

# CAREER SWITCHERS

Women in Tech: Unlock the talent pool  
that will help fill the tech labour shortage





This report highlights that the gender gap in the tech industry will not be closed by the UK's education system alone. With 80% of Code First Girls' community coming from non-computer science, mathematics, or engineering backgrounds, it's clear that girls are not being encouraged into tech careers and pathways early in their education. But, just because women are not encouraged into these careers does not mean they lack the skills or capability to succeed in the industry.

Career switchers are providing companies access to the top diverse talent they need in order to flourish. By bringing a range of different perspectives and experiences, career switchers are strengthening employers' ability to problem solve and come up with creative and innovative solutions.

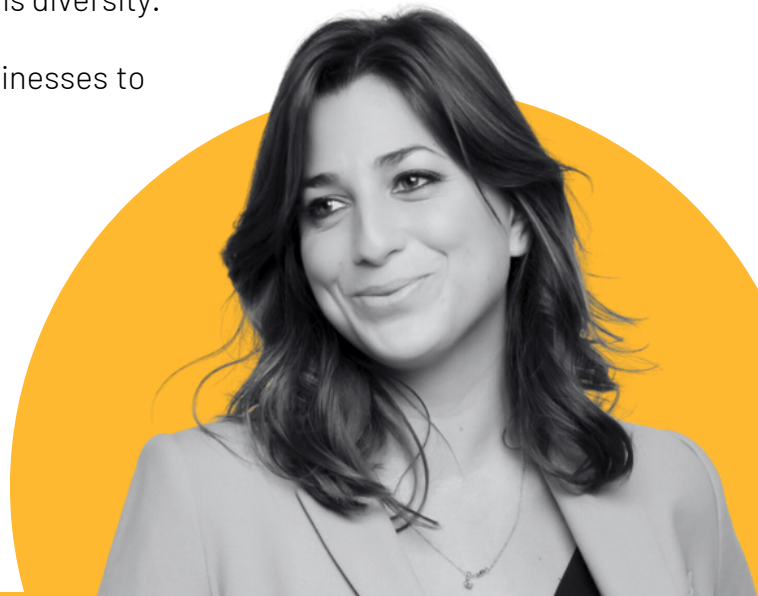
Code First Girls is very proud to launch this report, which includes key employer takeaways and valuable insights into how to attract and retain career switchers; from creating the right environment with support and flexibility to building pathways for continued development. The tech industry has a largely untapped talent pool at its fingertips - in fact, 50% of our community are career switchers, and this is only increasing.

To ensure our tech industry is as strong as it can be, employers must draw on the widest possible range of voices and insights. We must all play a part in removing both social and economic barriers to entry faced by those seeking to enter the sector and create an environment that actively champions diversity.

I hope this report can provide a guide for businesses to begin their own journeys in doing just that.

A handwritten signature in black ink that reads 'Anna'.

**Anna Brailsford, CEO, Code First Girls**



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# EXECUTIVE SUMMARY

## PURPOSE OF THE REPORT

The UK needs 3 million more skilled people working in technology by 2025. That figure can't be achieved by merely funneling more people through university alone. New diverse talent pools need to be found and nurtured.

Over the past two years, Code First Girls has noticed a significant increase in the number of women switching to a career in technology. In 2020, career switchers made up less than 2% of the Code First Girls' community. That number is now more than 41%. We wanted to discover what's motivating these women to switch careers, what they're looking for from tech employers, and how they can be supported to progress into leadership positions.

## HOW DID WE CONDUCT OUR RESEARCH?

In August 2022, Code First Girls surveyed more than 1,200 women in the Code First Girls community. Almost two thirds of respondents identified as career switchers, with 54% not currently working in a technical role. The remainder were still studying (18%), interning or doing work experience (4%), not currently employed (16%) or retired (0.08%).

## OUR FINDINGS

- Almost three quarters of the career switchers surveyed are aged between 25 and 34, and more than half have leadership experience.
- Technology appeals because of the opportunities to progress and upskill, flexible working and salary.
- They have similar entry-level salary expectations as graduates, despite greater experience.
- Many have experienced barriers to joining the tech workforce, such as a lack of training opportunities or not being taken seriously enough.



# EXECUTIVE SUMMARY

## OUR RECOMMENDATIONS

- Support and promote free training opportunities run by organisations like Code First Girls, which women can pursue around other responsibilities at any point in their lives.
- Ensure advertisements highlight the benefits of a technology career, including rapid career progression, flexibility, interesting work, and high salaries.
- Mention career switchers in job descriptions, and scrutinise the gender-biased language used and the level of previous sector experience that's considered necessary for a role.
- Be open to the skills and potential that these women bring from other professions, and champion career switchers already working within an organisation.
- Provide mentorship and fast-track career opportunities to those women joining the sector later in life, particularly where they have previous leadership experience. Put support in place focused specifically on key transitional moments of a woman's career, such as returning to work after maternity leave, or dealing with menopause.

## THE OPPORTUNITY FOR ALL INDUSTRIES & SECTORS

Never has there been a better time to upskill in or into tech. Across all industries, tech plays a critical role in innovation, efficiencies and effectiveness – from analysing patient data in medicine to creating new easy-to-use learning tools in schools or using machine learning to improve the performance of racing cars in sport – tech touches every industry. All industries need to unlock opportunities for those within roles to build up their tech skills.

Not only will doing so also unlock efficiencies with processes, but it will also help contribute to solving a much wider issue of the digital skills gap that is happening globally as we speak. And, on a personal development level, providing opportunities for upskilling is in line with what women are looking for in career opportunities. Seems like a no-brainer to us!



# INTRODUCTION

## WHY CAREER SWITCHERS?

The decision to switch careers is not one that's taken lightly. For some, the thought of retraining and starting again at the bottom of the ladder is unthinkable. But others are excited about the opportunity to make their way in a new industry. At Code First Girls, almost half (41%) of all members consider themselves career switchers, with an additional 13% either taking a career break or currently not employed, but looking for their next career move.

That's good news for the sector, where women only make up 26% of technology's workforce, despite evidence that organisations with diverse teams perform much better. It's estimated that one million women need to be hired for the sector to achieve gender parity, a move that would contribute £2.6 billion to the UK economy each year. That can't be achieved by bolstering those numbers at university alone. Currently, 30,000 (19%) of the annual number of computer science graduates are women. At the current levels, there will only be one woman per 115 roles in the UK technology sector by 2025.

We spoke to more than 1,200 women in the Code First Girls community to discover what's encouraging women to switch careers into tech. Almost two-thirds of respondents identified as career switchers and 54% are not currently working in a technical role.

While Code First Girls provides equal opportunities to women and non-binary people, based on the survey, 96% identified as women and 2% identified as non-binary. In this report, we are therefore focusing on our findings from the experiences of our cohort who identify as women.





# CHAPTER ONE

## HOW TECHNOLOGY BECAME A MAN'S WORLD

### CHAPTER TAKE-AWAY:

Employers need to do more to counter historical and ingrained perceptions of what a career in technology looks like. Today, many girls see STEM as subjects better suited to boys, despite the evidence showing that they can do even better than their peers in exams. Despite efforts to improve the interest of girls in STEM, employers, the UK government and society as a whole need to take a much more active interest in encouraging more girls into tech, by building early interest in the range of professions available, championing role models, and securing a sustainable future talent pipeline for the sector.

