

**Briefing: Workforce
Integration and
Inclusion
in the Digital sector**

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Briefing: Workforce integration and inclusion in the digital sector

Introduction

There are significant differences between the unemployment rates of people in London, with certain groups being markedly underrepresented in the workplace. Underrepresented groups include **BAME Londoners, women, young people, lone parents, deaf and disabled Londoners**. Many groups navigate a system of barriers including biased recruitment processes, unequal pay and prospects for progression. These barriers are not inevitable and mean many businesses overlook and exclude people from underrepresented groups, missing out on their talent and drive.

In 2021 the Greater London Authority (GLA's) Workforce Integration Network (WIN) commissioned Work Advance and the Institute of Employment Studies to explore workforce diversity in the priority growth sectors in London – that is **the green, digital, creative, hospitality and health sectors**.¹ The researchers carried out an evidence review and conducted interviews with Londoners and employers to understand the nature and causes of underrepresentation in key parts of the London labour market in order to help tackle persistent inequalities. The research is designed to share critical insights with key stakeholders within the Mayor's Academy programme.² The briefing provides a summary of the key themes of the research that are relevant to the digital industry. This includes:

- The workforce demographics of your industry
- The specific barriers to entry and progression within your industry for underrepresented groups.

See: [Employer insights into diversity and inclusion](#), an accompanying document to this briefing which contains insights about the business practices that are making a difference to diversity and inclusion in London's priority sectors.

¹ Workforce Integration Network (WIN) Skills Academy Workforce Analysis Project; *Lesley Giles, Paul Sissons, Heather Carey, Miguel Subosa and Becci Newton*

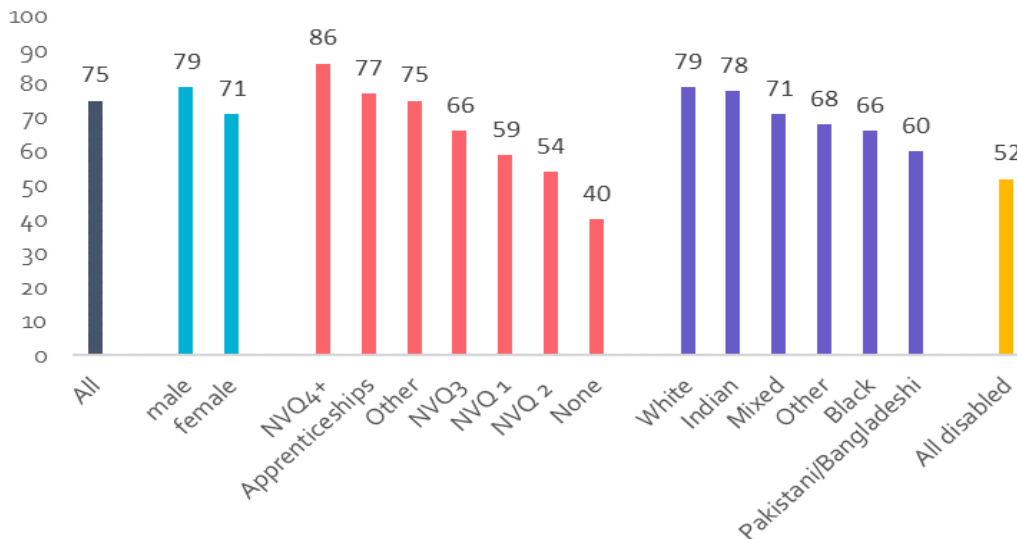
² The [Mayor's Academy programme](#) will provide support to employers to ensure groups underrepresented in the labour market are supported through measures to promote workforce diversity and inclusion, including in terms of recruitment, retention and progression. In doing so the programme plans to build on the work of the [GLA's Workforce Integration Network \(WIN\)](#) by engaging directly with employers to tackle barriers and support them in building more inclusive workforces

What are the current challenges to achieving diversity within London’s Labour market?

There are a number of **deep rooted and persistent diversity challenges** that exist within the current labour market in London.

