

Evidence Summary

Skills shortages in the UK economy

2023



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Introduction

The scale of skills shortages across the UK continues to grow thanks to significant challenges facing the country: economic uncertainty, the implications of Brexit, international geopolitical instability and war, the ongoing repercussions of the Covid-19 pandemic, the need to reach net zero emissions, and the consequences of the fourth industrial revolution.

It is essential that researchers, policy makers and frontline teachers, tutors and careers leaders all have access to key information regarding the size and scale of skills shortages and the changing labour market.

There is a huge amount of excellent research in this space. The Edge Foundation convenes key organisations and researchers to produce a regular series of <u>Skills Shortage</u> <u>Bulletins</u> exploring the changing labour market and key sectors of the economy.

In this summary document, we draw out succinctly the key messages from across the series. We hope this helps to aggregate and amplify the messages we have been hearing on skills shortages in the UK, and the changing shape of our economy and labour market, so that you can use them in your work.



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Contents

Key messages

	1. Overall labour market conditions remain challenging	4
	2. Skills shortages are numerous and have grown significantly	6
	3. The rate of skills investment is in decline	7
	4. Skills shortages have significant cost for UK businesses and the economy	9
	 The skills employers are seeking are overwhelmingly technical and transferable 	10
	6. The skills employers are seeking are not being prioritised within the education system	11
	7. Employers' and young peoples' confidence in the future ability to meet skills requirements is low	13
Sector summaries		15
	Engineering	16
	Digital	17
	Creative	18
	Hospitality	19
	Health and Social Care	20
	Construction	21
	Logistics	22
	Green	23

To see the full series of Skills Shortages Bulletins please visit www.edge.co.uk/research/projects/skills-shortages-uk-economy/

Key message 1:

Overall labour market conditions remain challenging

The last few years have been challenging for employment and the labour market. Difficult national and international economic circumstances and uncertainties including inflation, recession, and war in Europe exert considerable pressure on employees and employers. The consequences of the pandemic still linger.

- While youth unemployment has fallen from its pandemic peak, it remained high long after due to a significant mismatch between the skills young people develop while in education and those the future economy will need, deriving from the longstanding narrow scope of the academic school curriculum in allowing space for skills development (House of Lords Committee on Youth Unemployment, Bulletin 10). Young people, lower-paid workers, those in retail and hospitality, and those previously on insecure contracts were most vulnerable to unemployment during the pandemic, and older workers who lost their jobs were far more likely to slip into long-term worklessness (Bulletin 8 and Bulletin 9).
- A third of Britons (34%) want to change careers, yet only 16% of respondents understand exactly how their skills would be useful in another career. Many Britons lack the confidence and know-how when it comes to recognising the potential of transferable skills as a route to changing careers. City and Guilds (Bulletin 9) has launched 'Skills Bridges' to turn the tide on unemployment in the UK and help individuals who work in industries impacted by Covid-19 to switch careers.
- > Youth Employment UK's Youth Voice Census 2022 (Bulletin 11) found the impact of a global health pandemic, the cost-of-living-crisis, and the uncertainty of political tensions have had a significant impact on young people. The dual impact of disrupted education and a challenging initial entry to the labour market has accelerated social, emotional and mental health challenges and is contributing to the growing fears and feelings of isolation.
- > There are differences in job loss rates between different ethnic groups, with some Black, Asian and minority ethnic communities particularly vulnerable to increased debt and financial hardship. The Learning and Work Institute (Bulletin 8) found that during the pandemic those from lower-income families and without a degree-level qualification were hardest hit.
- > The <u>CBI reports</u> firms were taking action to support employees on the cost of living. 46% of firms responding to a 2022 survey and who reported supporting employees planned to bring forward or have additional pay reviews, and 36% awarded staff one-off bonus payments. However, 34% of organisations were only offering 'a general increase below inflation' at the next pay round, significantly higher than previous years. Just 29% were giving a pay increase in line with inflation, the lowest since 2012. 7% expected to provide a general pay increase above inflation.

...older workers seeking unemployment related benefits doubled. This is particularly concerning given that older workers who lose their jobs are far more likely to slip into long-term worklessness.

