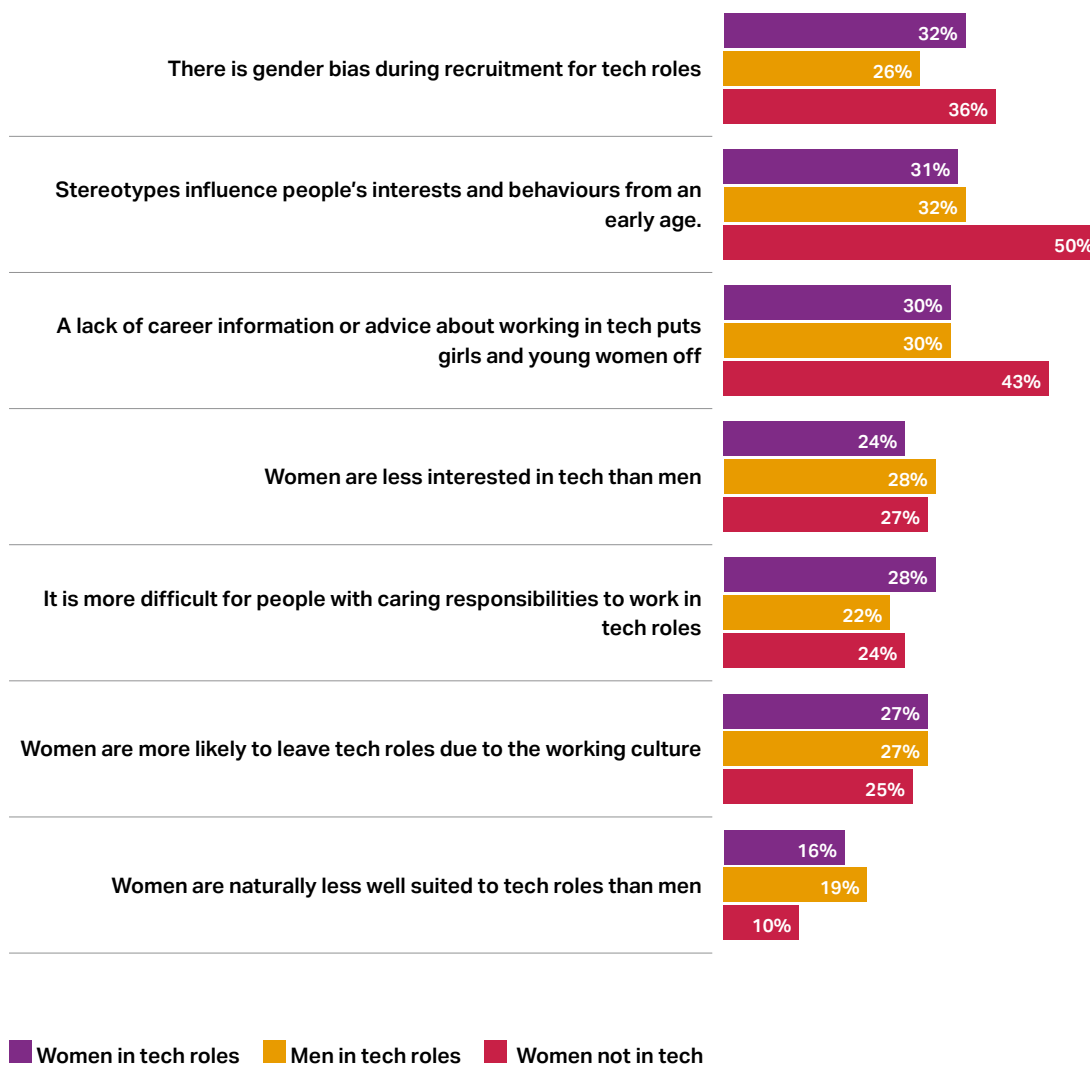>
> **[Woman working in a tech role]**

Entering tech summary:

- Longevity, sector growth, the ubiquity and importance of technology, good pay and opportunities for creativity all motivated entry to tech roles for women. **73%** women and **71%** men in tech roles agreed that working in tech provides many opportunities for career development and personal growth.

- A lack of career information or advice about working in tech was perceived as a barrier by women outside of tech, with **53%** agreeing that they did not know how to get a tech role or enter the field. This was also reflected by the experiences of women who had entered tech. **32%** of women outside of tech believed there to be a university degree requirement for working in a tech role, whilst women in tech roles were keen to highlight the diversity of entry routes to the sector.

- Gendered self-perceptions as a result of societal messaging acted as a barrier to entering tech, but opportunities when young to explore and play with technology, alongside support and resources from family and others around them served to counter this messaging and facilitate entry to tech roles for women. These perceptions remain present in tech itself, with **19%** of men in tech roles giving 'women are naturally less well suited to tech roles than men' as a reason why fewer women are present in the profession, whilst just **26%** of men give gender bias in recruitment as a reason.

- Perceptions from women outside tech of a 'laddish' or misogynistic corporate culture also served as a barrier, with **26%** in the survey agreeing that there is more sexist behaviour in tech work than in other types of work.

- Black and minoritised women faced additional barriers during job searches for tech, including condescension at interview, unexplained rejections and bias. **18%** had been made to feel uncomfortable in relation to their race ethnicity, religious or cultural background during an application. White women were significantly more likely to agree that hiring processes had been fair and unbiased in their most recent application for a tech role (**67%**) than Black and minoritised women (**57%**).

- People working in smaller organisations were also significantly less likely to have experienced fair and unbiased hiring processes (**49%** of those in organisations with less than 10 employees, **61%** for 10-49 employees, and up to **70%** for organisations with 250+ employees), perhaps reflecting lower levels of formal recruitment procedures in smaller organisations.

The graph below summarises the key barriers to women entering tech roles highlighted in the sections above, among women and men in tech, as well as women working outside of tech in the survey. The top reasons selected by women explaining why there are fewer women working in tech roles were gender bias during recruitment, stereotypes from an early age, and a lack of career information or advice, whilst for men these were stereotypes from an early age, a lack of career information or advice, and women being less interested in tech than men.

Figure 3: Survey responses to 'Why do you think there are fewer women than men working in tech roles?' for women in tech roles (N = 555), men in tech roles (N = 523), and women outside of tech with STEM qualifications at Level 3 or above (N = 360)

	Women in tech roles	Men in tech roles	Women not in tech
There is gender bias during recruitment for tech roles	32%	26%	36%
Stereotypes influence people's interests and behaviours from an early age.	31%	32%	50%
A lack of career information or advice about working in tech puts girls and young women off	30%	30%	43%
Women are less interested in tech than men	24%	28%	27%
It is more difficult for people with caring responsibilities to work in tech roles	28%	22%	24%
Women are more likely to leave tech roles due to the working culture	27%	27%	25%
Women are naturally less well suited to tech roles than men	16%	19%	10%

■ Women in tech roles   ■ Men in tech roles   ■ Women not in tech

Workplace cultures

This section explores how women made sense of their experiences of the cultures in their tech roles, that is, the ideas, notions, and social behaviours that played out in day-to-day interactions within the workplace.