- Employment rates differ significantly by parental status, qualification and skills level, ethnicity, gender, age, disability and between local areas for example – **see Figure 1 below**
- There are significant **imbalances in education and skills** levels across the population
- Inequalities are also evident in **access to training**. Younger people, ethnic minorities and women are most likely to report a lack of resources to invest in their own development.
- There are concerns about **levels of good work**, with signs of falling job quality in the last decade as the London economy moves towards more atypical working practices.

Figure 1: Working age (16-64) Employment Rates (%) for select groups in London



Source: GLA (2022) Local Skills Report

Key stats

- ❖ There is wide variation in educational attainment across the working population: with **around one in eight (13%) London residents aged 25-64 having low or no qualifications**, including **one in four of those from Bangladeshi backgrounds, and more than half of all disabled Londoners**.
- ❖ Training measures appear to be declining compared to the past, at a time when we need to see the reverse to keep up with labour market changes. For instance, **in the last 12 months to June 2021 only 17% of working age Londoners were in receipt of job-related training in the last 13 weeks, a fall from 20% since 2004** (GLA economics 2022)³.
- ❖ Precarious forms of working⁴, higher turnover and low pay disproportionately affect certain groups. These above issues are compounded by wages struggling to keep pace with the rising costs of living in London, as such **the proportion of people in poverty has risen to be the highest of any UK region and significant pay gaps are evident by gender, ethnicity, disability and spatially**.

Labour Market context

The pandemic disproportionately impacted London's labour market relative to other regions in the UK. While London's unemployment rate has consistently been above the UK rate, there has been a marked recovery since the pandemic's peak. London's unemployment rate of 4.2% in the three months to September 2022, is at the joint lowest level since the series started in 1992.

However, headline labour market measures also conceal major inequalities. Despite improvements, there are still large differences in outcomes for residents from different ethnic backgrounds; nearly one in twelve Black Londoners (8.5%) were unemployed in the period April 2021 to March 2022, nearly double the rate for their White counterparts (4.5%).⁵

Employment rates are also below average for disabled Londoners as well as for (female) parents and for Londoners with no or low qualifications. London's youth unemployment rate was higher than in any other UK region in 2021, while the rate of labour force

³ GLA (2022) [Local Skills Report](#).

⁴ Precarious forms of working refer to zero-hour contracts and temporary work.

⁵ Annual population survey (APS) data Apr 2021-Mar 2022, persons aged 16+

participation (economic activity) among Londoners aged 50 and older has declined in the last year.

What are the common barriers inhibiting diversity in the growth sectors?

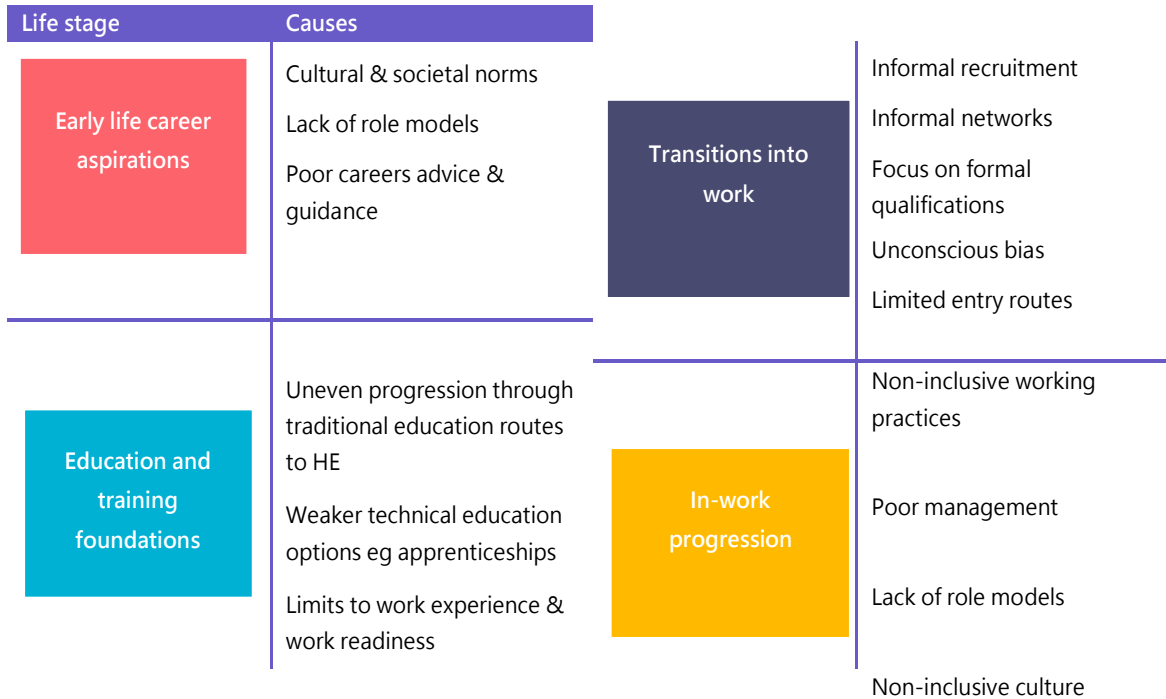
The research highlighted several commonalities around diversity and inclusion issues across **the green, health, creative, digital and hospitality sectors (see figure 2 below)**. However, there are also some sector specific issues relating to the different characteristics of the sectors, occupational labour markets, skills requirements and progression pathways **(see Creative section below)**. To fully address these issues will require a combination of cross-cutting and sector-specific targeting.