Learning and Work Institute

Highlighting these challenges is not to say that improvements are not forthcoming, and that workers have not been able to return to work on better pay, better conditions, or in a new industry. Skills shortages in some sectors have led to growing competition for talent between recruiters, encouraging job switching and quitting according to Robert Half's 2023 salary guide. This has increased starting salaries and led to employers to begin to prioritise employee experience including flexible working (a trend of course accelerated by the pandemic), upskilling and career development opportunities, and equality, diversity, and inclusion.

The years since national lockdowns have continued to see trends of emerging professions adopting new technologies. There has been a greater demand from green economy and digital sectors in particular – for example increasing the call for roles such as Artificial Intelligence (AI) and machine learning specialists; digital transformation specialists; project managers; robotics engineers; machine repairers. AI is finding the broadest adoption among the Digital Information and Communications, Financial Services, Healthcare, and Transportation industries, while the Government and the Public Sector industry shows a distinct focus on encryption specifically. Equally, such shifts have engendered the difficult reality of decreasing demand for some jobs.

QS in their Global Employer Survey 2022 highlight that in the medium term to 2030 AI will predominantly increase workplace efficiencies and threaten lower-skilled jobs including clerical or routine manual roles. We now need to see policies putting into place a ladder that allows workers of all ages, the skills and capacity to learn, progress and retrain throughout their working lives

This is building on and accelerating the changes that we have already begun to see as a result of the **fourth industrial revolution**, which has brought with it trends like automation, the use of robotics in manufacturing, and the impact of big data and analytics across all industries. Covid-19 has undoubtedly accelerated this, with data from the World Economic Forum (Bulletin 8) highlighting that **over 80% of employers reported that automation has accelerated their work processes.**

As we look to the future, the picture is summarised by the acronym VUCA - volatility, uncertainty, complexity, and ambiguity.

World Economic Forum









Key message 2:

Skills shortages are numerous and have grown significantly

The Department for Education's (DfE) latest Employer Skills Survey 2019 (Bulletin 8) provides a vital pre-Covid-19 baseline. It set out insights into the long-running skills challenges employers have been facing at the tail end of a period of economic uncertainty, transformation, and disruption. It highlighted that nearly a quarter of all vacancies were skills shortage vacancies (which cannot be filled because the employer cannot find the skills they need), a further increase of 2 percentage points since 2017. Of most concern, nearly three fifths of these shortages were reported in middle and high skilled roles.

The UK skills mismatch was also reinforced by the <u>Industrial Strategy Council's</u> report (Bulletin 7) which highlighted that by **2030**, **7 million additional workers could be under-skilled** for their job requirements - this would currently constitute about 20% of the labour market.

...by 2030, 7 million additional workers could be under-skilled for their job requirements...

Industrial Strategy Council

Research from Lloyds Bank Group / IPSOS MORI argued that digital skills are of particularly acute shortage, emphasising that around 11.7 million people aged 15+ across the UK lack the 'essential digital skills' needed for day-to-day life online. The Covid-19 pandemic necessitated the fast tracking of digital skills, with one in three (33%) having boosted digital skills during lockdown (Bulletin 8). The Learning and Work Institute (Bulletin 11) identified further deficiencies, including 9 million workingaged adults in English with low basic skills in literacy or numeracy, including 5 million who have low skills in both. However, the Institute was also concerned that the number of adults participating in programmes to boost such skills had dropped by over 60% since 2012.

Skills Shortages are exacerbated by a number of factors. Firstly, City & Guilds report concerns among potential recruits around low pay, inflexible working conditions and a lack of opportunity to progress as deterring factors. Secondly, the Resolution Foundation notes that many roles in vital industries, such as transport and storage, manufacturing and domestic services, have proportionately relied on EU workers who are mostly ineligible for a skilled worker visa under the new system (Bulletin 10). Other challenges are sector specific. In nursing, a sector with severe skills shortages with 50,000 nursing vacancies in the UK, there are fears that abolishing BTECs in 2024 and 2025 will damage the NHS in England's efforts to recruit. Apprenticeships are a viable solution to bridge skills gaps, but many employers continue to struggle with investing in training because of the Apprenticeship Levy (Bulletin 10) and Bulletin 11).