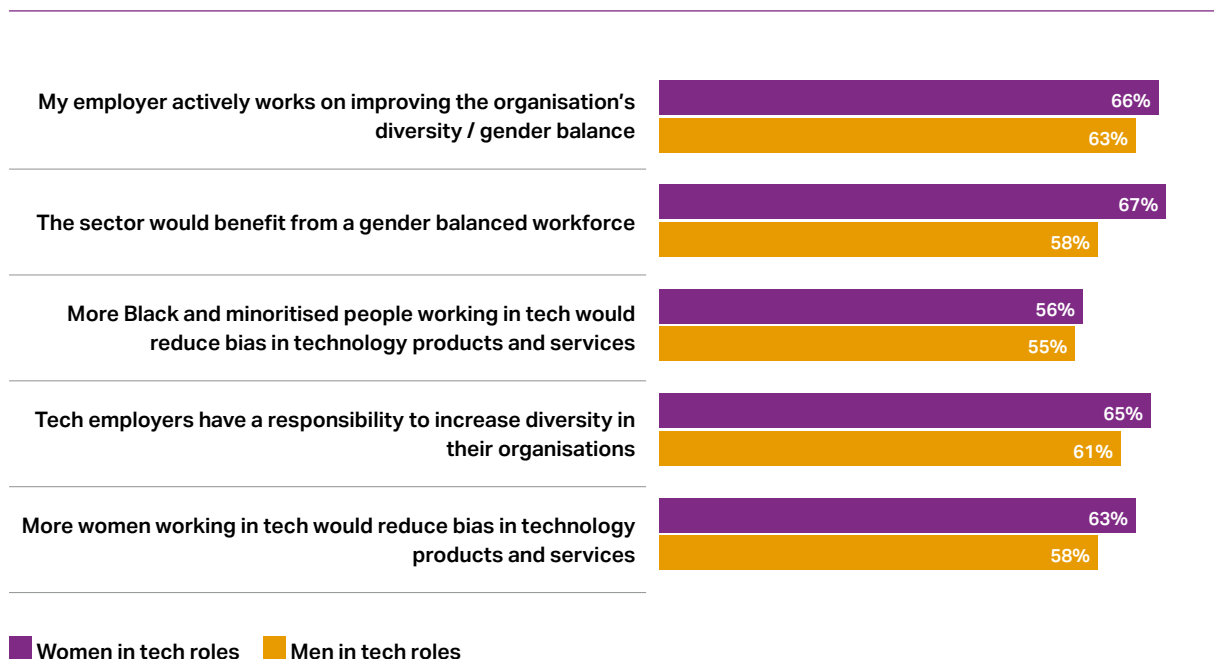## 1. 'I'm in quite a male dominated industry… But it doesn't put me off.' (Views from experienced women).

Overall, women who had been working in tech roles for 10 or more years reflected positively on their experiences at work. Whilst all these women found themselves in male-dominated settings, they often felt that things had been improving slowly over time and had hope for the future. Similarly in the survey, job satisfaction increased with age: **61%** of women aged 18-24 agreed that they were satisfied in their role, significantly less than the **73%** of 25–34-year-olds, **75%** of 35–44-year-olds, **74%** of 45–54-year-olds and **78%** of women aged 55+ who agreed.

> **" I'm in quite a male dominated industry, male dominated company, male dominated team, male dominated directors and exec team. But it doesn't put me off. It doesn't make me feel less ambitious, I do think the world is changing."**
>
> **[Woman working in a tech role]**

Women who had worked in tech roles for more than 10 years highlighted an increase in diversity and inclusion initiatives and women's networking events or opportunities as a progressive change. This was reflected in the survey, in which **66%** of women and **63%** men who currently or had recently worked in a tech role agreed that 'my employer actively works on improving the organisation's diversity / gender balance'. Agreement with this statement increased with company size, from 57% and 61% for companies with 1-9 and 10-49 employees respectively, to 71% for companies with 50-99 employees, 70% for 100-249 employees, and 64% for 250+ employees. As shown in **Figure 4**, improvements to diversity were more important to women overall than men.

Figure 4: % survey respondents agreeing with each statement, for women in tech roles (N = 555) **and men in tech roles** (N = 523)

Statement	Women in tech roles	Men in tech roles
My employer actively works on improving the organisation's diversity / gender balance	66%	63%
The sector would benefit from a gender balanced workforce	67%	58%
More Black and minoritised people working in tech would reduce bias in technology products and services	56%	55%
Tech employers have a responsibility to increase diversity in their organisations	65%	61%
More women working in tech would reduce bias in technology products and services	63%	58%

■ Women in tech roles   ■ Men in tech roles

Women who had worked in larger, global companies also tended to speak positively about their experiences. They suggested that this was related to greater diversity among staff as well as a higher level of policies and formalised practices to promote positive cultures. Celebrating this diversity was really important, with women giving examples of Diwali and Pride month celebrations whereby flags reflecting different identities were hung up in the workplace, making lesbian and bisexual women feel included. However, in the survey, lesbian and bisexual women were significantly less likely to agree that they felt comfortable in the culture at their workplace (**59%**), compared to **76%** of straight women (**Figure 5**). This highlights the importance of an inclusive and welcoming physical environment.

> "They really celebrated Black History month, and during Pride month as well. I thought it was great to celebrate all the different diversity groups… So during pride month, around the building they would have all the different pride flags up… it makes it feel more inclusive, which is good."
>
> **[Woman who left tech]**

2. 'Every day I have to prove myself'. (Stereotypes).

Whilst many pointed to a positive culture, over the past 12 months, **43%** women and **42%** men had considered leaving their tech role weekly or more often. Young women were particularly likely to have considered leaving, with **57%** of 18-24 year old women and **51%** of 25-34s having done so in the last week, compared to **31%** of 35-44s, **29%** of 45-54s and **12%** of women aged 55+ years. Bisexual and lesbian women were also significantly more likely to have considered leaving weekly or more (**51%**, compared to **41%** of straight women), and disabled women (**59%**, compared to **37%** of non-disabled women).

In the focus groups and interviews, Black and minoritised women in tech roles, younger women who had been working in tech for less than 10 years, and those who had left tech more often spoke in depth about the challenges of the workplace cultures they had faced. Right from the start of a role there could be an unfair perception from colleagues that as a member of a minoritised group, they had just been hired 'for diversity' rather than based on their skills. This led to feelings of isolation and inferiority, as one woman of Black African heritage noted.

> "I felt very early on that I didn't look the part, because obviously it's very male heavy and very white male heavy. So as a young black girl, especially coming from not a great background and it was just very isolating. You kind of feel inferior, as bad as that is to say, I did kind of feel inferior. And … I worked at the first place for two years and in those two years I was the only black person. There was always a lot of comments."
>
> **[Woman who left tech]**

Another woman spoke of her experience being blamed for her male colleague's mistakes by her manager. The manager had expressed his anger at her over the mistakes, until she was able to explain that they had been created by her male colleague and not her (and had arisen whilst she was away on annual leave). At this point he was very forgiving of the colleague.