### *How did we create a technology crisis?*

Technology wasn't always dominated by men. When modern computing began to emerge during the early 1940s, hundreds of women were hired to work in the sector, solving complex calculations and building early computer systems. In the 1950s and 1960s, women tended to work behind the scenes building software while men specialised in hardware engineering. In 1967, the US edition of Cosmopolitan published a feature hailing computer science as an exciting alternative to secretarial work, and by 1984, women majoring in computer science at American universities grew to 37%, double what it is today.

***"By 1984, women majoring in computer science at American universities grew to 37%, double what it is today".***

Many of those women went on to achieve great things. Grace Hopper was involved in the creation of UNIVAC, the first all-electronic digital computer. She also co-developed COBOL, one of the earliest standardised computer languages, and coined the word "bug" to describe a computer malfunction. Hedy Lamarr, an Austrian-American actress, was also an inventor who pioneered the technology that would one day form the basis for Wi-Fi, GPS and Bluetooth.



*Grace Murray Hopper '28 worked on the UNIVAC computer series and developed the programming language COBOL.*

# CHAPTER ONE

## HOW TECHNOLOGY BECAME A MAN'S WORLD

Engineer and mathematician Dr Radia Perlman was one of the main people behind assembling the networks and technology that would later enable the internet. And Annie Easley was the computer programmer whose work at NASA helped get rockets into space.



Archive footage from *Bombshell: The Hedy Lamarr Story*

By the 1970s, governments were beginning to recognise how powerful computers were becoming and women started being pushed out. A decade later, the arrival of the personal computer and advancements of computer software in the 1980s brought a gold rush to Silicon Valley. Men like Steve Jobs and Bill Gates dominated the technology pages, and personal computers and games consoles began to be marketed almost exclusively to men and boys. The number of women studying computer science began to steadily decline in the US and UK. And those women that applied for technology jobs were often rejected because they weren't the right 'culture fit'.

**A poll by PwC found that 78% of A-Level and university students could not name a famous woman working in technology.**

Fast forward 40 years, and many people struggle to name technology role models who are women, reinforcing the notion that it's a sector just for men. A poll with 2,000 British A Level and university students by PwC, found 78% couldn't name a famous woman working in technology, and only 3% of girls said a career in tech is their first choice.

### QUICK TAKEAWAYS

- More technology role models are needed.
- Showcase more women in tech to highlight careers.



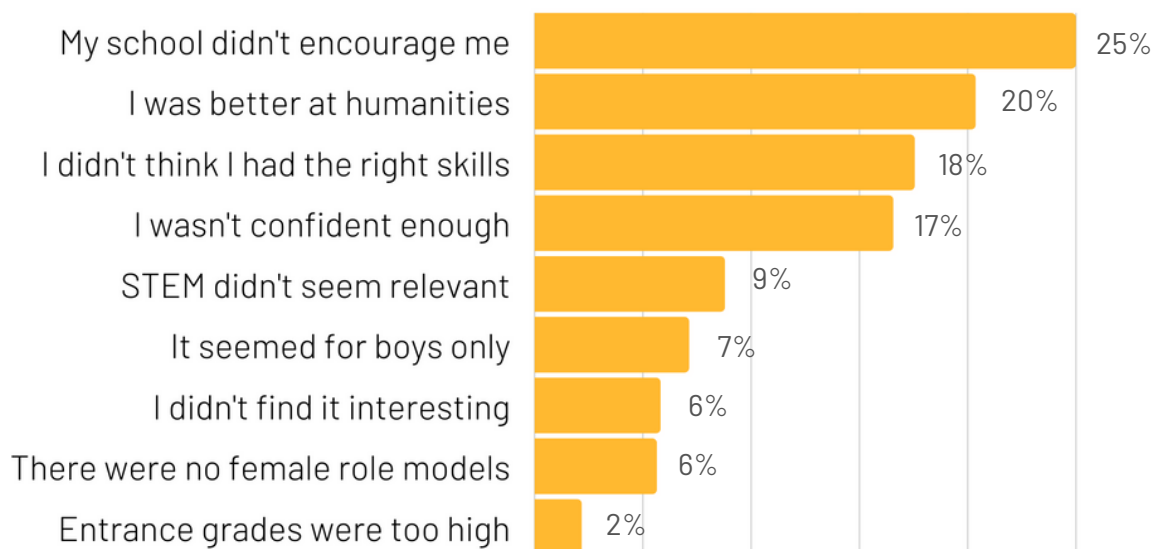
# CHAPTER ONE

## HOW TECHNOLOGY BECAME A MAN'S WORLD

### *Encouraging careers in tech at an early age*

For many career switchers, that belief in technology being for boys starts at school. Code First Girls' research revealed that 88% of career switchers say a career in technology wasn't mentioned at school. Almost half (46%) didn't choose to study STEM subjects. When asked why not, almost one in four say they weren't encouraged to consider them, and one in five say they felt they were better at humanities subjects. An additional 17% didn't feel confident in those subjects.

#### WHY DID CAREER SWITCHERS NOT CHOOSE STEM SUBJECTS AT SCHOOL?



### *Where does that leave us today?*

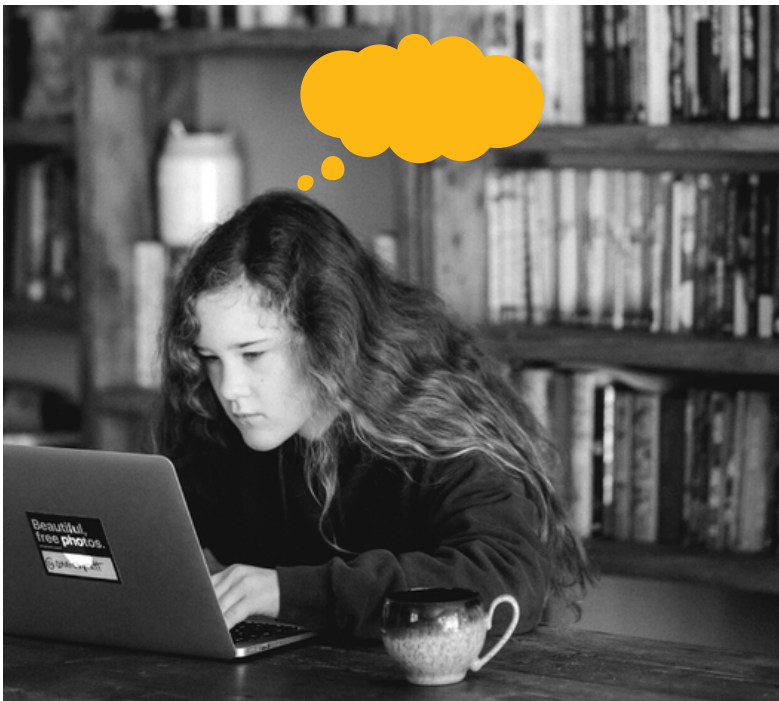
Those early misconceptions continue later in life. Previous research has found that 29% didn't think they would succeed or have the skillset to consider a career in technology, 29% didn't think it would be something they would be good at, and 28% said they didn't understand it. Others associated a career in tech with coding on a computer all day, didn't think it was conducive to a family life, or said they didn't believe it would provide fulfilment. Figures from UCAS show only 35% of STEM students in higher education are women. That number drops to 19% when just computer science is considered.