The research established how factors build and/or evolve throughout people's lives. This aligns with the **"life-stage approach"** taken in wider research⁶. So, in essence it has found that factors start early in life; continue further into education; inhibit transitions into work; and finally undermine opportunities for in-work advancement and progression to more senior and/or experienced roles later in an individual's career.

For information on how employers are addressing issues across the life stage (see **appendix 1: Employer Insights into Diversity and Inclusion**)

⁶ Carey et al (2021) screened out: tackling class inequality in the screen industries.

Figure 2: The barriers inhibiting diversity across the growth sectors in London



- **Early life: Cultural and societal norms** and personal biases from networks, friends and family and **Role models** were critical influencers. Restricted access to inspiring and impartial **careers advice and guidance** was another key limiting factor
- **Education foundations:** Opportunities in growth careers will be constrained where individuals **lack the basic platform of skills** and qualifications for further study and work. **Uneven progression through traditional routes** to higher education and **weaker alternative technical education routes** such as apprenticeships are a key factor for some.
- **Into work transitions: Informal recruitment and working practices** operating through closed and **informal networks**, especially amongst smaller businesses, bring a greater **risk of unconscious bias** and constrain the reach of work opportunities to diverse groups.
- **In-work progression: Non-inclusive working practices, poor management** and a **lack of supportive role models**, create an **organisational culture** where individuals do not feel supported and can continuously develop and progress

Deep Dive: Digital sector

Key stats

- ❖ In 2021⁷ there are 1.3 million jobs in the digital industry in England and 413,000 jobs in London. The UK tech industry was expanding 4 times faster than the rest of the UK economy⁸.
- ❖ Tech firms in London and the Southeast accounted for more than half (55 per cent) of the UK's tech economy⁹.
- ❖ Patterns of internet usage vary across the UK, with the percentage the population of internet non-users the lowest in London at 7% (2018).¹⁰
- ❖ In 2022, digital firms in London accounted for more than a third (36%) of the UK's digital firms.¹¹ London is the fourth globally in terms of venture capital investment in Tech after San Francisco, Beijing and New York at \$10.6 billion and generates a turnover of £156 billion.¹²
- ❖ In 2019, the digital sector represented 13.0% of London's total economic output (GVA) at £58bn¹³ and in 2021 the digital workforce in London, comprising of 413,000 employees, represented 8% of employment in London and a third (32.5%) of all sector employees in England¹⁴
- ❖ Digital jobs are highly skilled and well paid. In 2021, the median gross pay in the Digital sector in London was £48,000 compared to £38,000 for the sector across the UK.
- ❖ In 2021 **64% of digital sector workers UK-wide have a degree or equivalent qualification, compared to 41% across all sectors.**¹⁵
- ❖ The Employer Skills Survey of 2019¹⁶ found that close to half of London employers highlighted that the main skill lacking by the existing workforce was Digital skills (both basic and advanced).