> **The next meeting we had with the manager, he was furious, on me!... Then when it came out that he [male colleague] has messed up the things, it's like 'ok, things happen, we are human, things go wrong. It was altogether a switch in his [the manager's] behaviour, in his mode of operation as soon as he realised it is something he, my colleague, has done."**

[Woman who left tech]

In alignment with the literature, this experience reflects an implicit assumption based on stereotypes that women, particularly Black and minoritised women, are more prone to mistakes and/or less technically skilled.[31] Other examples of assumptions about women's skills and abilities in tech settings were common, including that they worked in marketing or were present in a meeting to take the minutes. Black women were significantly more likely to have experienced the assumption that they do not hold a technical role (**33%**) than white (**19%**) or Asian women (**19%**).

> **I'm just like 'I'm a tech person just like you, like don't! Why me? Is it because I'm the only woman in the room, or is it because I'm the only black woman in the room? Why have I got to take the meeting minutes? And so I didn't, I just didn't."**

[Woman who left tech]

Experiences like this led women, particularly young women or those early in their careers, to feel a need to anticipate others' perceptions and clarify their role before any assumptions could be made. This was accompanied by a feeling of needing to prove their knowledge or skills, by working 'twice as hard' and ensuring their work is visible.

> **Maybe this is like kind of an internal thing that will go over time with experience, I don't know, but I do feel like I have to prove my knowledge when I'm in front of a new person. Or like immediately say my title so that they don't assume I'm in design, or marketing, or human resources."**

[Woman working in a tech role]

> **It's kind of scary because I feel like every day I have to prove myself. I feel like if I'm not working twice as hard as them, they won't even acknowledge me... I constantly feel like I have to make sure they know that I'm just as smart or even smarter, or I kind of just fade into the cracks."**

[Woman working in a tech role]

These stereotypes appear to run deep in tech settings as well as being present in wider societal messaging, with women working in tech roles acknowledging that even they catch themselves questioning other women's technical expertise – although do work to challenge this mindset.
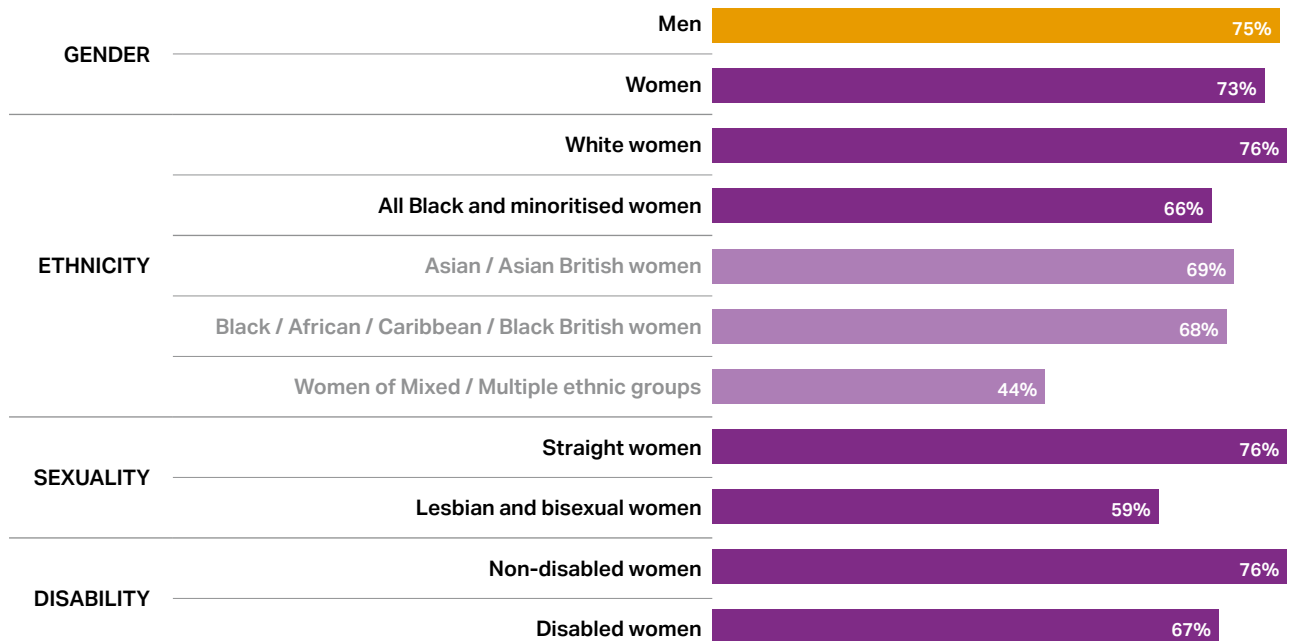
> **If I see another woman in a technology discussion, I tend to think 'how much do you really know about this'… Being usually the only woman and having to prove yourself all of the time kind of gets you into this defensive attitude, and then it takes time to put yourself out of that mindset."**

[Woman working in a tech role]

3. 'No one was being held accountable'. (Bullying and harassment).

In the survey overall **73%** women and **75%** men in tech roles agreed that they felt comfortable in the culture at their workplace. Interestingly, these figures do not indicate a significant gender difference, which somewhat contrasts with some of the figures below highlighting high numbers of women experiencing sexism, racism, and ableism (**Figure 6** and **Figure 7**), as well as the experiences of exclusion highlighted by women in the interviews and focus groups. One possible interpretation is that the question regarding culture referred to current or most recent workplace, whilst many women had experienced sexism at various points across their careers. It stands to reason that those who experience the most difficult cultures do not remain in those roles. Moreover, broken down further we find that lesbian, bisexual, disabled and Black and minoritised women, were all significantly less likely to feel comfortable in the culture at their workplace than straight, non-disabled, or white women (**Figure 5**).

Figure 5: % women agreeing that *'I feel comfortable in the culture at my workplace'* (for their current or most recent tech role), by gender, ethnicity, sexual orientation, and disability

GENDER	
Men	75%
Women	73%
ETHNICITY	
White women	76%
All Black and minoritised women	66%
Asian / Asian British women	69%
Black / African / Caribbean / Black British women	68%
Women of Mixed / Multiple ethnic groups	44%
SEXUALITY	
Straight women	76%
Lesbian and bisexual women	59%
DISABILITY	
Non-disabled women	76%
Disabled women	67%

Whilst several participants had positive experiences, the focus groups and interviews demonstrated that troubling forms of exclusion occurred at the intersection of sexism and racism – arguably linked to tech's heavy stereotypes around technical work, who is capable of it and who should be doing it. One woman of Black African heritage who had since left tech, spoke of derogatory comments about her name, heritage and personality which served to socially exclude her, as a young woman and as the only Black person in the office. She had also experienced an incident of sexual harassment which was reported but not investigated amid a lack of accountability among the organisation's leadership. These experiences led her to leave tech – indeed, in the survey Black and minoritised women were significantly more likely to cite the working culture is not inclusive as a reason for leaving (**22%**) than white women (**8%**). This experience was accompanied by a culture of bullying and harassment of other young women in the office for which there was no accountability, alongside social exclusion whereby male colleagues would hold drinks meetings in private clubs.