# CHAPTER ONE

## HOW TECHNOLOGY BECAME A MAN'S WORLD

### *How quickly are things changing?*

It's reassuring to see some change starting to happen. Code First Girls' research reveals one in three respondents currently studying are being encouraged to consider a career in technology, compared to less than 13% of career switchers. More than 31% of those women currently studying say they were taught computer coding skills at school, versus only one in ten of career switchers. Younger respondents are also less likely to say there's a lack of inspirational women and role models in technology (36% vs 41% of career switchers). And there are significant efforts to increase girls' interest in STEM via social enterprises and professional bodies including [The Royal Academy of Engineering](#).



Because girls do just as well as (if not better than) boys in STEM, given the chance. In 2021, girls in the UK achieved [more top grades in maths](#) than boys at A-level and GCSE. It's a similar picture for science – in 2020, girls were awarded a [greater number of science A-levels than boys](#) for the second year in a row. One group of computer science students found the software repository [GitHub approved code written by women at a higher rate](#) than code written by men – but only if their gender was not disclosed.

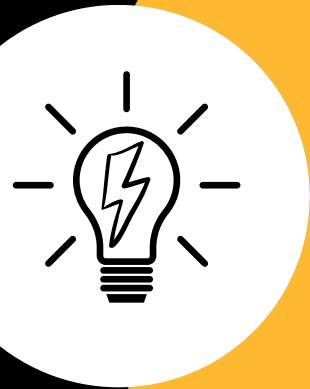
When someone's early interaction with STEM is gendered, it stands to reason that women pursue other career paths. One way to resolve this challenge, as well as engaging with current students in education, is to provide opportunities for women to change their minds later in life – should they wish to do so.

### **QUICK TAKEAWAYS**

- Girls often outperform boys in maths and science subjects.
- Schools need to encourage careers in tech to all students.

# CHAPTER ONE

## HOW TECHNOLOGY BECAME A MAN'S WORLD



### INSIGHTS INTO ACTION:

- Government, schools and society can start early with building interest in coding and STEM and evolve this from primary to high school education.
- Schools, in particular, can take an active role in demonstrating career pathways and showcasing the range of professions available.
- Companies can actively work to dismantle the "man's world" notion by highlighting hired women in tech across a variety of industries and role types.
- Businesses and media can champion women as tech role models and highlight their career journeys and success stories.

### Community Stories

*"I came from a non-technical background and knew nothing about coding until I was 39 years old. Being able to re-train with Code First Girls at this point of my life has been priceless, and the job opportunities offered me as part of the CFGdegree has completely changed my life."*

**Translator switched to Software Engineer at Skyscanner, London**

*"I'd always been into tech, but never considered it as a career path, foolishly believing coding was only for men who liked maths. A colleague recommended Code First Girls to me last year, I saw there was the opportunity to be sponsored and subsequently hired by Veygo. I was over the moon when I got my offer – luckily I was able to continue my full time job on top of my studies so I wouldn't have to take a break from earning. I went from a customer relations role to a software engineer in the space of a few months. It was tough but it was the best decision I ever made."*

**Customer Relations Manager switched to Software Engineer at Veygo, Cardiff**

# CHAPTER TWO

## WHY WOMEN ARE SWITCHING CAREERS

### CHAPTER TAKE-AWAY:

Women are leaving a range of careers to join technology and are bringing a range of transferable skills with them. The majority are aged 25 to 44 and many also have leadership experience. They're primarily looking for a career change because there hasn't been a clear pathway or progression available in a previous role, because they were paid poorly, or because they've experienced burnout. Employers looking to hire career switchers into tech need to be mindful of those previous experiences and highlight the measures they're taking to ensure a very different experience.

### ***Which careers are women switching from?***

Women choosing to join the technology workforce come from a wide range of backgrounds and professions. They bring a plethora of transferable skills, from problem-solving and teamwork to analytical expertise, communication and attention to detail. Career switchers tend to be open-minded, creative and independent. But above all, they're ready and willing to learn.

Code First Girls' research found almost three-quarters of the career switchers surveyed are aged 25-34, and 22% are aged 35-44. Many have leadership experience – 57% are mid-level or higher, with 12.73% being senior, director or C-suite level. Additionally, one in five career switchers identify as neurodiverse and almost four in 10 are non-white, giving companies the opportunity to actively hire a range of diverse candidates.

***UK-wide, technology is a career shift appealing most to women working in teaching, accounting, retail and healthcare.***

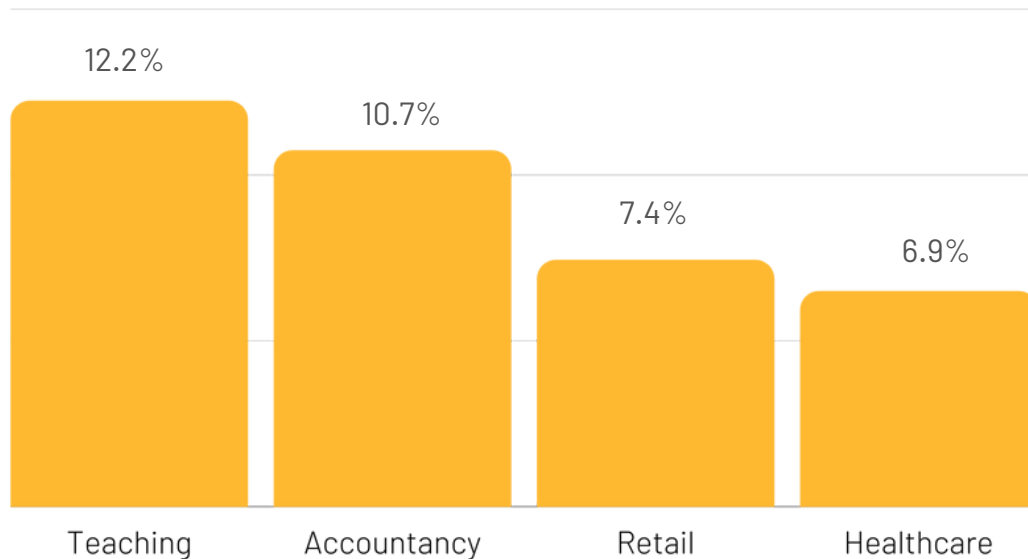


UK-wide, technology is a career shift appealing most to women working in teaching, accountancy, retail, and healthcare, according to the cohort polled by Code First Girls. Regionally, in Scotland, one in four of the women changing careers were teachers, 13% have previously worked in public services or administration and 8% have worked in the media. In Wales, the industry women are changing out of the most is accountancy (19%) and in Northern Ireland, retail (10%), teaching (10%) and healthcare (10%) share the top spot.

# CHAPTER TWO

## WHY WOMEN ARE SWITCHING CAREERS

### KEY SECTORS CODE FIRST GIRLS CAREER SWITCHERS WORK IN PREVIOUSLY



The trend of career switching into tech is also supported by figures from the [Office of National Statistics](#). In 2021, the number of women working as programmers and software developers in the UK increased by almost 15,000, and the number of women working as web designers increased by almost 10,000. Overall, 32% more women joined the technology sector in 2021, compared to the previous year. At the same time, more than 100,000 women left the nursing profession in 2021, compared to 2020, and 152,500 women left teaching. Of course, not all will have gone into technology but there's a clear movement across all three sectors.

Coinciding with this, additional polls shed further light as to why individuals are leaving these industries. [A poll by the National Education Union](#) found almost half (44%) of teachers intend to leave the profession by 2027 because of increasing workloads. [One in six health and social care workers](#) want to leave the sector completely, thanks in part to staff shortages and low pay. And [accountants are leaving in record numbers](#) because of a lack of training opportunities and career development.





