

Fast Forward for Digital Jobs

A taskforce to drive positive change

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Foreword

We know technology can be a force for good. We see it every day in the work we do, the people we do it with and who we do it for. As an industry, we now have a collective chance and obligation to ensure the use of technology in our businesses, our lives and our society can bring about positive change on a national scale.

The COVID-19 crisis has had a dramatic impact on the lives of many people, on their wellbeing and their employment prospects. [Almost two-thirds of those who have lost their jobs as a result of the pandemic are under the age of 25.](#) There is a risk that, without coordinated action, the negative economic impact of the pandemic will be long-lasting for this generation and more to come.

As employers in the technology sector, we want to work together with the Government to stop this happening. We know that many good jobs will be created in the years to come – bringing with them the opportunity for people to thrive. We must connect these jobs with those who need them. This will equip far more people with the skills and pathways they need to thrive in a future defined by new technology.

The Fast Forward for Digital Jobs Taskforce, made up of industry leaders from across the technology sector, has come together to explore how we can open up training and qualifications to a much wider base of potential employees.

This report is the outcome of an in-depth literature review examining adult education, digital skills training, and a series of interviews both with those working inside leading tech companies and the wider tech ecosystem. The report sets out seven recommendations across three areas to support learners, employers and the country to invest in digital skills.

We have already seen how innovative Government reforms such as the Lifetime Skills Guarantee will look to do this, but more needs to be considered. We pay particular attention to the challenge of opening up pathways into digital jobs to people from all backgrounds, recognising that a more diverse and inclusive workforce is crucial to build a society and economy that works for everyone.

If we work together, we can equip people with the skills and careers they need for the future and for what comes next.

Jacqueline de Rojas CBE, President, techUK

“The Fast Forward for Digital Jobs Taskforce has come together to explore how we can open up pathways to digital jobs. If we work together, we can equip all people with the skills and careers they need for what comes next.”

Jacqueline de Rojas CBE, President, techUK



Executive Summary

Right now, both the tech industry and Government have an important role to play to support people. If we can match the array of technology roles and exciting careers created every day with those displaced by the pandemic, and by automation and innovation, we will play a significant part in helping people transform their employment prospects and create the pipeline of digital skills and tech talent that our economy needs.

While the benefits of this are clear, so too are the challenges. We will struggle to overcome these without direct action and collaboration across the technology landscape – but we believe it is possible.

The Fast Forward for Digital Jobs Taskforce has identified seven key recommendations which will enable us to skill, reskill and retrain people – guiding them into fulfilling jobs for the future and equipping them with the tools they need to thrive. These broadly fall under three headings: supporting learners, supporting employers and delivering at scale.

These recommendations support the Government's ambition to revolutionise and restructure the skills system so we can move past the outdated notion that there is only one route up the career ladder.



Recommendations

Supporting learners

1. **Showcase the life changing opportunities of digital skills and jobs**

techUK should work with the sector to run an inspiring campaign telling the story of how people from all walks of life have successfully reskilled in digital technology and benefited from life-changing career opportunities through diverse pathways, from T-Levels and apprenticeships and onto degree level qualifications. It should highlight the diversity and effectiveness of pathways and jobs available to all, regardless of background. This campaign should reach out to those people who have traditionally been less confident or aware of their ability to access the opportunities available.

2. **Champion bite-sized flexible learning**

While the Government focuses on addressing the discrepancy between Further Education (FE) and Higher Education (HE) it should also look beyond these traditional routes to consider new approaches to learning that are fit for purpose for the 21st Century. Government and industry should work together to champion and expand the development and take up of short modular online courses, including bootcamps, that have been proven to be a flexible, affordable and effective route for learners to acquire productive digital skills that are valued by employers.

3. **Help learners meet the cost of retraining**

The Lifelong Loan Entitlement and Lifetime Skills Guarantee lay the foundations for a culture and system of lifelong learning. We urge the Government to extend this financial assistance to cover industry certifications from a wider range of providers.

Supporting employers

4. **Help SMEs to invest in digital reskilling through a Digital Skills Tax Credit**

The Help to Grow scheme should now be matched with a skills tax credit to incentivise SMEs to invest in training their workforce. This could be modelled on other tax credits for SMEs such as the existing relief for R&D investment.

5. **Enable more SMEs to benefit from the Apprenticeship Levy**

Employers should be further encouraged to invest in skills to maximise the number of apprenticeships and the effectiveness of the levy. This should include increasing the percentage of unspent funds from levy-payers that can be transferred to smaller companies in their ecosystem and supply chain.

6. **Ensure education providers focus on job readiness**

Education and learning providers should work more closely with employers to understand and deliver programmes that develop the skill sets that employers need. Industry-led accreditation focused on job-readiness would act as a positive signpost to build employer and learner confidence in a market with more diverse provision.