...11.7 million people aged 15+ across the UK lack the 'essential digital skills' needed for day-to-day life online...

Lloyds Bank Group / IPSOS MORI

Key message 3:

The rate of skills investment is in decline

Surveys and analyses have repeatedly suggested that employer and public investment in training for existing workers is low and falling.

Findings from the <u>Learning and Work Institute</u> (Bulletin 8) found that **Government spending** on adult learning in England declined by 47% in the decade from 2009-10 to 2018-19, and that employers spend comparably less in this area than their international counterparts.

Meanwhile, the <u>DfE Employer Skills Survey</u> (Bulletin 8) highlighted that fewer employers had arranged or funded training (61%) for staff in the last 12 months in 2019 - the lowest proportion since 2011, and that the total number of training days has reduced by 9m since 2015 (a fall of 8.3%). The Survey also revealed that training reached a smaller share of people overall (i.e. 60% in 2019 compared to 62% in 2017) which is the lowest proportion reported since 2011 (54%). This means a higher proportion of people are missing out. <u>Hays and Go1</u> in 2022 have identified that while 82% of employers say they provide learning resources to their staff, just 54% of employees agree. 82% of employees felt they were responsible for their own upskilling and reported a lack of time during work hours, while employers only sometimes perceived new skills being applied in work.

<u>CBI</u> (Bulletin 8) highlighted that **Small and Medium sized Enterprises (SMEs) face more** barriers preventing them from increasing investment in training compared to large organisations, such as a lack of scale, high fixed costs of training and lack of capacity.

Interestingly, <u>Lloyds Bank / IPSOS MORI</u> (Bulletin 8) revealed that the pandemic lockdown has resulted in an increase in self-directed learning, with one in three (35%) having taken action and boosted their digital skills, with almost a third (31%) reporting they have upskilled for work reasons. Over half of these learners (57%) are self-taught, with a quarter (25%) calling upon family members for support and one in five (21%) relying on friends.

...the pandemic lockdown has resulted in an increase in self-directed learning, with one in three (35%) having taken action and boosted their digital skills...

Lloyds Bank Group / IPSOS MORI

A key question therefore is how in future to incentivise 'shared responsibility' and co-investment in skills from the state, employers, educational institutions, and individuals, to drive the kind of lifelong learning revolution necessary to support future economic success and social prosperity for all. The Learning and Work Institute (Bulletin 11) have shown that basic skills not only improve productivity but lead to positive social outcomes in adults. The Recruitment & Employment Confederation (Bulletin 11) calls for business and the government to see skills as an investment and to recognise the 'ever increasing importance of inclusive workplaces contributing to their growth, productivity and revenue'. Hays and Go1 identified some positive signs, including that 80% of employers would consider hiring candidates without all required skills with the intention of upskilling them in the role.

Businesses must play their part on the skills agenda by putting the "people stuff" first and seeing skills as an investment rather than a cost. Equality, diversity and inclusion is another area that we need to get right...





Key message 4:

Skills shortages have significant cost for UK businesses and the economy

Economic uncertainties and the ongoing disruption caused by the pandemic has seen the number of available job candidates grow, yet employers continue to struggle to find suitably skilled workers. This is evidenced by the Open University's annual Business Barometer (Bulletin 10). In 2021 it highlighted that 61% of organisations believe they have a skills shortage in their organisation, and the CBI found three quarters of UK companies were hit by labour shortages during 2022. The consequences are even more pronounced for SMEs. The Federation of Small Businesses found 80% of small firms faced difficulties recruiting applicants with suitable skills.

Disruption caused by the pandemic has seen the number of available job candidates grow, yet employers still struggled during the past year to find suitably skilled workers.

Open University' Business Barometer

As a consequence of a lack of available skills 78% of UK organisations suffered a decline in output, profitability, or growth, the Open University reports in their 2022 Business Barometer (Bulletin 11).

As a result, there has been an increase in the amount spent by businesses to find, secure and develop talent as identified for example by Robert Half's Salary Guide. Employer are spending out on recruitment fees, increased salaries, temporary staff, and training to upskill those hired at a lower level which the Open University in 2020 calculated totalled £6.1 billion per year (Bulletin 8).