⁷ ONS Business Register and Employment Survey, 2021

⁸ Tech Nation: 2020 Report <https://technation.io/report2020/> & <https://technation.io/bright-tech-future/#uk-tech-jobs>

⁹ Analysis from accountancy and business advisory firm BDO LLP (Nov 2019), <https://www.bdo.co.uk/en-gb/news/2019/london-south-east-tech-economy-worth-47-billion#:~:text=The per cent20technology per cent20industry per cent20in per cent20London,produces per cent20in per cent20a per cent20particular per cent20industry>

¹⁰ Exploring the UK's digital divide

¹¹ ONS UK Business Counts data, 2022

¹² The Future UK Tech built, Tech Nation Report 2021

¹³ DCMS (2021) Assessing the UK's digital regional ecosystems.

¹⁴ ONS Business Register and Employment Survey, 2021

¹⁵ DCMS Sector economic estimates: Employment, January to December 2021

¹⁶ <https://www.gov.uk/government/collections/employer-skills-survey-2019>

What are the career opportunities in the Digital industry in London's Labour market?

Opportunities in the digital sector are lucrative, however they are not equitable. A key factor contributing to the digital skills gaps is the lack of investment in digital upskilling of the UK labour force - employer investment in training, as well as public funding for adult education has declined over the years.¹⁷ It is acknowledged that 'there is no single silver bullet that can close the UK's digital skills gap. Rather, it will take a new era of investment, collaboration and commitment from employers, employees and government alike'.¹⁸

There is a significant opportunity to address demand for digitally skilled workers by increasing the number of workers from underrepresented groups in the Digital sector in London.

In London, key occupations showing increasing risk of skills shortages include programmers and software development professionals¹⁹, full stack developers, engineers, and data scientists. These roles are increasingly calling for a broader "toolkit" of technical digital skills such as front and back-end programming skills, networking, and data modelling²⁰. Other occupations include cyber security, hardware engineering and systems/network management - many of which are included on the Government's Skills Shortages List developed by the Migration Advisory Committee²¹. At the same time there is evidence of growing competition for roles, especially in London, with **each digital vacancy seeing an average of 50 applications in 2020**²².

¹⁷ GLA (2020d) Digital Sector Skills Report (16.12.2020). Unpublished paper

¹⁸ Microsoft 2020

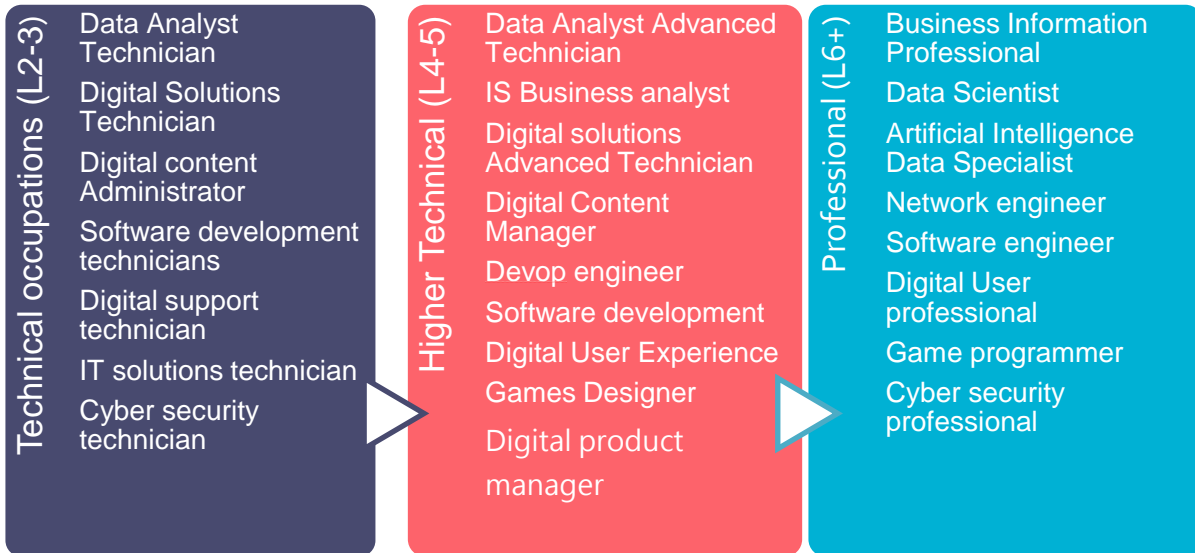
¹⁹ With specialist knowledge in a range of languages such as Engineering, .net, Javascript, Java, C++, Data, SQL, Python. Amazon Web Service, Client