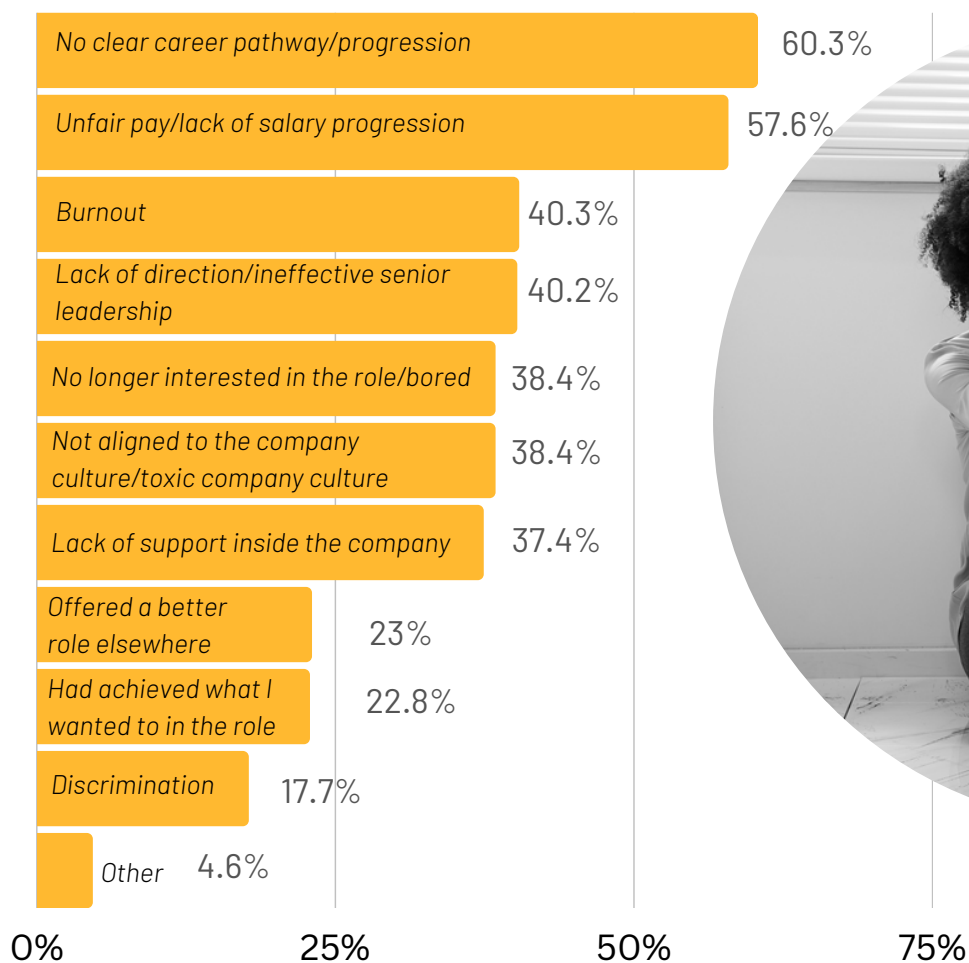
# CHAPTER TWO

## WHY WOMEN ARE SWITCHING CAREERS

### ***Insights from the community: why are they leaving their roles?***

When Code First Girls asked career switchers why they left their previous roles, almost two-thirds (60%) say it was because there was no clear promotional pathway or progression, and more than half say unfair pay or lack of opportunities for a salary increase. Four in 10 have experienced burnout, caused by unreasonable time pressure, lack of communication and support from a manager, lack of work-life balance, and an unmanageable workload.

#### **WHY ARE WOMEN LEAVING THEIR ROLES?**



### ***Minority groups are impacted further***

Those from underrepresented ethnicities and those who identify as neurodivergent are more likely to leave a role due to burnout, discrimination, unfair pay/lack of salary progression, having no clear career pathway or progression and lack of support inside the company, as they over-index on each of these areas vs. their career switcher counterparts.

# CHAPTER TWO

## WHY WOMEN ARE SWITCHING CAREERS

### ***From C-Suite discrimination to Mid-Level role boredom***

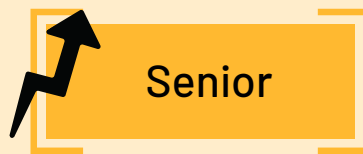
Looking further into the data, we do see different seniority levels also over-index against some of the reasons for leaving a role. For Entry level roles, none of the key reasons for leaving over-indexed with this group, however, for Mid-Level roles, there was a trend of moving on due to no longer being interested in the brand or being offered a role elsewhere. On the other end, C-Suite over-indexed with leaving a role due to discrimination. Senior Roles over-indexed across the majority of reasons linked directly to progression, non-alignment to the company or leadership and burnout.

#### **HOW DIFFERENT LEVELS OF SENIORITY OVER-INDEX ACROSS REASONS FOR LEAVING ROLES**



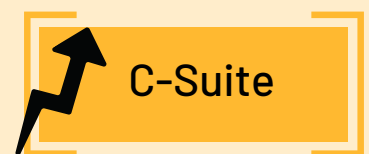
#### **Mid-Level**

- No longer interested in the role/bored
- Offered a better role elsewhere



#### **Senior**

- No clear career pathway/progression
- Unfair pay/lack of salary progression
- Burnout
- Lack of direction/ineffective senior leadership
- Not aligned to the company culture/toxic company culture
- Lack of support inside the company
- Had achieved what I wanted to in the role
- Discrimination



#### **C-Suite**

- Discrimination

### ***The big upskilling opportunity***

On the flip side though, a huge 81% indicated that they would stay in their roles if they were given the opportunity to upskill. Not only is there the opportunity to retain talent, there is also the opportunity to drive business performance by enabling a digital/tech workforce, thereby future-proofing organisations and reducing the global digital skills gap.



*"I decided to pursue a career in Pharmacy because of my interest in science and desire to make an impact in my community. Despite the challenges currently faced by the healthcare industry, I found the work rewarding. I stumbled upon programming while trying to create a website and quickly became fascinated by it. I taught myself programming languages and eventually enrolled in the CFG Software Engineering Degree. I enjoy the mental stimulation and creativity required by coding. Additionally, having the ability to create programs that solve real-world problems and improve the lives of many is what pushed me to make the switch."*

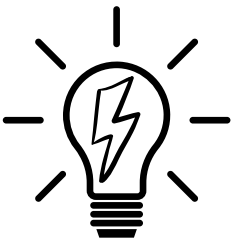
**Pharmacist who has up skilled through CFG courses, London**

# CHAPTER TWO

## WHY WOMEN ARE SWITCHING CAREERS

### INSIGHTS INTO ACTION:

- Career switchers provide a strong talent pool for any company or industry with tech needs, with a range of transferable soft skills and experience.
- Many bring leadership experience and could progress quickly in tech roles, driving diversity growth for middle and senior management.
- There is an opportunity for all industries to retain talent through upskilling opportunities, driving a digital, tech-enabled workforce.
- Industries and companies will still need to address wider reasons for leaving, such as low pay and burnout, but can also retain talent through clearer career and salary progression opportunities.