> **"The men had full range to talk to women degradingly, to shout at them, so many women had cried in the bathrooms... No one was being held accountable here, it was just very bad... The men would go off every Friday to have a drinks meeting in an actual private members club... And when things go wrong, and it's just never their fault."**
>
> **[Woman who left tech]**

A woman of Black Caribbean heritage who still worked in tech spoke of clients dismissing her tech skills due to her gender and accent, but did not receive support from her manager or colleagues in tackling this. Indeed, amid condescension from others promoting a need to prove her capabilities at work, she highlighted that:

> **"To this day I cannot get my manager to stop calling me honey."**
>
> **[Woman working in a tech role]**

The survey estimates the prevalence of these and similar experiences, with **72%** of Black and minoritised women having experienced at least one form of racism in a tech role (**Figure 6)** whilst **72%** of women overall reported experiencing at least one form of sexism in a tech role (**Figure 7**). The most commonly reported form of sexism or discrimination was being paid less than colleagues who do the same or a very similar job, experienced by **22%** of women working in tech roles. This was reflected in the interviews in which women spoke about only receiving a pay rise upon highlighting the discrepancy between theirs and their colleagues' pay for equal work.

> **"I only got an increase in my salary because I found out how much my coworkers who does the exact same job that I do was making. That's the only reason I got the increase."**
>
> **[Woman working in a tech role]**

Other forms of sexism included unwanted "banter", personal comments about appearance, racial slurs, assumptions that they did not hold a technical role, and sexual harassment. Younger women, disabled women and lesbian and bisexual women were significantly more likely to have experienced and witnessed many of the instances of sexism shown in **Figure 7** than their counterparts. Those in larger organisations with more than 250 employees were significantly less likely to experience sexism than those in organisations smaller than this. Furthermore, ableism was prevalent, with **73%** disabled women having experienced this in a tech role.

Figure 6: % Black and minoritised women experiencing racism at work whilst in a tech role
(N = 180)

Category	%
Unwanted "jokes" or "banter" related to my cultural background, religion, race, or ethnicity	31%
Repeated mispronunciation of my name	25%
Unwanted personal comments or questions about my cultural background, religion, race, or ethnicity	24%
Use of racial slurs	12%
Other experiences of racism, racial bias, racial microaggressions or discrimination related to race	24%
None of the above	28%

Figure 7: % Women experiencing sexism or discrimination at work whilst in a tech role (N = 555)

Being paid less than colleagues who do the same, or a very similar job	22%
Unwanted "jokes" or "banter" related to my gender	22%
Questioning of my skills or abilities	20%
Statements of surprise at my skills or abilities	19%
Being talked over in meetings by male colleagues	18%
Unwanted personal comments or questions about my appearance	18%
Assumptions from colleagues or clients that I do not hold a technical role	16%
Use of sexist language	15%
Sexual harassment	9%
Other experiences of sexism, gender-bias or discrimination related to gender	15%

It was often difficult to challenge colleagues' behaviour or the environment women found themselves in, in part due to the risk of increasing the harassment or appearing to match up with harmful stereotypes such as the 'angry Black woman'. These women did not want to risk further damaging the relationships with people they work with everyday, although were forced to balance this against not wanting to continue in the same environment or wanting future employees of colour in the organisation to have to experience what they did.

> **At the end of the day I need to work with them. I didn't want to be seen as standoffish, I didn't want to be seen as the sassy angry Black woman, so the way that they downplay it, you're just like [sigh]."**
>
> **[Woman who left tech]**

What's more, the sunk cost of getting into the role in the first place and feeling lucky to be there acted as a motivator to stay amid an exclusionary, racist and sexist culture.

> **It was hard for me to even get that role, and it kind of made me feel like I had to stay and stick it out, because I finally got a job in tech. When you don't really have many options you kind of cling to the option you have."**
>
> **[Woman who left tech]**

4. 'The guys were given the opportunity to get involved, and we weren't.' (Exclusion).

Experiences of exclusion emerged from the interviews and focus groups. Some had not been included in team social events, or had felt that these had catered exclusively to the interests of the men in the organisation. Younger women talked about experiences of struggling to access the same resources and support as male colleagues at the same level. One woman who had left her tech role spoke about an experience of being hired for a tech apprenticeship among a group of mostly male apprentices, and not being given interesting or challenging work. Instead, she was singled out by the manager to conduct tasks like the 'sandwich run' despite other, equally junior, male colleagues not being asked to

do so. She highlighted that this had been because there was not enough work to go around but still felt that there was a gendered aspect.

> **So he used to have me like go and do the sandwich run and go and stock up the sweet trolley and that was the point where I started to feel different as a woman. Even though there were other women in the team, they were all a lot more senior than me, so being a junior grade, and being a girl, I feel like that's when I started to sense that I was being treated a little bit differently by him."**
>
> **[Woman who left tech]**

Whilst more senior female colleagues were supportive and had offered to help with her training, in reality this ended up not happening as the resources and time weren't available. She had felt that the allocation of resources, in particular training had been unfairly distributed among the apprentices. Weighing up whether things might be different if the work itself was a better fit for her skills and interests, she acknowledged that the conditions in place hadn't really allowed her to discover this. She describes how having a clear training plan from the outset might have made attaining her goals feel more within reach.

> **What's my learning gonna look like and what is gonna be put in place to get me to be like them, and that wasn't set out in front of me. It wasn't like 'you do these small steps and you'll be able to do this, and these small steps and you'll be able to do that'. So it just felt like a million miles away and like I was never going to get there."**
>
> **[Woman who left tech]**

Whilst she had also had positive and inspiring experiences in being invited to participate at a 'Women in tech' event early on in the apprenticeship, she had notably been excluded from attending a hackathon event which her male colleagues at the same level were invited to participate in and was instead asked to promote it along with a female colleague. This is evocative of well-documented 'brogrammer' culture around hackathons, competitive events in which tech problems are solved in teams, often overnight, and can be exclusionary toward women and minoritised groups.[32]

> **There was a hackathon, and the guys were given the opportunity to get involved, and we weren't. We were told 'it needs promoting, so you can do the promoting of it' rather than actually getting involved in it."**
>
> **[Woman who left tech]**

Another woman, who had since moved to another sector within tech, described experiences in a previous role of colleagues acting differently and dismissive towards women but actively praising men in the same settings e.g. when leading a meeting. These experiences could often be subtle but could also be more outright. She gave the example of drafting pleasant emails with requests for colleagues but these being ignored until the director would chase them up, and of more senior female colleagues being directly excluded from meetings they ought to have been invited to. This was amid the organisation 'talking big' about its Diversity & Inclusion group and positive culture, which did not at all align with her experience.

Workplace cultures summary:

- Women who had been working in tech roles for 10 or more years tended to reflect positively on the culture of their workplace – particularly where diversity was celebrated – and had hope for progressive change in the industry. People working for larger companies were more likely to agree that their employer actively works on improving the organisation's diversity / gender balance.

- However, stereotypes and assumptions about technical capabilities, including being blamed for male colleagues' mistakes and perceived as the 'diversity hire' led to women feeling a heightened pressure to prove themselves in the workplace, with Black women significantly more likely to have experienced the assumption that they do not hold a technical role (**33%**) than white (**19%**) or Asian women (**19%**). The most commonly reported form of sexism or discrimination by women working in tech roles was being paid less than colleagues who do the same or a very similar job, experienced by **22%**.