Alarmingly, these shortages are anticipated to have significant and damaging consequences for the UK economy. The Recruitment & Employment Confederation (Bulletin 11) estimates that if labour shortages are not addressed the cost to the UK economy will be £39 billion a year from 2024 through to 2027. They call for the creation of a future workforce strategy including policies for skills, immigration, and regional investment, and for businesses to appreciate skills as an investment and prioritise equality, diversity, and inclusion initiatives to recruit and retain best talent.

With a 10% surge in demand for staff across the economy, and the labour market restricted by shortages, we could see a 1.2% fall in expected GDP and productivity by 2027 – costing the economy anywhere between £30 billion and £39 billion every year.

Recruitment and Employment Confederation

Key message 5:

The skills employers are seeking are overwhelmingly technical and transferable

Of all the messages from the research captured in this series of bulletins, this is probably the most often repeated and reinforced. Our very first article on the DfE's <u>Employer Perspectives Survey</u> (Bulletin 1) showed that almost two thirds (65%) of employers rated relevant work experience as significant or critical when hiring, compared to less than half (46%) for academic qualifications.

This was reinforced by CBI/Pearson's <u>Educating for the Modern World</u> (Bulletin 3), which showed that over half of employers (60%) value broader skills such as problem solving and nearly three quarters (75%) say they prefer a mix of academic and technical qualifications or that they view all qualifications equally.

The post-Covid-19 skills landscape looks particularly interesting as the latest data from the Skills Network (Bulletin 8) showed that the top 5 skills sought by employers in the UK are: Auditing; Nursing; Accounting; Business Development and an understanding of Key Performance Indicators. Research also found that technical skills such as programming, coding, and software development are in extremely high demand, with technological roles growing by 7.3% each year. This accords with the findings of other research suggesting that both 'high-tech' and 'high-touch' roles are experiencing significant demand.

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Skills Network

In addition to 'technical skills', the same report also analysed those 'soft skills' most required by employers and found that the ability to display soft skills like management, leadership and planning is crucial for candidates. Similar sentiments are echoed across our bulletins and more widely by Kingston University's 'Future Skills' campaign which further identified problem solving, communication and analytical skills, resilience, and initiative as some of the top 10 skills that the labour market will demand in the near future. Linkedin's Global Talent Trends 2019 (Bulletin 5) found that 92% of employers said that so-called 'soft skills' are equally or more important than hard skills, with creativity highlighted as being of particular value. There is work to be done to help young people understand the skills that employers are looking for – Youth Employment UK reported in 2021 only 33% of young people thought they understood the skills employers are looking for, and 57.5% believe they have some idea (Bulletin 9).

Edge's partners at <u>Skills Builder Partnership</u> have an excellent model summarising these key skills and how young people can develop them:

















Key message 6:

The skills employers are seeking are not being prioritised within the education system

Several pieces of research featured in the bulletins have highlighted that, despite the clear evidence from employers, the skills and attributes above are, in some cases, being actively deprioritised by current education policy.

Indeed, the <u>OECD</u> (Bulletin 8) has said that one of the biggest risks to national education systems today is that **traditional ways of educating are losing currency and relevance** and are not adapting quickly enough to the needs of a dynamic economy.

We highlighted in research from <u>JCQ</u> (Bulletin 3) that between 2010 and 2018, with the introduction of the EBacc, there was a **fall of 154,000 (57%)** in entries to Design and Technology GCSEs and a reduction of **77,000 (20%)** in entries into creative subjects. In computer-based subjects, there was a fall between 2016 and 2018 of 17,000 entries. These are subjects that support the development of key skills and competencies that employers seek, such as creativity, team working and digital skills.

Edge and Education & Employers' <u>Joint Dialogue</u> (Bulletin 4) highlighted that teachers feel recent qualification reforms are negatively impacting their ability to teach the skills that employers are looking for. Nearly half (47%) of teachers surveyed believed that they have fewer opportunities to develop employability skills since the introduction of reformed GCSEs and A-Levels in 2014, a third stating that the new syllabus required a focus on rote learning, leaving less space for developing creativity.