²⁰ Tech Nation (2021) [Job and Skills Report](#)

²¹ MAC (2020) [Skills Shortages Occupation List](#).

²² Tech Nation (2021) [The future UK tech built](#).

Figure 1: opportunity pathway in the digital industry



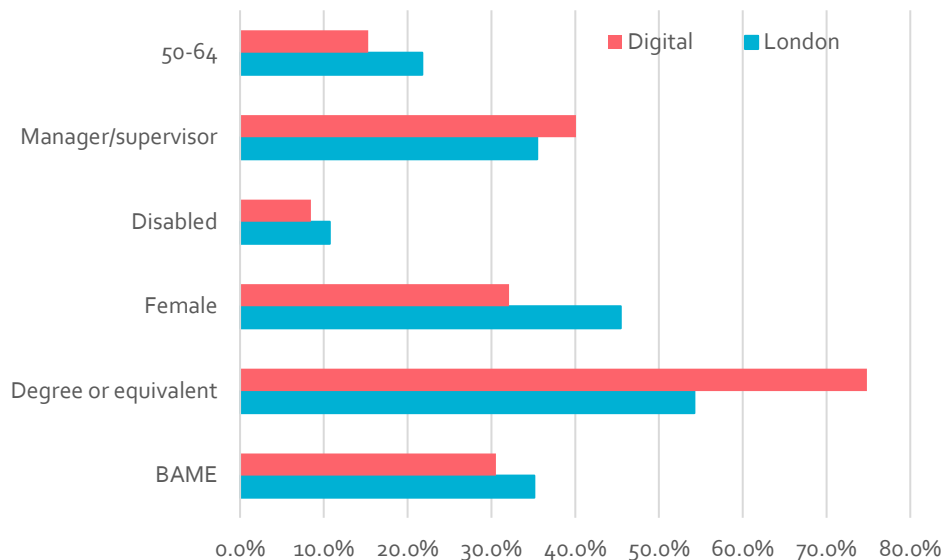
Source: based on the IFATE occupational maps and the SOC framework

The technical digital roles in highest demand in London have covered three broad career pathways:

- **Digital business services:** These cover digital roles that work closely with different business functions/domains to enhance their effectiveness. As such they involve managing digitally enabled solutions for the more effective use of data (eg improving business processes through the use of machine learning and artificial intelligence); and for improving e-commerce and communications
- **Digital production, design and development:** These cover very technical digital functions covering software engineering, product design and architecture, building and testing software components involving coding, programming, modelling, simulation and systems engineering.
- **Digital support and services:** These roles cover designing, installing, maintaining and supporting IT systems, infrastructure, the selection and maintenance of devices, cloud storage and management and cyber security. This involves skills in IT technology, data management, cloud computing and communication networks.

How diverse is the Digital industry in London?

Figure 2: A snapshot of diversity by digital sector ²³



Source: GLA analysis 2021

Women are underrepresented in the digital sector as a whole and even for those employed there is a significant gender pay gap (**i.e., at 22% in 2021 higher than the UK average at 15%**).²⁴ According to Tech Nation, barely a fifth of workers in digital roles within the tech sector in London were occupied by women, compared to around a quarter nationally.²⁵

Recent figures from the GLA suggest **just under a third of roles in the tech sector are filled by women**. The workforce has **fewer disabled workers, older workers and is less ethnically diverse than London as a whole**. While ethnic minorities are better represented in the sector than they are in the workforce as whole (just under a third of London workers are from minority ethnic groups compared to 12% across the economy), they are still underrepresented compared to London's working population overall (35%)²⁶.