Delivering change at scale

7. **Develop an online 'Digital Skills Toolkit 2.0' to help people navigate to digital skills and careers**

Building on the success of the Skills Toolkit, an end-to-end 'Digital Skills Toolkit 2.0' should be developed to make digital opportunities and pathways more transparent and accessible to more people. It would enable people across all areas of society to understand the digital job opportunities available to them and the skills pathways to access those jobs.

Such a toolkit would encompass many of the other recommendations in this report. It would help support a more responsive and dynamic labour market that would enable more people from diverse backgrounds to participate and thrive in our modern digital economy.

The Taskforce



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Chair of the techUK Fast Forward for Digital
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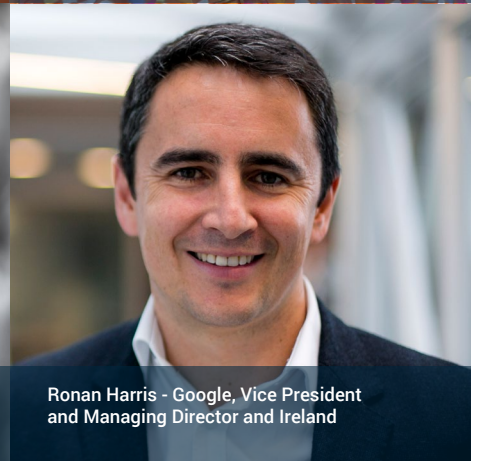
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The Fast Forward for Digital Jobs Taskforce was created under the techUK umbrella to bring together leaders from the technology sector whose businesses are committed to the skilling not just of their own employees but of the wider communities they serve.

Focusing on productive skills (RQF 4 and above)

The Taskforce has focused on 'productive' technical skills that are currently most in demand by employers and likely to drive economic growth in the near term. It has also paid close attention to helping learners and businesses identify and acquire these skills. There are three broad categories that sit under the umbrella of digital skills¹. To understand where our future skills need lies, it is important to identify and anticipate the supply and changing needs of each category:

1. Essential digital skills for life

Essential digital skills are those that are required to make simple use of digital devices and functions such as navigating a website to access a public service or being able to send an email. This is a foundational level of computer and internet literacy.

2. Digital skills for the modern workplace

Digital skills for the modern workplace is an intermediate-level of understanding and skill sets that uses digital and tech effectively on a day-to-day basis. While the digital skills needed by the general workforce are likely to differ across sectors, there will be some requirements, including confident use of tools, that apply across all sectors. Taskforce members have highlighted the particular importance of these skills to ensure the UK's workforce is prepared for the ever-greater augmentation of tasks within job roles as technology becomes more embedded and sophisticated.

3. Higher-level technical digital skills

Higher-level technical digital skills are specific skills that include data analysis or coding as well as digital transformations and emerging technologies for example Artificial Intelligence (AI) and machine learning requires technical and specialist skills.

This report focuses on categories two and three: Digital skills for the modern workplace and Higher-level technical skills. In the education system this means the focus of this report is on RQF levels 4 and above.

A report drawn from data and insights from world-leading digital businesses

Taskforce members have used data and insights from their own businesses and ecosystems to identify challenges to skilling and training, as well as successful initiatives and ways of working from the UK and abroad.

These insights have been complemented with:

- » An in-depth literature review examining the UK's skills policy landscape, particularly in relation to adult education and vocational skills training.
- » Interviews with employees from within Taskforce members and key stakeholders from across the ecosystem exploring best practice and developing and testing the recommendations set out in the report.

The Taskforce is extremely grateful for all those who took the time to contribute their expertise and insight.

¹ Definitions differ slightly across sectors – these broad categories have been considered by techUK to provide necessary distinctions between them.



Introduction

Equipping people for work in a fast-changing world

Over the last 20 years, the global economy has been digitising at pace, making digital skills an increasingly vital requirement for employers. The pandemic has accelerated this change at a speed that we could not have imagined.

Almost overnight we have seen the requirement for businesses of all sizes and in all sectors to pivot to digital. Businesses and organisations have been forced to rapidly adopt new digital technology to continue to operate. As we emerge into the post-pandemic world, the pace of digitisation shows no sign of slowing down, meaning more jobs will require digital skills as we hit the road to recovery.

At the same time, unemployment in the UK is currently around 5% – [the highest for more than four years](#), and with 4.7 million people due to exit the furlough scheme later this year, this is very likely to increase. As the Government's legislative agenda for the next year focuses on equipping people with the skills they need, there has never been a more pressing need to match people's skills to a fast-changing labour market.

The role of the technology industry

As an industry we can equip those displaced by the pandemic, and the changing requirements of the workplace, with not just the skills but the direct opportunities and careers to get back to work and be at the forefront of a growing sector.