Youth Employment UK's annual Youth Voice Census 2021 and 2022 (Bulletin 9, 11) detailed young peoples' perspectives of how far the education system prepares them for work. Following trends from 2021, careers activities continued to decline in 2022. The most common careers support received by young people, 'Face to face' careers sessions, declined from 42.1% to 38.6%. In 2022 just 29.7% of young people rated the career advice they had received in secondary school so far as 'good' or 'excellent'. In 2021 43% of those in college had access to a careers advisor, while access to career support plummeted across universities with half of students not accessing any support.

Although academic qualifications are still discussed with students more frequently than vocational qualifications, we are seeing a positive change in the number of young people hearing about apprenticeship opportunities in school. In 2021 85.8% of young people had apprenticeships discussed with them and 84.7% of current apprentices rated their apprenticeship as 'Good' or 'Excellent' overall. However, large proportions of young people reported that other vocational options such as traineeships (66%) and T Levels (72%) were never discussed, and this showed no improvement from 2021 to 2022.



In 2021 65% of young people reported believing it was 'Important' or 'Very Important' to take part in social action and extracurricular activities. Such activities can support the development of transferable skills sought by employers. However, opportunities for extracurricular activities fell in the wake of the pandemic.

The case studies highlighted throughout the bulletins show that despite wider policy, some schools, colleges, and universities are focusing explicitly on developing the skills employers are asking for. Cardiff University's National Software Academy (Bulletin 2), the Edge Hotel School (Bulletin 3), and Ada, the National College for Digital Skills (Bulletin 8), all provide robust examples of integrating rich employer engagement and workplace experience to prepare students for the world of work. Elsewhere, the British Academy's SHAPE (Social Sciences, Humanities and Arts for People and the Economy) skills campaign evidences how these disciplines facilitate the development of valuable skills.

Other alternative interventions include for example Techcentre Training's (<u>Bulletin 10</u>) collaborations with charities and housing associations to address educational deficiencies experienced by young people in local communities, strengthening their digital and communication skills and preparing them for employment.

Key message 7:

Employers' and young peoples' confidence in the future ability to meet skills requirements is low

Skills that were in short supply pre-pandemic have become all the more highly sought after in the following years since national lockdowns. Digital skills in particular have become even more desirable as organisations shift their working models online, and remain in high demand, as referenced in Lloyds Bank Group / IPSOS MORI and Tech Nation reports (Bulletin 8).

...11.7 million people aged 15+ across the UK lack the 'essential digital skills' needed for day-to-day life online.

Lloyds Bank Group / IPSOS MORI

Meanwhile, the <u>Industrial Strategy Council</u> (Bulletin 7) pointed to more severe **skills shortages in 'workplace skills'** with at least 2.1 million workers likely to be acutely underskilled in at least one core management area (leadership, decision-making or advanced communication) and 1.5 million likely to be acutely under-skilled in at least one STEM workplace requirement.

This suggests that more significant changes are required in the education system to meet the needs of employers. The case for change in assessment as one way to drive these changes is set out clearly by the Rethinking Assessment movement that Edge has helped to found.

...more severe skills shortages in 'workplace skills' with at least 2.1 million workers likely to be acutely under-skilled in at least one core management area...

Industrial Strategy Council

Youth Employment UK's annual Youth Voice Census 2021 and 2022 (Bulletin 9 and 11) have over the last few years tracked the concerns of young people who do not feel prepared to enter the labour market. In 2022 just one in three agreed their school supported them sufficiently to develop the skills they needed for the future. Young people and their carers struggle with a lack of information and understanding of the skills employers require. Lost opportunities due to the pandemic, the cost-of-living crisis, and global political tensions were leading to 28.5% of young people reporting 'social, emotional and mental health' challenges. 51% of young people looking for work thought their anxiety was the biggest barrier to accessing work.

Just 9.9% of young people feel confident that they will be able to access quality work experience where they live. Anxieties about work opportunities were most acute in underprivileged demographic groups. In the 2021 Youth Voice Census Asian, Asian British, Black, African, Black British or Caribbean respondents reported 'lack of work experience', 'anxiety' and 'having no contacts' and 'racial discrimination' as the biggest barriers to them gaining work, and in 2022 were 10% more likely to not be confident they could access quality work. Transgender respondents were 25% more likely to lack confidence.