²³ Data from the [Annual Population Survey](#) 3 years pooled dataset covering January 2017-December 2019 to look at the characteristics of workers in particular industry sectors in London; Each sector of interest in London was compared against London overall, using as the benchmark 'Londoners aged 16+ who are in employment.

²⁴ DCMS (2019) [No longer optional: employer demand for digital skills](#).

²⁵ Tech Nation (2021) [The future UK tech built](#). Note that the definition of tech jobs does not necessarily correspond to the DCMS digital sector grouping.

²⁶ Tech Nation (2021) [The future UK tech built](#). Note that the definition of tech jobs does not necessarily correspond to the DCMS digital sector grouping.

In addition, there are again **inequalities in pay with those individuals coming from ‘Black/ African/Caribbean/Black British’** backgrounds having the lowest wages on average. These disparities are also reflected in senior positions highlighting that progression opportunities are also constrained. Indeed, there is a **clear underrepresentation of women and ethnic minorities in management and senior positions**. Wider evidence on diversity is limited by data deficiencies, especially in relation to identifying wider background characteristics. That said the **current evidence highlights notable intersections existing at senior levels, between gender and ethnicity, especially affecting ethnic minority women**

Table 1: Digital sector compared to London as a whole²⁷

Getting in – underrepresented groups	Getting on - groups underrepresented at managerial level
Ethnicity: Black Gender: Women Disabled people Age: 16-24 NS-SEC: Lower social classes Qualification level: below degree level Country of birth: Foreign born	Ethnicity: Black Gender: Women Age: 50-64 NS-SEC: Low social classes Qualification level: below degree level

In addition to the initial insight above, further intersectional analysis ²⁸ was undertaken by looking within ethnic group- specifically Black and Asian Londoners- to determine any disparities in how these groups specifically experience the labour market.

²⁷Data from the [Annual Population Survey](#) 3 years pooled dataset covering January 2017-December 2019 to look at the characteristics of workers in particular industry sectors in London Each sector of interest in London was compared against London overall, using as the benchmark 'Londoners aged 16+ who are in employment.

²⁸WIN takes an **intersectional approach** to diversity and inclusion by examining how ethnicity interacts with other factors such as age, gender, education and class in shaping people’s experiences with work.

In the Digital sector Black Londoners are underrepresented. The following intersectional groups emerge as most disproportionately underrepresented:

- **Black professionals**²⁹
- **Black below degree-level qualification**
- **Asian below degree-level qualification**

For more information, please see priority groups briefing [here](#).

What are the key barriers to entry and progression in the Digital industry?^{30 31}

The digital industry is a high skilled and high paid sector. Conversely the sector has a lower share of routine roles and higher self-employment. The combination of such features, in addition, to the growing competitive pressures, may point to **challenges in entry requirements, retention and progression**. High, technical skills requirements set the bar higher in terms of minimum entry needs to pursue digital careers, and where individuals choose to follow career routes through an entrepreneurial path there are the additional challenges of commercialising ideas in competitive markets, securing investment backing to get products and ideas to market, and then to access the necessary business and development support to advance and ensure success.

In high skilled growth sectors such as Digital there is a **heavy reliance on universities and degree-educated talent**. In addition, educational barriers are further compounded by limited entry routes. For example, those working in the digital sector discussed how employers' often demand formal work experience for entry-level positions, meaning many take up unpaid precarious roles in order to secure better quality employment. However, it also meant that, unless **individuals had access to financial resources from other sources, this necessity formed a major barrier to sustained employment in digital roles**.

²⁹ The [National Statistics Socio-economic classification \(NS-SEC\)](#) is an occupationally based socio-economic classification. Though it does provide a measure of socio-economic differences, it should not be confused with other [measures of socio-economic background](#) like 'type of secondary school attended', 'parents' qualifications', 'parents' occupations' and 'eligibility for Free School Meals during school years'. Only NS-SEC is available from the survey where the workforce diversity information is obtained, so is used as an imperfect proxy

³⁰ Please see Digital sector source report for further background info on barriers.