### Community Stories

*"I wanted to get into the technology industry because of the opportunity this field offers to learn and grow in so many different ways every day, expand my horizons, develop my problem-solving skills, and of course because of the flexibility, and the incredible career pathways. Taking the leap to apply for the CFGdegree, with my husband's encouragement, was a massive step for me. After looking at the sponsored companies, TPXimpact immediately got my attention and I only applied to them, since I wanted to work in a company that improves society! I am now working on my dream and am combining my two passions to a bigger extent as now I'll be making a positive impact on people's lives via technology! I'm just so grateful for this journey and this amazing life experience!"*

**Healthcare Administrator to Associate Software Engineer at TPX Impact, Lincoln**

*"I decided to stop relying on my employers to give me the position I wanted and I decided to take action for myself...I started googling job descriptions for analyst roles and saw requirements for languages such as Python and SQL. So I started looking for training courses. A lot of them were very expensive, so I was overjoyed to discover CFG. I thought free courses with a guaranteed job was too good to be true, but I decided to dip my toe in and see what happened. After gaining the technical skills to back up my talent, I've finally secured an analyst role which suits me perfectly. I'm completely supported at work and I finally feel happy for the first time in a long time. I'm also doing postgraduate study at university, as the CFG courses really made me want to delve deeper. I can't say how grateful I am to CFG for helping me get to where I wanted to be for so long."*

**Customer service to Market Research Analyst at FOS, UK**

# CHAPTER THREE

## HOW TO ATTRACT & HIRE CAREER SWITCHERS

### CHAPTER TAKE-AWAY:

With their years of prior experience and understanding of the importance of work/life balance, career switchers are looking for opportunities for professional progression, chances to upskill, and the ability to work flexibly. Despite the soft skills and leadership qualities they bring to the table, career switchers are open to similar salaries as graduates but have the potential to climb the ladder rapidly. They're looking at a wide variety of roles – from data analysts, to full-stack developers and data scientists – and want to do their part to change the world.

### What do career switchers want?

Data from the Office for National Statistics shows technology is one of the fastest sectors for job growth, particularly for the creation of jobs for women. It's one of the better paying industries to work in, with computer engineers earning an average of £50,000 per annum. And technology is one of the more progressive sectors, when it comes to offering jobs with flexible working.

#### WHAT MAKES A CAREER IN TECH APPEALING?

Better career progression 71%

Learning opportunities 69%

Flexible/remote working 64%

When asked about what appeals about technology, Code First Girls' career switchers say they're looking for better career progression (71%), learning opportunities (69%) and the ability to work remotely (64%). Salary was also flagged by seven in ten career switchers as a key factor that makes a career in tech attractive, compared to six out of ten graduates.



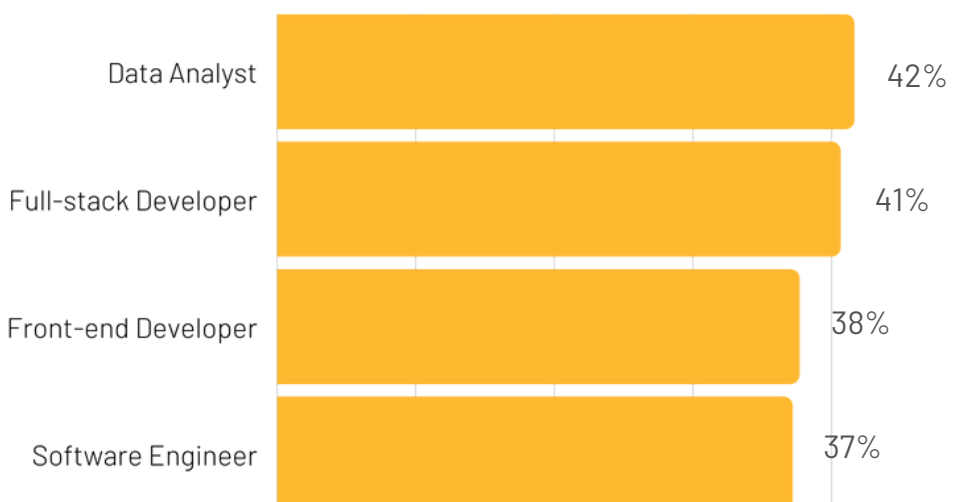
# CHAPTER THREE

## HOW TO ATTRACT & HIRE CAREER SWITCHERS

### ***Career switchers are interested in a variety of tech roles***

Code First Girls' analysis showed that career switchers are interested in a variety of roles – the most popular roles being in data analysis, closely followed by a full-stack developer and front-end developer. They're most interested in trends such as machine learning, health technology, big data and artificial intelligence, as well as wearable tech, accessibility and algorithm design.

#### **WHICH ROLES ARE CAREER SWITCHERS INTERESTED IN?**



### ***But despite their eagerness to join the tech world, many career switchers have faced challenges taking that first step.***

A lack of confidence is cited by 77% of career switchers as the biggest barrier, compared to 64% of graduates. More than a third (38%) say they've felt there is a lack of professional development and training opportunities for them to enter the sector; 32% say they haven't been taken seriously enough, and one in five believe there's a lack of equity in opportunities.

#### **QUICK TAKEAWAYS**

- Career switchers are interested in a range of roles and tech trends.
- However, the majority, often lack the confidence to take the first step.



# CHAPTER THREE

## HOW TO ATTRACT & HIRE CAREER SWITCHERS

***Career switchers have been dissuaded from taking a job because of a lack of role models in an organisation.***

Almost one in three career switchers say they've been dissuaded from taking a job because of a lack of role models in an organisation, highlighting the importance of creating more visibility of those women succeeding in technology. This almost doubles for those who also identify as neurodiverse. More than one in five of those from an ethnic minority background say the lack of diversity in technology has been a challenge in pursuing a tech-related career, perhaps because they don't see it as a place for them.



**NatWest Group**

### CASE STUDY SPOTLIGHT

NatWest is actively holding itself accountable to drive diversity and inclusion across the business. Since doing so, the number of women has risen across the business.

*"Despite widespread initiatives underway, such as our partnership with Code First Girls which has helped over 2,000 women learn to code for free, data shows that the number of women working in the tech sector has remained consistently low over the past decade. This is in part attributed to smaller numbers of girls pursuing STEM subjects at school and the lack of access to educational resources and role models for women looking to take up a career in tech.*

*NatWest Group recognises the need to continually attract and retain a talented and diverse technology workforce. A diverse workforce ensures a variety of skills, insights, and experiences to draw upon as we innovate and offer our customer base the quality digital products and experiences they are looking for. Early-stage investment in diverse talent pipelines with partners like Code First Girls is helping us to proactively build this workforce."*