- Overall, **73%** women and **75%** men who currently or had recently worked in a tech role agreed that they felt comfortable in the culture at their workplace. However, broken down further, Black and minoritised women, disabled women, and lesbian and bisexual women were significantly less likely to agree. In the interviews, Black and minoritised women spoke about workplace cultures of racism and harassment, and in the survey **72%** of Black and minoritised women having experienced at least one form of racism, **72%** of women overall reported experiencing at least one form of sexism, and **73%** disabled women having experienced ableism in a tech role.

- Younger women spoke of experiences of exclusion from Hackathon events, exclusion from access to interesting work and a lack of clear training plans in the workplace.

Workplace practices

This section explores employer practices and policies that women in tech roles had observed and experienced in the workplace, including diversity and inclusion initiatives, promotions and pay, and part-time and flexible work options.

1. 'I love the cake, on women's day, but that does not make the culture change.' (Diversity initiatives).

Women in tech roles spoke of inclusivity rhetoric within the workplace that was often not combined with concrete action to tackle disparities – a view that was matched by similar perceptions of the industry from women outside of tech. They noted how talk of equality, diversity, and inclusion could feel performative when not combined with attempts to improve workplace conditions and cultures from leadership. Indeed, this section's heading is a quote from a woman working in tech, whose reflection on International Women's Day celebrations sums up the mismatch between systemic change and surface-level celebration or talk – which could often mean additional labour for women (e.g. organising cake sales).

Another woman reflected on her experience of an International Women's Day in which the majority of the labour had fallen on the women in the office who were asked to be 'ambassadors' in organising an activity whereby employees were encouraged to 'write a nice note' and send it to a female colleague.
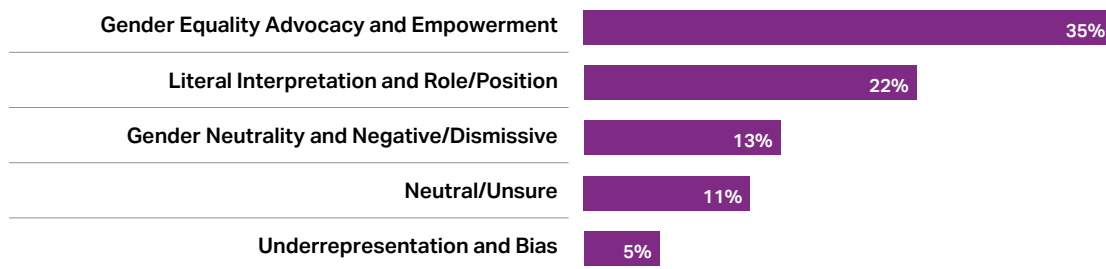
> **"We just get the basic, like 'oh it's women's day', like' write a nice note'… I got two little notes about how detail-oriented I am and you know – super hero, or whatever, and it just makes me 'ugh', cringe a little bit – you know what I mean? There aren't any men writing these, these notes, it's like women empowering other women. Asking certain women to be ambassadors for it – to encourage people to do it."**
>
> **[Woman who left tech]**

However, there was consensus that inclusivity initiatives weren't always performative, with many citing the real positive impact of equality, diversity, and inclusion groups in their organisations and the progress that they had seen over time in the numbers of women working in tech roles. This mixture of feelings about equality, diversity, and inclusion work was explored in the survey, focus groups and interviews through women's reflections on the phrase 'women in tech', a term commonly associated with networking and celebratory events as well as diversity programmes and initiatives in the industry. Critique in the literature of this term has focused on how it can suggest that women are separate, or the 'out-group' in tech.[38]

Women who had currently or recently worked in tech had a range views and experiences of the phrase. In the survey, women were asked what the term means to them, with the most common responses being related to gender equality and empowerment, followed by interpretations in a literal sense as a descriptor of women working in tech. The third most common responses – which were also reflected in the interviews and focus groups – related to the idea that it could be a negative or performative term serving which could feel alienating, and their preference would be for gender neutrality instead (**Figure 8**).

Figure 8: Response categories for women in tech roles to *'What does the phrase 'women in tech' mean to you? Please explain to what extent you think this is a helpful phrase / label.'* (N = 555)[39]

Gender Equality Advocacy and Empowerment	35%
Literal Interpretation and Role/Position	22%
Gender Neutrality and Negative/Dismissive	13%
Neutral/Unsure	11%
Underrepresentation and Bias	5%

In the interviews and focus groups, reflections on the phrase were also mixed, with women associating it with togetherness and collaboration between women amid a shared cause regardless of background or seniority, as well as highlighting how it could make them feel separate from the norm and patronised, particularly where not combined with concrete action or where there was an over-emphasis on getting women into tech at the cost of improving existing workplace cultures (and thus retention) for women. This reflects research findings from the literature, in which senior staff in tech organisations perceived the underrepresentation of women to be individual or societal.[40]

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38   Hardey M. The Culture of Women in Tech: An Unsuitable Job for a Woman. Emerald Group Publishing; 2019.

39   Respondents were provided an open text box and responses were categorised by Survation. Where percentages do not sum to 100, the remainder of responses were non-responsive or irrelevant.

40   Wynn AT. Pathways toward change: Ideologies and gender equality in a Silicon Valley technology company. Gender & society. 2020; 34(1):106-30.

A selection of quotes below highlight the variation in perspectives and the themes that emerged (**Table 4**). The final quote from a woman working in a tech role sums up the difficulty here – in striking a balance between inclusivity and condescension/alienation.

Table 4: Quotes from discussions about the phrase 'women in tech' in the focus groups and interviews, by theme.

Theme	Group	Quote
Togetherness and progression	Woman who left tech	"It's a culture, it's a group of women working together to make sure that they're represented, equally paid, equally represented across all teams, senior leaders, everything. Women in tech was just more of a group, it didn't matter what background, or entry level, or management you were – it was just a group of women getting together for the same cause."
	Woman who left tech	"Yes I hear it more regularly now than I did years ago – women in tech, women in STEM – it's a good phrase, I feel like it's giving opportunities that weren't there years and years ago, and how this has evolved over the years. I really like the phrase."
	Woman working in a tech role	"In the early 90s, another woman at the table was competition, because there was no space for another woman in this very male-dominated spaces. But now it actually means that equality is coming."
Gender neutrality would be better	Woman who left tech	"I would be more happy with, let's say, 'people in tech', so you are kind of grouped into that tech group, you're not like 'women in tech'... It does feel like you're trying to have that inclusivity, or getting into that circle – you're not already there... It's not very positive for me to hear that statement."
	Woman who left tech	"I 100% believe in equality but I think when you keep referring to the fact that it's a woman doing a job... It's like 'oh, well done for being a woman in a tech role', like I feel like we're past that – or we should be past it... Like at a normal tech event, would you be less likely to be invited, because is your work any less than what a man's doing?"
Performativity	Woman working in a tech role	"For me the phrase is kind of annoying, because I feel like we already spotlight it, as it is, being in tech... I feel like they're just giving us something pretty to keep us quiet so that they can say 'yeah, we care about everybody, yeah we support everybody... The term makes me feel like it's another blanket to cover more serious issues."
	Woman who left tech	"I just find it a bit unsubstantial... I just find it a bit condescending as well, because then it felt like the only people that were actually trying to make such a shitty idea work were the people that it was meant to be given to."
	Woman working in a tech role	"It just seems a bit of an overused catch phrase that the UK uses. Like, we have all these stupid catch phrases and then at some point it stops becoming a good thing and starts becoming something that's a hindrance... If people don't know much about it, it ends up becoming people getting women into tech, but no one's fixing the cultures that are making women leave tech as well, or making women jump into other industries."
Balance	Woman working in a tech role	I feel like it's a very tricky balance between wanting to have stuff in place to make people feel included, but then also not alienating people and making them feel special or like it's strange that they are part of the tech industry."