Above all, young people's final call in the census in 2021 was that they wanted their contributions to mean something. Sadly, 81.9% of young people do not think there are enough opportunities to share their views on important issues currently.

...young people do not feel prepared for their futures. There's a mismatch between the skills they believe employers want and the skills they believe they have.

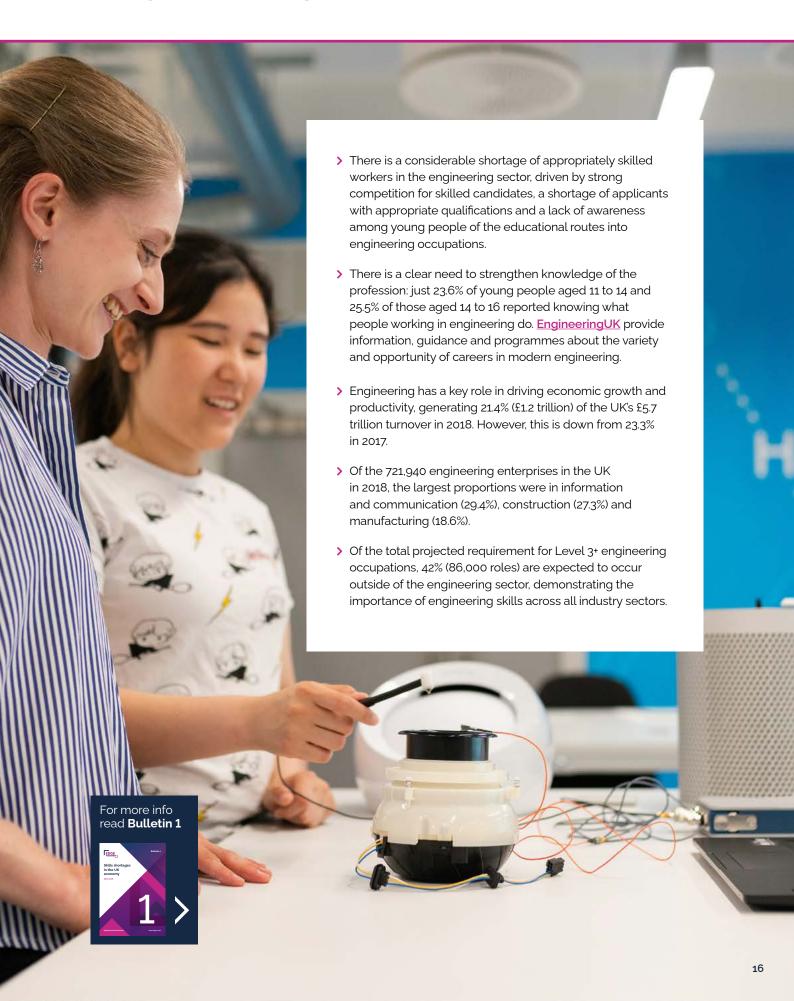
Youth Employment UK



Sector summaries

Skills shortages and challenges vary across different sectors of the economy. In this second part of this report, we highlight key messages in the Bulletins by sector.

Engineering



Digital

- > In 2020, UK tech employment had grown by 40% over the last 2 years, accounting for 9% of the national workforce with 2.93m jobs created.
- Tech Nation shows that there have been rapid recent increases in demand for roles resulting from Covid-19; from June to August 2020 digital tech saw a 36% increase in vacancies. Of all roles advertised, Cambridge and Belfast had the highest proportion of digital tech roles at 26%.
- In 2018, there were over 130,000 software developer vacancies - the most in-demand tech position across all clusters in the UK. This was still true in 2020, the most advertised digital tech role across the UK cities was Software Developer (6 per cent of all advertised digital tech roles).
- > Over the past several years, demand for roles containing AI, cyber and cloud skills have all increased. Between 2018-2019 AI and cyber grew by 44% and 22% respectively year on year.
- Data centres provide the core digital infrastructure that underpins our modern economy by transmitting, receiving, storing, processing, and managing digital data securely and efficiently. Data Centres require complex skills needs, from network design to air conditioning, from energy management to generator maintenance. In the UK, this sector cannot currently meet its skills needs with domestic talent.
- > Ada, the National College for Digital Skills, offers a Sixth Form and higher level (level 4) and degree (level 6) apprenticeships for those who are passionate about tech.