We have the power to do it. The digital technology sector is arguably one of the UK's true success stories, [accounting for 7.7% of UK GVA](#). The sector alone employs 2.98 million people with a further 1.87 million people employed in tech roles right across the economy. 10% of all jobs in the UK are tech jobs, and projections suggest the UK has the [potential to create a further three million new technology jobs by 2025](#).

These jobs are generally highly skilled and pay substantially more than the average UK salary, with an [average annual income of £62,500](#). They are also well spread out – available in every economic sector and across the nations and regions, with growing hubs in towns and cities right across the country raising prosperity and boosting local economies. techUK has found within its [Nations and Regions work](#) that building 21st century skills for an inclusive workforce is essential to tackle the immediate challenges brought by the COVID-19 pandemic. Closing the Local Digital Capital gap would transform the UK, [boosting economic output by as much as £145 billion and creating 2.7 million new jobs in the process](#).

Even at the height of the first lockdown, there were [tens of thousands of jobs advertised for digital technology roles each month](#). In the North East alone, 87 new jobs on average were advertised every single day². However, many of these vacancies go unfilled due to a lack of the right skills in the population. If the UK Government wants to deliver on its promise of a truly levelled-up nation, skills, particularly digital skills, must form a key pillar.

What comes next

In this report, we call on the Government to work with the Taskforce and the wider tech industry to open up new flexible pathways for people to train, retrain and reskill so they can find their way into good jobs that enable them to thrive in the post-pandemic economy. Beyond the immediate need to retrain people, we also need to embrace a new culture of lifelong learning, embedding a positive approach to the continuous adoption of new skills and aptitudes.

At the same time, we can enable a generation of people to have new and valuable careers and a generation of new digital businesses to access the skills they need to grow and keep innovating. Much has been learnt since the Apprenticeship Levy was first introduced and there is now strong consensus about the need to open new routes into digital roles that are accessible to people from all walks of life. However, much of the activity and many of the initiatives remain sub-scale and disjointed.

As we look forward to stepping out of the shadow of the pandemic, there has never been a greater need for us to work together in a concerted and committed drive to transform the UK skills landscape. This can only be achieved through long-term thinking and significant investment.

² Source: David Dunn, Tech Clusters UK.

Building back inclusively

Digital innovation is creating new roles and new skill set requirements almost every day. According to McKinsey, one third of new jobs created in the US in the past 25 were in areas that did not exist previously and talk of tech destroying jobs has been disproven, with the internet creating [2.4 jobs for every job it eclipsed](#).

This is good news, but it brings with it a responsibility to get people ready for the future world of work and ensure they have the skills to thrive.



The unique situation created by the pandemic

The pandemic has generated significant challenges for maintaining personal wellbeing, economic stability and for society to function. However, there are opportunities for people to move into a new generation of tech jobs and digital careers that will chart the course of the country's economic future.

According to the latest figures, in just a few months, [COVID-19 had accelerated digital transformation by an average of seven years](#). Importantly, data suggests that those shifts are here to stay.³

For businesses to truly see the benefits of digital innovation, they need their teams to be ready to utilise it. This means skilling the employees they already have and creating pathways for a new pipeline of talent. Much of this training and skilling can be achieved through flexible modular courses that are agile and responsive to the pace of technological change.

Lifelong learning is a game-changer

Beyond the immediate needs presented by new technologies already adopted and this short-term jobs challenge, we also have a chance to prepare the workforce for near continuous innovation adoption.

If we can upskill people for the jobs available now and instill a culture of lifelong learning among both the newly re-employed and those who have been in their roles for many years, the UK will be on the road not just to recovery but to becoming a more digitised, higher-skilled economy.

The appetite among the population is already there. Through the pandemic we have seen a massive increase in people recognising the growing importance of digital skills in the future jobs market and signaling their interest in acquiring these skills through short online courses.

The Institute of Coding (IoC), a Government-supported initiative designed to respond to the UK's digital skills gap, has already enrolled more

than [800,000](#) people as it marks three years of supporting learners on their journey into the sector. Its online courses are specifically designed to be accessible to a large variety of people from diverse backgrounds and the courses have been created with input from major employers to help meet the demands of the national skills crisis.

In a recent survey of its learners, 25% said their work situation had been improved by taking a course – either by gaining a promotion, taking on more responsibilities or taking on a new more technical job. Respondents also reported themselves to be better prepared for future careers (63%), more confident working in tech (61%) and more confident to apply for tech roles (54%).

Further opportunities

Greater acceptance of remote work can create opportunities for some to access the workplace more readily, thanks to a greater ability to work around people's lives including, for example, those who have greater caring responsibilities or disabilities.