2. 'You need to be a bit more visual.' (Promotions and pay).

Overall, **66%** women and **63%** men in tech were satisfied with their career progression so far, whilst slightly fewer – **57%** women and 56% men in tech were satisfied with their pay. These figures are relatively high, which sits somewhat in contrast to the underrepresentation of women in senior tech roles, although they do indicate that there is a large minority who did not agree that they were satisfied

with their progression or pay. Fewer Black and minoritised women were satisfied with their career progression (**63%**) and pay (**53%**) than white women (**67%** for career progression and pay), although the difference was not statistically significant. Women who had worked in tech roles for 10+ years were the most likely to be positive about their experiences of pay and progression in the interviews / focus groups, although attributed much of this to knowing the right people in the organisation they were in. The quote below illustrates the view of one such woman.

> **You've got to make your own future happen, so you've got to do it. No one's going to come and give it to you on a plate. For me I've always had to work hard for everything. I think it makes the difference – talking or connecting, networking with the right people."**

[Woman working in a tech role]

As highlighted above (see '*No one was being held accountable*'), some women in the interviews and focus groups had experienced being paid less than male colleagues for the same role, with this being the most common form of sexism cited by women in tech roles. They also spoke of not being permitted to discuss salaries in the workplace. Pay transparency was an important point for many women, both those who had appreciated positive experiences of clear salary bounds outlined by their employer according to level, and those who had wished that this were available.

Experiences of training and development opportunities were likewise mixed – with an example of inequity in access to training highlighted in the section above ('*The guys were given the opportunity to get involved, and we weren't.*') – but training was highly valued when made available. Issues of budgeting was often the reason cited by employers when training was unavailable. In the survey, **66%** women and **69%** men in tech agreed that they are provided with training and development opportunities that suit them, with people working at organisations with 250+ employees significantly more likely to agree (71%) compared to those with 1-9 employees (60%). In between, organisations with 10-99 and 100-249 employees had 68% and 70% people agreeing, respectively.
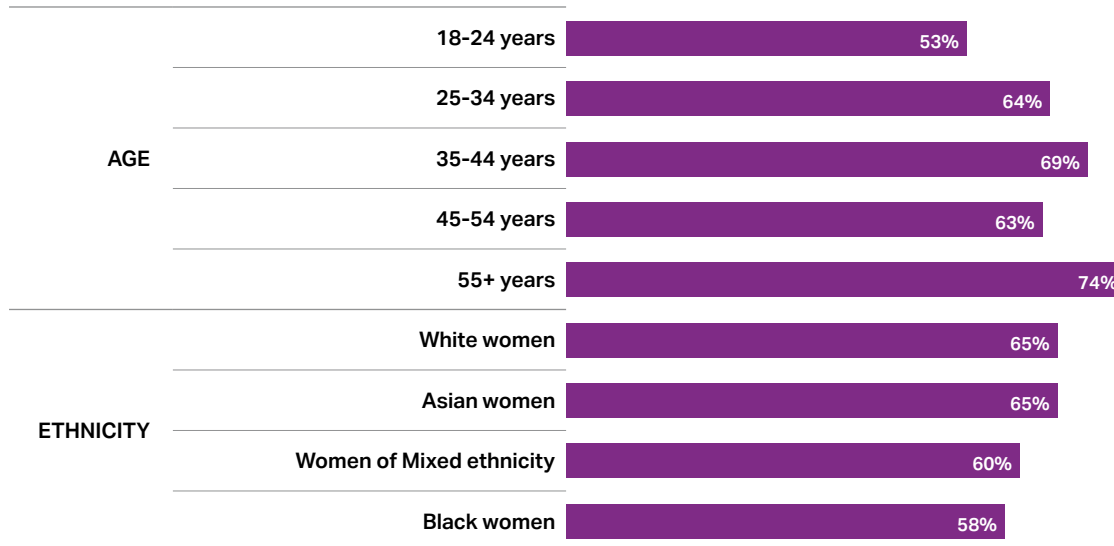
In terms of promotion, for those who had had positive experiences the key elements included a fair process with applications open to all, and the panel who made the decision included someone who was independent and did not work within the same team. However, others had experienced vague criteria and moving goalposts when it came to promotion. A lack of progression opportunities had been the reason cited for her departure by one woman who had left tech (although was open to returning for the right opportunity), whilst another described how she had repeatedly tried to meet unclear expectations without reward.

> **It was always 'you need to be a bit more visual' so I'd become a bit more visual, or 'you need to become a bit more approachable' so I'd become a bit more approachable, 'you need to become a bit more open to attending different meetings that aren't relevant to your role'. 'Okay!'"**

[Woman who left tech]

In the survey, **64%** women and **65%** men in tech roles agreed that they were clear on how promotion decisions are made at their workplace. Younger women aged 18-24 were significantly less likely to agree than older women, and Black women and women of Mixed ethnicity were less likely to agree (**24%** and **58%** respectively) than Asian (**65%**) and white women (**65%**) (**Figure 9**).

Figure 9: % women currently or recently in tech roles agreeing that *'I am clear on how promotion decisions are made at my workplace'*, **by age and ethnicity**

AGE	18-24 years	53%
	25-34 years	64%
	35-44 years	69%
	45-54 years	63%
	55+ years	74%
ETHNICITY	White women	65%
	Asian women	65%
	Women of Mixed ethnicity	60%
	Black women	58%

3. 'It's kind of hard being the part-timer.' (Part-time and flexible work).

The ability to choose their working patterns, including how, when, and where they worked was very important to women in tech roles. Many were happy with the flexibility offered by their role, with **68%** women and **69%** men currently or recently working in tech agreeing that their employer provides options for flexible work that suit them. Perceptions from women outside the industry were also of inflexibility, with **29%** agreeing (and **19%** disagreeing) that there is a lack of flexible work in tech roles in the survey, and a perceived lack of flexibility was highlighted as a barrier to entry in the focus groups (also see '*It's got this culture*' section above).

The proportion of women in tech roles agreeing that their employer offered part-time work that suited them were slightly lower than that for flexible work, although still in the majority, at **63%** women and **54%** men – the higher figure for women reflecting the greater number of female part-time workers.

Some women currently or recently working in tech roles had been able to access the part-time work that suited them after returning from maternity leave. One woman was pleased with this overall but also felt that it had not been normalised in her office as it was uncommon practice. Working in a context where everyone else was on a full-time and fixed schedule had meant little acknowledgement of her working patterns or adaptability from colleagues. She left her tech role to spend more time with her children whilst they were young, and – whilst she did reflect that overall the flexibility had been good – she noted that she would like to return to work into an industry with a better work-life balance.