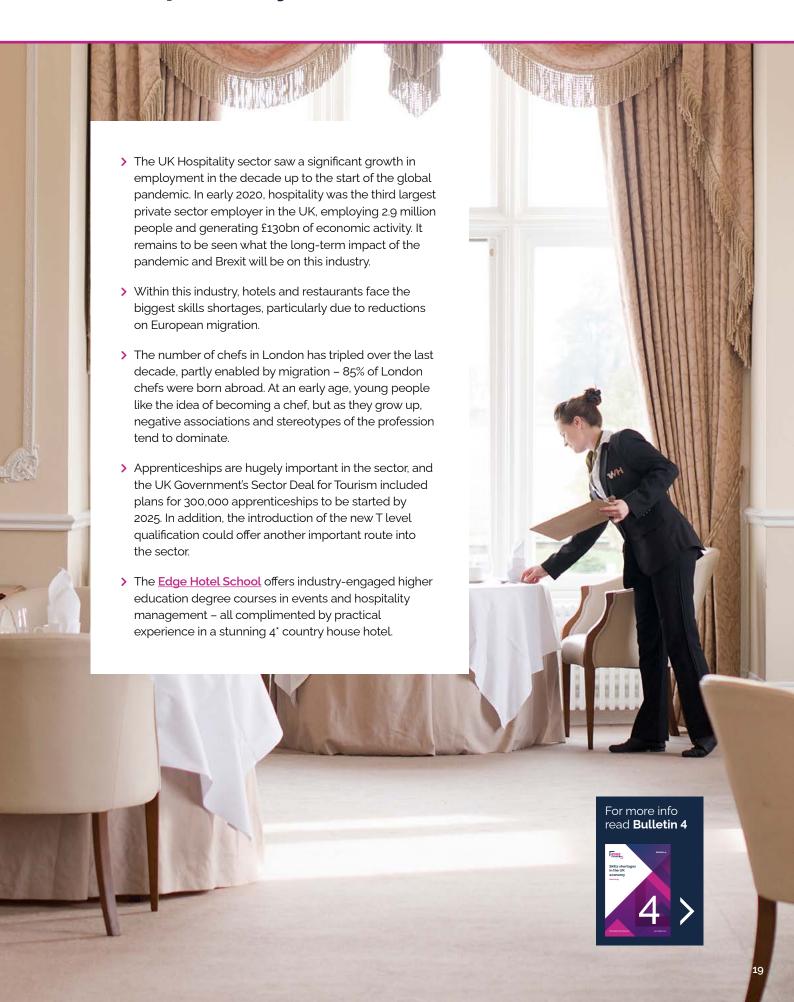
 O1Founders is an innovative coding school which offers those wishing to reskill free education and a job guarantee. Their unique model is based on peer-to-peer and project-based learning. Both of these provide a pipeline of talent straight to the UK's tech industry, with a key focus on improving diversity and equality within the sector.
- Cardiff University's National Software Academy offers a BA in Applied Software Engineering. It works closely with industry, teaching with problem-based learning and real-world examples to ensure graduates are highly employable and meet the needs of local employers.