³¹ Further case studies available at [Workforce Integration Network \(WIN\) Skills Academy Workforce Analysis Project \(pages 31-68\)](#)

“...Alternate routes into tech are huge. This is the game changer because ...it's important to lean in to try and fix what we're doing in schools and universities... But I think this is not just about let's create a whole lot more apprenticeship schemes, bootcamps, etc...but how do we help companies understand how to attract, select, onboard and grow people who've gone through these alternate routes into tech. So, I think there's a piece around, at the very least, mapping across London all the different provision, signposting that both for employers and for individuals who want to get onto those courses”.

(Employer digital sector)

“They don't have access to the bank of mum and dad. They don't have the access to friends and family, or the people who would normally invest, and also they've probably got existing financial responsibilities. They might need to be working to pay household bills, they might need to be sending money back to family elsewhere in the world. They can't take the risk that other people can take. They don't have the educational background. They don't have the safety net. So yeah, even getting something started is really, really difficult...”

(Stakeholder digital sector)

In addition, opportunities within the digital sector are not always publicly advertised. Interviewees discussed the importance of professional networking within these sectors, explaining that it is common for opportunities to be advertised through word of mouth. Attending **seminars, conferences, training courses, and networking events** are crucial to building networks and identifying the range of opportunities available. In addition to the financial barriers created by early-career precarious employment, attending these events often incurs a fee, thus increasing the obstacles for those with limited financial resources.

Please see [Digital sector source](#) report for information on initiatives to tackle underrepresentation.

Research insights

Case study – Challenges securing entry routes

Upon completing his undergraduate studies, Lucas continued to work in retail for 18 months whilst struggling to secure a graduate position in the digital sector. This was in the context of a very competitive job market amidst the credit crunch. Eventually, he secured a low-paid internship that provided industry exposure and equipped him with relevant skills. Soon after beginning the internship, he was made redundant and again found great difficulty in securing a role in the sector.

Lucas said that, whilst experience was essential, many hiring managers did not always recognise experience without CPD and formal qualifications to supplement it. He eventually found his next role with the help of a Central London youth club, where he received coaching about preparing job applications, writing a curriculum vitae, and responding to competency-based interview questions.

In his current company, Lucas has been sure to take up several professional development opportunities to show that he is someone who wants to advance in his career. He stressed how important it was for managers to support their employees' CPD, remarking how his career stagnated under managers who did not afford him opportunities to bolster his skillset or take on more responsibilities within the team.

Lucas, technical engineering manager

Case study: Inflexible opportunities for continuing professional development (CPD)

Dahlia, a migrant worker originally from Sri Lanka, moved to England in 2009 to pursue a master's degree. She has been employed in the digital sector since starting her professional career in her home country. Given rapid software developments, she described how difficult it could be to keep up to speed. As such, she discussed the importance of CPD to career progression, especially for women with childcare responsibilities.

Due to taking parental leave, Dahlia reported feeling that she missed out on a lot of industry developments. As such, on her return to work, she felt an urgent need to catch up, so that she could work to her previous capacity. Dahlia quickly realised that balancing work, skills development, and childcare made it even more difficult to keep up with industry changes and felt that she was constantly behind when her child was young. Her company's support for her CPD helped her bridge this gap, which, in turn, facilitated her career progression.

However, she also lamented missing out on several milestones in her child's life, in her effort to keep her skills and knowledge up to date. She called on the relevant authorities to provide CPD support to mothers seeking to return to the digital sector and strongly advocates for policies that safeguard work-life balance.

Dahlia, software developer

Further information

This briefing was produced utilising information from the research conducted by Work advance and Institute of Employment Studies. The briefing highlights areas where you can seek further information. For further information please see the following:

- Workforce Integration and Inclusion in London's growth sectors; analysis project for the Workforce Integration Network and Skills academy's team; *Lesley Giles, Paul Sissons, Heather Carey, Miguel Subosa and Becci Newton*
- Source evidence report, Underrepresentation in Digital Careers, *Institute of Employment Studies*

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