**Alison Rose DBE, CEO at NatWest**

# CHAPTER THREE

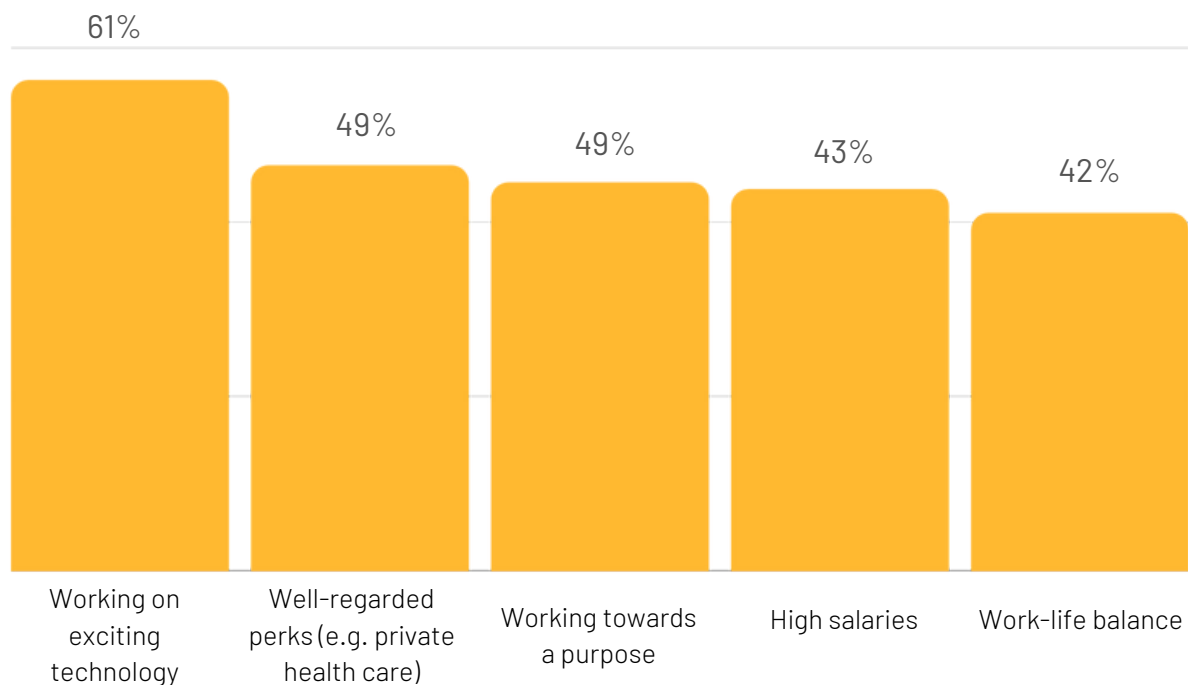
## HOW TO ATTRACT & HIRE CAREER SWITCHERS

### ***What attracts career switchers?***

For technology leaders looking to hire career switchers, it's important to consider how to tailor recruitment strategies for this cohort of women. Psychologists have found using inherently masculine language, such as words like "ambitious", "assertive", and "self reliant", in job adverts puts off women candidates from applying. One company, for example, dropped the words "confident", "competitive" and "champion" and saw applications from women increase by six times.

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### **KEY FACTORS THAT MAKE A CAREER IN TECH ATTRACTIVE TO CAREER SWITCHERS**



But beyond tweaks to language, employers also need to consider the benefits that will appeal most to career switchers. Overall, Code First Girls' research shows they're more interested in career progression opportunities (71% vs 66%) and flexible working (64% vs 60%) than the general cohort.

# CHAPTER THREE

## HOW TO ATTRACT & HIRE CAREER SWITCHERS

In the regions, career switchers in Wales are most drawn to flexible working (16%), while in Northern Ireland it is job security (17%). In Scotland, 81% are interested in tech career progression opportunities, 79% are interested in flexible working, and 68% say the learning opportunities are the most interesting to them.

***Career switchers also want to know more about the company itself and the technology they could be working on.***

It's also important for employers to think about how they're advertising the company itself and the technology that career switchers will be working on. Almost two-thirds (61%) say they want to work for a particular company because of the potential to work on exciting technology (vs 56% of graduates). Almost half of all career switchers (49%) say they want perks and benefits (such as private healthcare), and 49% want to work for a purpose they believe in. Almost two-thirds (63%) say they want to see the salary listed in the job advert, compared to just 56% of graduates.

### ***But do career switchers cost more?***

While 72% of career switchers say salaries make a career in tech attractive (versus 65% of those currently studying), they don't appear to have higher salary expectations than the overall cohort. When asked what they would expect to be paid as a junior software engineer, the majority of career switchers say £25-35k. That's the same pay bracket that graduates put junior software developers into.

So, for the same salary, tech leaders could hire someone with highly developed skills they can draw on from day one. Given that three in four people switch into tech between the ages of 25 and 34, and many have mid-management experience, many career switchers will be looking to continue climbing the career ladder, even after switching to technology.



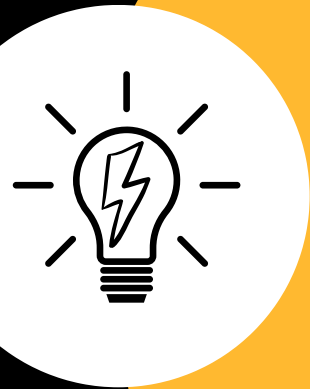
Their interest in flexible working may lie in their need to juggle work with other priorities, such as childcare or ageing parents. Or perhaps, given the high incidence of burnout among this group, they are more interested in achieving a better work-life balance this time around.

# CHAPTER THREE

## HOW TO ATTRACT & HIRE CAREER SWITCHERS

### INSIGHTS INTO ACTION:

- Language in job ads plays a really important role not only in attracting diverse candidates but particularly with career switchers.
- A great way to attract career switchers is through showcasing the technology used and projects they could be involved in with their role.
- To help build the confidence to apply, showcase diverse and inclusive teams, and women role models within the company or organisation.
- Although career switchers will take on a junior salary when they switch, it is equally important to plan career and salary progression opportunities.



### Community Stories

*"I never thought at any moment during my life that I would be where I am today. It wouldn't have been possible without the opportunity created by CFG and the support of my sponsoring company Capgemini seeing the potential in me. I would like to combine my previous experience in healthcare and medicinal research, with what is expanding experience in technology to contribute or find innovation healthcare practices that are economically sustainable."*

**Live in Carer switched to Insights and Data Consultant at Capgemini, Glasgow**

*"While being furloughed during the pandemic lockdown, I had a lot of time to reflect on the direction of my career, how I would like to grow and what impact I wanted to make. My time in the charity sector parallels working in a start-up environment, my role was all-encompassing. I had a special interest in data analysis and governance. I decided to pursue further training in data and began self-studying. I came across Code First Girls on social media and saw a wonderful opportunity to grow alongside a community. I really enjoyed my introduction to python course and was excited for the launch of the boot camp! I never would have imagined that I would be teaching the same introduction to python course a year later. I'm now in a role where I get to apply the skills learned, continue developing, and I'm still close to my CFG peers and instructors".*

**Charity sector finance switching to Data Scientist in Financial Services, London**

# CHAPTER FOUR

## HOW TO EMPOWER & PROGRESS CAREER SWITCHERS

### CHAPTER TAKE-AWAY:

Organisations with a more gender-diverse leadership team perform better than those that don't. Given their previous managerial experience in other professions, career switchers are a rich source of leaders in waiting for the technology sector. They also greatly value career progression opportunities and chances to upskill over other less experienced candidates. Given the right support, career switchers have the potential to climb the career ladder very quickly.

Some of our Code First Girls partner companies have found that setting targets and offering mentorship and peer-to-peer support at every level, as well as training opportunities and programmes that directly address key transitional moments in a woman's career (such as returning after maternity leave) have created a drastic change in the gender diversity at the higher levels of an organisation.

### ***Why does getting more women into leadership matter?***

In 2017, Google software engineer James Damore wrote an internal memo. In it, he suggested that "the distribution of preferences and abilities of men and women differ in part due to biological causes and that these differences may explain why we don't see equal representation of women in tech and leadership". He went on to imply that women's "stronger interest in people" and "neuroticism" might make them less suited to being good coders and leaders. Thankfully, he was promptly fired.

***Only 9% of C-Suite leadership positions are held by women and only 3% as Chief Technology Officer roles. Change is needed.***

But the sad truth is that there is still an unequal gender balance at the top of most technology organisations. Globally, only 28% of Google's leadership team, for example, is made up of women. In the UK specifically, the number of women employed in the sector may have reached 26%, but only 9% of the C-suite leader positions are held by women. That number drops even lower when considering technical roles – women only account for 3% of Chief Technology Officers (CTO) or Technical Director roles, and just 0.6% of Chief Operating Officers. .