> **When you work in an environment where 99.9% of the people you work with are full-time, it's kind of hard being the part-timer… there was never that expectation of giving [me] just a few hours on a Monday morning just to catch up with emails or anything."**
>
> **[Woman who left tech]**

This sense of flexible or part-time working patterns not been normalised was experienced by another woman who had had her request to work part-time denied after returning to work after maternity leave.
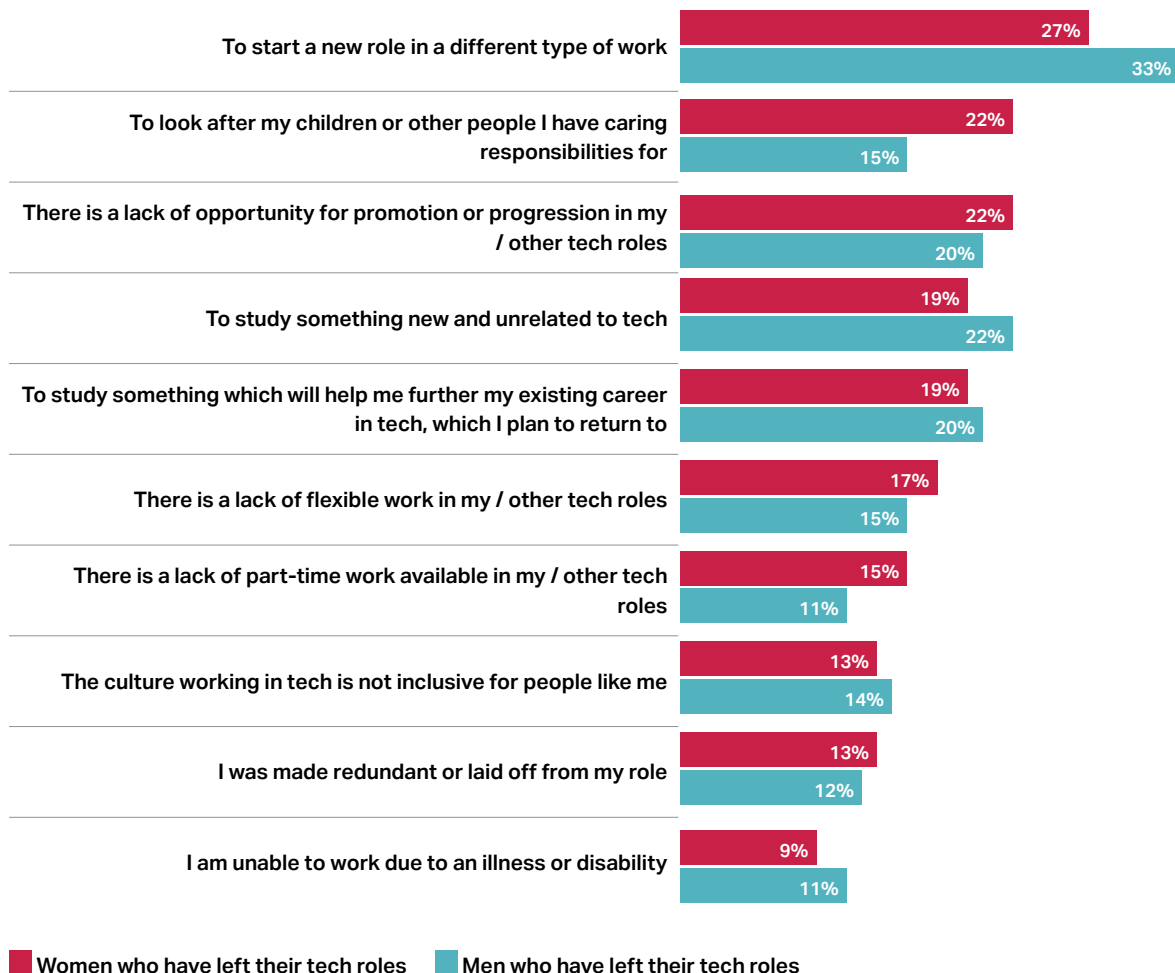
Her manager had agreed to an informal arrangement in which she had flexible hours working around her parenting and could work from home when needed. However, this temporary agreement had unraveled when feedback from other colleagues arose: *"Everyone was saying 'why aren't we getting this privilege, why is she?'"*. She was eventually told, at a time when her childcare arrangements had fallen through, that she needed to be present in the office for longer and work the usual fixed working hours – this had meant that she was forced to leave her role. Whilst still hoping to return to a tech role in the future, she reflected on the impact of this.

> **It was not a happy thing to do. I have always been into the technical roles and working, and I had to take some decisions because of my family commitments and personal commitments. So yes, it didn't feel good."**
>
> **[Woman who left tech]**

This experience is reflected in the survey, in which people with caring responsibilities were significantly more likely to have considered leaving their tech role weekly or more often (46% compared to 37% of those without caring responsibilities). For both men and women who had left tech roles, the top reason for leaving was to start a new role in a different type of work (**Figure 10**). However, women were more likely to leave to look after children or others they have caring responsibilities for or because of a lack of part-time work, whilst men were more likely to leave to study something new.

Figure 10: % respondents who have left their tech roles selecting each reason for leaving, by gender (N = 195 women, N = 137 men)

Reason	Women	Men
To start a new role in a different type of work	27%	33%
To look after my children or other people I have caring responsibilities for	22%	15%
There is a lack of opportunity for promotion or progression in my / other tech roles	22%	20%
To study something new and unrelated to tech	19%	22%
To study something which will help me further my existing career in tech, which I plan to return to	19%	20%
There is a lack of flexible work in my / other tech roles	17%	15%
There is a lack of part-time work available in my / other tech roles	15%	11%
The culture working in tech is not inclusive for people like me	13%	14%
I was made redundant or laid off from my role	13%	12%
I am unable to work due to an illness or disability	9%	11%

■ Women who have left their tech roles ■ Men who have left their tech roles

Women continue to hold the biggest share of caring and child-raising responsibility in society, meaning that their options and decisions about work and parenthood are heavily impacted by employer support available – and the lack of support available to men also serves to widen this gap. In the survey, **65%** of women in tech roles agreed that their employer provides parental leave options that suit them – this compares to **59%** of men. In the interviews and focus groups, women in tech roles spoke about a range of experiences of parental leave, including second-hand accounts from male colleagues who had complained about the lack of parental leave and being unnecessarily contacted by their workplace when away after the birth of their child, as well as more extreme cases of judgement and shaming over pregnancy. One woman had set up a meeting with her female manager in which she hoped to organise her maternity leave arrangements, but was instead met with judgement at being 'too young' to have a child.