Creative



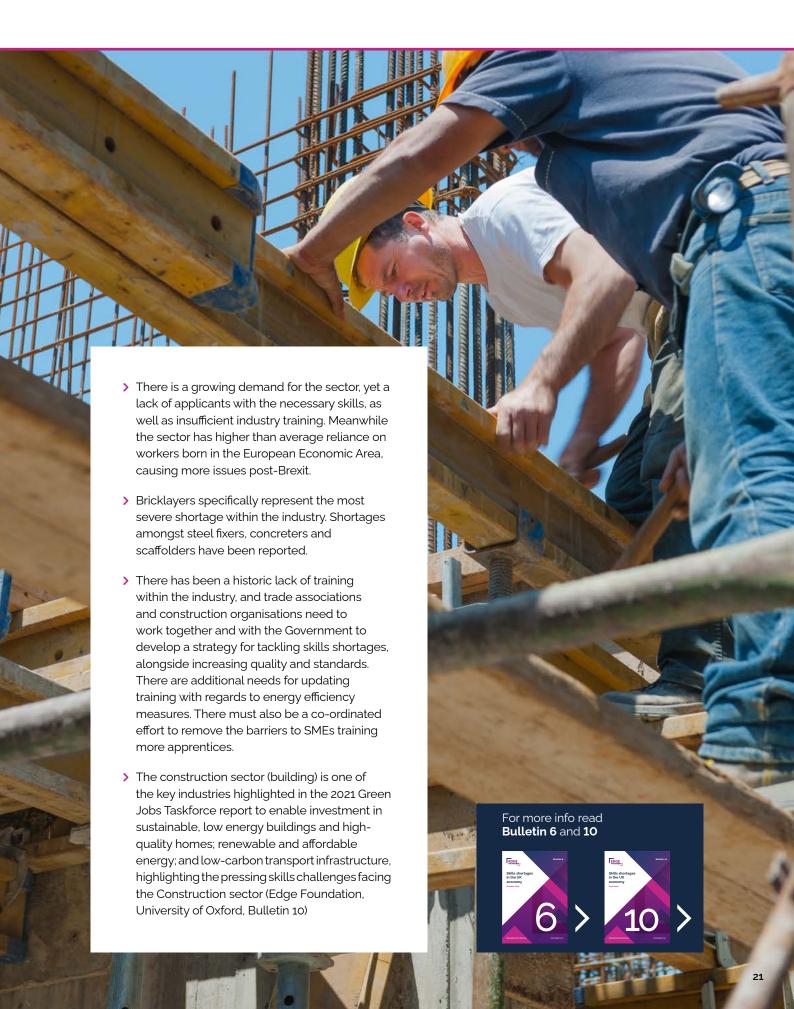
Hospitality



Health and Social Care



Construction



Logistics



Green



- > Policy attention is turning towards the concept of a Green New Deal to drive economic recovery, including localised job creation through investment in sustainable, low energy buildings and high-quality homes; renewable and affordable energy; and low-carbon transport infrastructure. Such shifts in the labour and skills markets will be necessary to meet the UK's climate goals.
- The Institute for Public Policy Research suggests that as many as 200,000 jobs could be created in energy efficiency by 2030 – offshore wind being a major portion of this.
- Decarbonising the UK's housing stock, through renovation and construction work, is set to create 100,000 jobs annually over the next decade, with most jobs created in the services and the construction sectors (<u>Energy Efficiency</u> <u>Infrastructure Group</u>).
- Screen alliance argues that national priorities for 'levelling up' and combating low productivity must be married with promises to deliver a net zero economy by 2050. They argue that ambitious transformations in reuse, repair, and remanufacturing could create over 450,000 jobs by 2035 distributed across regions of the UK.

- > The Economy 2030 Inquiry report 'Net.

 Zero Jobs' cautions that transitions out of, and reskilling and upskilling of 'high carbon' jobs will likely require extra effort from organisations, the government, and workers. The effectiveness of interventions will vary between places, sectors, and demographic groups and necessitate targeted action, the RAND corporation highlights.
- The need for green technology deployment leads to a focus on technical skills linked with specific emerging technologies. However, good communication, leadership skills, professional integrity, general business and administrative skills are also required along with systematic CPD (<u>Bulletin 10</u>).
- > A comprehensive climate change education across the curriculum needs to be a priority.

 SOS-UK found that 71% of school pupils are interested in learning more about the environment and over 60% of university students want to learn more about sustainability. High numbers of teachers, young people, and employers report that more should be taught through education about the issue, but lack faith in the capacity of existing education provision to facilitate necessary understandings or foster important skills.



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To see the full series of Skills Shortages Bulletins please visit www.edge.co.uk/research/projects/skills-shortages-uk-economy/