### QUICK TAKEAWAYS

- Career switchers could be a solution to help improve diversity in leadership and C-suite roles in tech.



# CHAPTER FOUR

## HOW TO EMPOWER & PROGRESS CAREER SWITCHERS

### ***Progression can help improve the gender pay gap in tech***

Part of the issue around narrowing the gender pay gap in technology, which currently sits at 8.3% in the UK, is around progression. Research done by the University of Pittsburgh across sectors, found women tend to be asked or volunteer to do “low promotability” tasks such as writing a report, serving on a committee or mentoring new hires. These actions help an organisation overall but aren’t valued in the same way as revenue-generating activities are.

***Companies with greater gender diversity on executive teams are more likely to have above-average profitability and performance.***

Getting more women into leadership roles matters. Analysis by McKinsey found companies in the top quartile for gender diversity on executive teams are more likely to have above-average profitability and outperform those companies in the lowest quartile. Another study revealed firms with more women in senior positions are not only more profitable, but they’re also more socially responsible and provide safer high-quality customer experiences. Having women in high-profile positions is also more likely to encourage more women through the talent pipeline, as the visibility of role models increases.



# CHAPTER FOUR

## HOW TO EMPOWER & PROGRESS CAREER SWITCHERS

### ***How do we minimise attrition of female talent?***

With career switchers coming into technology with pre-existing leadership experience, there's the opportunity to fast-track suitable candidates into those higher roles. According to Code First Girls' respondents, 57% of career switchers are mid-level or higher, including 13% who have worked at a senior, director or C-suite level. Considering seven in ten say they're interested in technology because of the opportunities for better career progression, this should also help address attrition rates in the sector.

***Replacing salaried employees can cost businesses six to nine months' salary on average. Minimising churn will help the bottom line.***

Research has found women in STEM face a number of challenges, including alienation, extreme hours, bias, and leaders not seeing them as having leadership potential. It's a situation that damages retention and costs employers a significant amount of money. A 2022 study by InnovateHer that found women are more likely to leave their roles in the technology sector than men are, with half of women in tech leaving before the age of 35. One study by the Society for Human Resource Management estimates that replacing a salaried employee costs between six to nine months' salary on average. Minimising churn will have real benefits for the bottom line.



*"At Lloyds Banking Group we're committed to our aspiration of 50% of women in senior roles by 2025 and we've made great progress – but there's still more we can do. Our aspiration becomes more challenging in some of our more technical areas, where the industry is still not attracting female talent into the pipeline in the same way that we are able to attract male talent. Partnerships with companies like Code First Girls are incredibly important to help the industry to encourage and support females into tech careers, so that we can ensure our technologists fully represent our incredible customers."*

**Sharon Doherty, Chief People and Places Officer at Lloyds Banking Group**

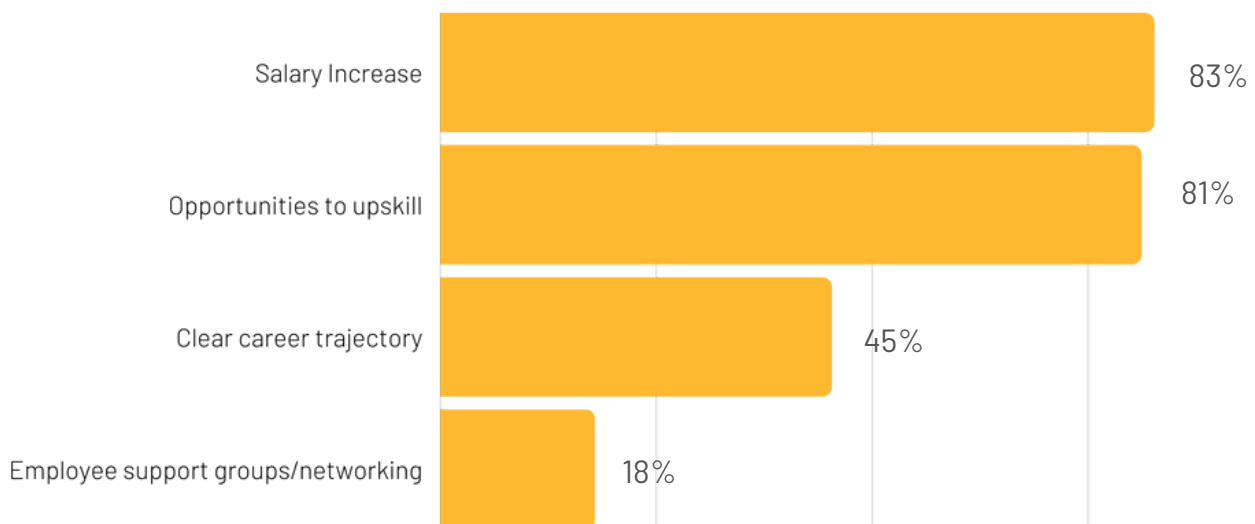
# CHAPTER FOUR

## HOW TO EMPOWER & PROGRESS CAREER SWITCHERS

### *How do we empower more women leaders?*

When asked what would encourage them to stay in a job by Code First Girls, a significant majority of career switchers say salary increases (83%), and opportunities to upskill (81%). Almost half (45%) point to a clear career trajectory. Overall, 75% of career switchers say career progression opportunities are the most important ways that a company can empower women in technology (vs 69% of all respondents).

#### WHAT WOULD ENCOURAGE CAREER SWITCHERS TO STAY IN A ROLE?



### *Addressing imposter syndrome*

Imposter syndrome can be another barrier to progression in the workplace. It's defined as when someone doubts their own abilities at work, and can disproportionately affect high-achieving people who struggle to acknowledge their achievements. A high percentage (82%) of career switchers say they've experienced imposter syndrome, compared to only 59% of graduates, and 73% of the overall cohort.

Employers can best help combat this by encouraging buddy systems and mentoring, fostering an environment of transparency and communication, and implementing onboarding and training programmes. Those career switchers from under-represented ethnicities and who identify as neurodiverse also point to the need for organisations to set goals around diversity and inclusion, and accountability mechanisms for change.