Others spoke of cultures of long hours without overtime pay, and flexible work requests which were dependent on kindness from individual managers, rather than embedded into company policy. Indeed, in the survey just one third of women (**36%**) and men (**33%**) in tech roles had seen flexible working advertised in job descriptions in their most recent search for a tech role, and a similar proportion (**33%** of women and **32%** of men) had discussed flexible working options during application processes. Those in larger organisations were significantly more likely to report seeing both flexible work in job adverts (41% for organisations with 250+ employees compared to 29% for 1-9 employees) and discussing it at application (19% for organisations with 1-9 employees, compared to 39% for 250+ employees).

Workplace practices summary:

- Workplace equality, diversity, and inclusion initiatives, whilst often pushing real progress, could also be perceived as performative by women in tech roles, especially when not combined concrete action to tackle disparities – a view that was matched by similar perceptions of the industry from women outside of tech.

- There were mixed perspectives on the helpfulness of the phrase 'women in tech', with a need to strike a balance between inclusivity and condescension/alienation of women in tech roles.

- Overall, **66%** women and **63%** men in tech were satisfied with their career progression so far, whilst slightly fewer – **57%** women and **56%** men in tech were satisfied with their pay. Pay transparency, clear promotion criteria, and ongoing training were highly valued by women, as evidenced by cases where these were and weren't present.

- Many were happy with the flexibility offered by their role, with **68%** women and **69%** men working in tech agreeing that their employer provides options for flexible work that suit them and **63%** of women and **54%** men in tech roles agreeing that their employer offers part-time work that suits them. Those in larger organisations were significantly more likely to report both seeing flexible work in job adverts and discussing it at application.

- However, some women had been forced to leave their role due to a lack of flexible or part-time work options after a return from maternity leave. For those who were able to access part-time or flexible work, this was often not normalised in the workplace.

- Just one third of women (**36%**) and men (**33%**) in tech roles had seen flexible working advertised in job descriptions in their most recent job search, and a similar proportion (**33%** of women and **32%** of men) had discussed flexible working options during application processes.

- **65%** of women in tech roles agreed that their employer provides parental leave options that suit them, compared to **59%** of men. Women spoke about male colleagues who had complained about the lack of parental leave and being unnecessarily contacted by their workplace when away after the birth of their child, as well as cases of judgement and shaming over pregnancy.

ADVICE AND HOPE FOR THE FUTURE.

The interviews and focus groups with women currently working in tech and tech leavers each concluded with the question 'What would you say to a young women considering entering tech?'. The responses reflected the women's own experiences of difficulties, but also provided advice, joy, and hope for the future.

1. 'Don't let people put you down' and 'look for mentors'.

Some women spoke of a need to 'speak up', not let others put you down and find mentors whilst being prepared for challenges, including 'stupid comments'.

> "Don't let people put you down… At the beginning of your career choose your bosses and your mentors more than the salary. Money will arrive but you need to capitalise on your knowledge at the beginning of your career – that's very important… Be prepared to get a stupid comment once in a while but also don't let that get you down… just be prepared for people questioning your knowledge."
>
> [Woman working in a tech role]

> "Find at least three established women in the industry and reach out to them … Speak out, don't minimise yourself, because men are overshadowing you. Speak out regardless. Show your work, take ownership of your work, and speak out. It's hard."
>
> [Woman who left tech]

> "Go for it really, hard work pays off as well. Don't listen too much to the noise of what other people say… Look for mentors, listen to them, look for people you aspire to, don't always listen to one person who's telling you or putting you off… You'll find a way, and be patient as well, I don't think things land on your lap… Just be ambitious."
>
> [Woman working in a tech role]

One woman expressed a sense of 'jadedness':

> "I try very hard not to give my jaded-ness to anyone. I'd probably just ask them why if they are interested."
>
> [Woman working in a tech role]

2. 'Follow your dream' because there are more 'doors opening up' nowadays.

Women who had worked in tech for a long time highlighted the greater level of opportunity in tech nowadays.

> "If that's what you have a genuine interest in then do it… And I do think that there are more doors opening up than probably what there were 10 or 15 years ago."
>
> [Woman who left tech]

❝ Follow your dream, have that confidence and don't let anyone put you down. If that's something you're interested in, or even if it's something you want to give it a go at, just give it a go, because there is a lot of support out there… There's so much out there compared to what there was 20-25 years ago, it's so much easier."

[Woman working in a tech role]

<u>3</u>. Tech is 'fun', 'exciting', 'empowering', and 'the changing landscape is brilliant'.

Women were keen to emphasize the 'endless opportunities' amid the breadth of the industry, whilst conveying the combination of stability and growth and a real sense of excitement and joy.

❝ For me, the emphasis needs to be put on the opportunity – that tech touches every other aspect of other industries. The pay is good, the benefits are good, the changing landscape is brilliant as well, but it doesn't confine itself to making apps on the phone or websites, it goes deeper into, you know, you can get into the psychology of how users interact with certain things, or going into pharmacy or healthcare technical spaces."

[Woman working in a tech role]

❝ I'd tell them go for it, because if there's one thing I truly enjoy about tech, and one thing keeping me at my job – it's the fact that it's a lot of learning, and it's constantly changing – it adapts, just like real life. You always have an opportunity to learn, you always have an opportunity to grow, and you can always switch into different aspects without actually having to leave tech. And I love that. …You feel accomplished, I know I'm doing something that I will always enjoy."

[Woman working in a tech role]

❝ I'd say go for it, yeah. I'd say endless opportunities, the world is now into data and so much tech – everything's becoming tech isn't it."

[Woman who left tech]

❝ Just do it, it's fun, it's emerging, there's always new things to learn and it can go in any direction you want – new technologies, new pathways, different parts of IT – never just stuck in one role. You can move wherever you want."

[Woman who left tech]

❝ It's exciting… obviously it's not without it's difficulties but there's so much growth and new stuff coming out constantly."

[Woman working in a tech role]

❝ It's empowering, and I think it opens up so many doors and opportunities for you. There's just so much stability as well, which is really nice."

[Woman working in a tech role]

CONCLUSION

Technology runs the world, underpinning almost everything we do. Yet women represent a minority of the UK tech workforce, and Black women are excluded further still. The implications of this are wide-ranging, from bias in systems built for all of us, to an excess of untapped talent.

At the point of entry, women outside tech perceive a degree requirement and a 'laddish' culture, whilst experiences from within tech indicate bias in recruiting practice and a lack of career information serving as barriers to women entering the field. Once in tech, many women feel positively about their workplace culture and its practices, particularly in larger organisations – which offers hope and reflects a positive impact of organisational efforts toward change. However, sexism and pay discrimination remain common, with Black and minoritised women at the sharpest end of workplace harassment, including derogatory comments and assumptions about skills. Age plays a role too, with younger women highlighting exclusion from training and participation in events.

The recommendations in this report reflect these women's voices and set out practical steps toward change. Eliminating bias in recruitment and normalising flexible and part-time work, particularly by leadership, will go some way toward tackling disparities, whilst promotion processes, pay rises, and bonuses should be transparently and equitably distributed. Crucially, care must be taken to ensure change efforts are not performative, but tackle the structural issues which continue to lock women out of tech roles.

The Fawcett Society is the UK's leading membership charity campaigning for gender equality and women's rights at work, at home and in public life. Our vision is a society in which women and girls in all their diversity are equal and truly free to fulfil their potential creating a stronger, happier, better future for us all.