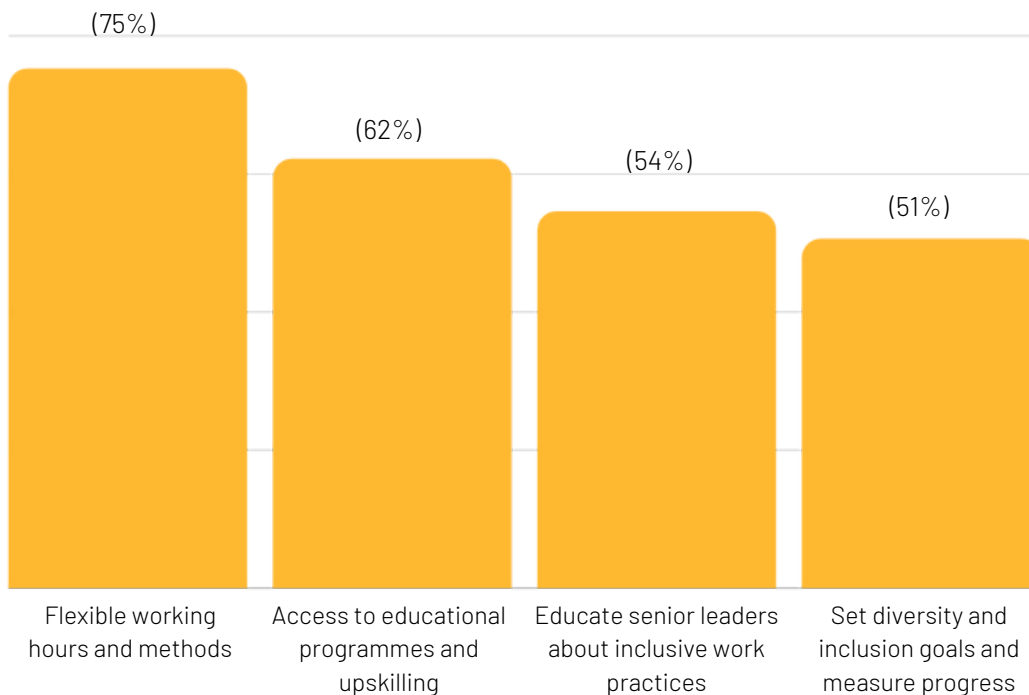
# CHAPTER FOUR

## HOW TO EMPOWER & PROGRESS CAREER SWITCHERS

### *How do we build inclusive cultures?*

Overall, building an inclusive culture for women to achieve their potential takes allyship and targeted action. Most career switchers say the benefits that make them feel included are flexible working hours and methods (75% versus 59% of graduates). Nearly two thirds (62%) point to access to educational programmes and upskilling, and 54% say it's when senior leaders are educated about inclusive work practices, and 51% say it's when senior leaders are educated about inclusive work practices.

#### HOW DO CAREER SWITCHERS THINK THAT INCLUSIVE CULTURES CAN BE BUILT?



### *Demonstrating allyship*

Career switchers also want men who are allies to speak up and confront discrimination when they see it, give women credit for their ideas or work, and consider mentoring or sponsoring women.

#### WHAT IS THE BEST WAY FOR OTHERS TO DEMONSTRATE ALLYSHIP IN THE WORKPLACE?

##### **#1 SPEAK UP**

Speaking up and confronting discrimination

##### **#2 GIVE CREDIT**

Publicly giving credit for ideas or work

##### **#3 MENTORING**

Mentoring or sponsoring one or more women

##### **#4 FEEDBACK**

Actively encourage feedback, open communication and listening

##### **#5 ADVOCATE**

Advocating for new opportunities

##### **#6 EDUCATE**

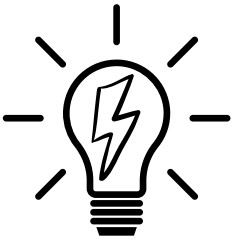
Educate oneself on the experiences of women at work

# CHAPTER FOUR

## HOW TO EMPOWER & PROGRESS CAREER SWITCHERS

### INSIGHTS INTO ACTION:

- There are clear, well-documented benefits of diverse leadership teams. All organisations should put in place planned diversity and inclusion targets and actively report on results (which also works well for diverse talent attraction).
- Implement supportive group networks for diverse groups in your business to help address areas such as imposter syndrome. Additionally, look at mentoring or buddy-system programmes to create support systems.
- Drive an inclusive culture with initiatives around flexible working, upskilling and education programmes for senior leaders.
- Create an environment that fosters allyship, with education to the wider organisation as to how they can participate and have a positive impact.



### Community Stories

*"The work that Code First Girls does is truly transformational, and it definitely has been for me. The practical support they offer in terms of an actual route into tech is incredible, and particularly for someone like me (coming into it as a career switcher) there was genuinely no other similar offer that I could find. Doing the CFGdegree, and the job with a CFG partner following this is a truly accessible route into tech. Not a lot of these exist and more are sorely needed in order to try and address under-representation (in terms of gender, class, ethnicity, and many other categories) within the tech sector."*

**University Fundraising Support Manager to Software Engineer at Dunelm, London**

*"My experience as a career switcher from a healthcare administrator to a DevOps Engineer has been transformative, thanks to the CFGDegree. The program provided me with a solid foundation in coding and DevOps practices, which has opened up new opportunities for me in the tech industry. I am grateful for the hands-on experience and supportive learning environment that the bootcamp provided, and I am excited to continue growing my skills as a DevOps Engineer."*

**Healthcare Administrator to DevOps Engineer at Fidelity International**



# CONCLUSION

## BE PART OF THE SOLUTION & DRIVE REAL CHANGE

The technology sector is truly facing a recruitment crisis over the next few years. It cannot find the talent it needs from university talent pools alone, particularly when it comes to improving the gender diversity of the field. Something needs to change.

As Code First Girls' research shows, there is a swell of older, experienced women interested in switching professions into technology. These are candidates who may have never considered a STEM career before, convinced it was a career just for men, or that they didn't have the right skills.



Instead, they went into different roles. But they come with a wealth of experience and skills to change things in technology for the better. And these women need to be given the chance to change their minds.

When asked how long they think it will take to achieve gender equality in technology, most career switchers that Code First Girl spoke to say six to ten years. They believe organisations can encourage more women into technology by adopting equal pay initiatives, supporting school STEM programmes, retaining talented women, and recruiting ambassadors and mentors.

# CONCLUSION

## FIVE ACTIONS TO UNLOCK CAREER SWITCHER TALENT

Career switchers are a valuable resource that could provide a real opportunity to address the UK's tech labour crisis and improve gender equality in technology. We need to encourage more women to see the sector as a place that will welcome them, and help them achieve their potential. As Karen Spärck Jones, a pioneering British computer scientist, once said: "Computing is too important to be left to men".

With that in mind, Code First Girls have compiled the top five actions organisations need to take to unlock the career switcher talent pool:

**1**

Support and promote free training opportunities run by organisations like Code First Girls, that women can pursue around other commitments and responsibilities, to upskill or reskill at any point in their professional lives.

**2**

Ensure advertisements highlight the benefits of a technology career, including career progression, flexible, interesting work, and high salaries.

**3**

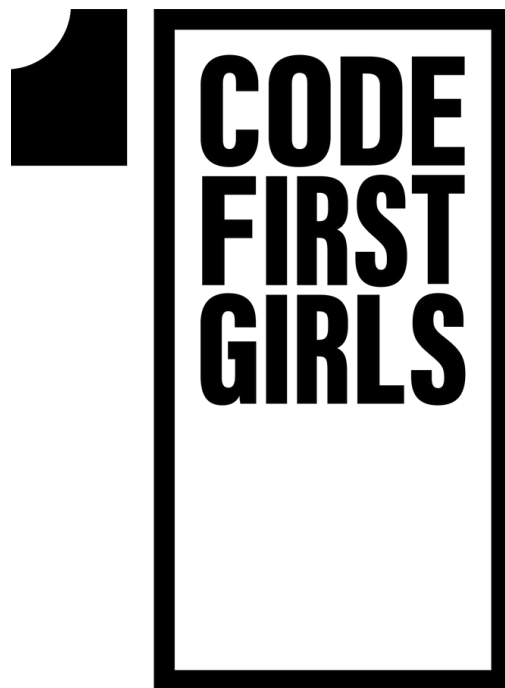
Mention career switchers in job descriptions, and scrutinise the gender-biased language used and level of previous sector experience that's considered necessary for a role.

**4**

Be open to the skills and potential that these women bring from other professions, and champion career switchers already working within an organisation, internally and externally.

**5**

Provide mentorship and fast-track career opportunities to those women joining the sector later in life, particularly where they have previous leadership experience. Put support in place focused specifically on key transitional moments of a woman's career, such as returning to work after maternity leave, or dealing with menopause.



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