Businesses across the country are waking up to the possibilities opened up by remote work and are shifting to embrace more inclusive hiring processes. In a survey of more than 150 HR leaders, over 75% of respondents said that COVID-19 presented important HR opportunities, among which was the chance to improve culture and team dynamics to [boost inclusivity](#). If we work to build targeted interventions, we will not only plot a quicker path to recovery but will also build a future that is more inclusive and productive.

Many industries face threats from automation and innovation and this reskilling challenge has been growing for many years. The pandemic has simply brought it into sharp focus.

We have the need – the jobs and the valuable careers waiting to be taken up. We know that people are hungry for their next opportunity, we just need to connect the two.

³ Ibid "For more than 60% of respondents, shifts in consumer behaviour and demands are here for good. For the rest of the metrics, around half or more expect the changes will at least have staying power in the post-recovery period".

The challenge of reskilling

The opportunity ahead of us, and the chance to build back better, is clear – but so too is the challenge. With digital jobs on the rise, we must make sure the UK workforce has the skills to fill these roles and to adapt to a future defined by continuous innovation. We need to bring the current tech workforce up to speed and also train those who have been displaced from other industries.

The UK does not yet have the infrastructure and resources it needs to meet this challenge. The provision of reskilling and retraining remains fragmented and sub-scale and business investment in reskilling remains very low, especially among SMEs, which are the biggest employer. This needs to change.

The tech industry has the second highest number of job vacancies in the UK (after healthcare) and will have [100,000 unfilled vacancies per month by the end of the second quarter in 2021](#). This skills mismatch is already costing the UK economy £6.3bn in lost GDP each year and is predicted to worsen significantly.



Changing the culture around learning

Research for the UK's Industrial Skills Council found that by 2030, now less than a decade away, [seven million additional workers could be under-skilled for their job requirements](#). This represents 20% of the jobs market. The overarching recommendation made in that report was that "an urgent shift to a new norm of lifelong learning in the UK workforce is required."⁴

Prior to the pandemic, adult learning was at a record low. A 2019 survey by the Learning and Work Institute showed that [adult learning was down 10% since 2010](#), the equivalent to 3.8 million fewer adults taking part in learning since the start of the decade.

Yet, the need to reskill is so much greater. Research from Nesta indicates that as a result of technological progress and changing demographics, more than six million people in the UK are currently employed in occupations that are likely to change radically or disappear entirely by 2030, spelling a much larger need for transition on the horizon.

The match-making job

[Unemployment has already exceeded 5% for the first time since 2016](#). Many of these jobs will not return. Even more worryingly, analysis by the Bank of England has shown that unemployment takes time to "unwind" – it took seven years to return to pre-recession levels of employment after the past two recessions.

"Matching job seekers to jobs is time-consuming and costly and once people have been unemployed for longer spells, the likelihood of finding a job falls," the Bank of England has said.

"COVID-19 has affected some parts of the economy more than others. This is likely to create a mismatch between the sectors in which more workers are losing their jobs and the sectors in which businesses are hiring. This could make it harder for people to find jobs, slowing the decline in unemployment."

Our way forward

We can respond to this challenge. Government and industry need to work together to signpost the opportunity of 'digital jobs' to more people and work to ensure that these opportunities are open to people of diverse backgrounds. This requires clear pathways, with flexible short courses that can get people from where they are today to where they need to be to thrive.

Once people have a greater awareness and confidence in these pathways – Government must encourage SMEs to offer them and to invest in retraining using existing funding mechanisms and developing new ones. This requires much greater collaboration between business, government and education providers.

The Taskforce recognises the challenges facing the UK and the people that power it are great; but so too are the rewards. If we can use the momentum coming out of the pandemic to drive the UK's digital skills base and build a culture of lifelong learning, we will give the industry the firepower it needs to lead us out of the recession and future-proof the careers of millions of people – enabling them to reach their potential.

The Taskforce is keen to work with Government on its [plans to build inclusive economic growth](#) to help deliver the skills and lifelong learning to do this.

⁴ ibid

Supporting learners

1. Showcase the life changing opportunities of digital skills and jobs

Opportunities in digital technology should be accessible to all, especially at a time when millions have been left unemployed and the economy has been ravaged by the impacts of COVID-19.

With technology playing a critical role in our day-to-day lives, those who design, produce and market the solutions of the future must be representative of the society they serve. The pandemic's impact on employment has been unevenly felt, with women, ethnic minorities, part-time workers and those on low incomes hit hardest.⁵

These individuals must be encouraged and supported into roles and into a sector that needs their perspectives. Through storytelling, and recruitment and retention policies that support building and keeping an inclusive workforce, we can support diverse candidates to pivot to digital.

⁴ 15% of workers in sector which have shut down because of the coronavirus are from a minority ethnic background, compared to 12% of all workers, 57% are women, compared to a workforce average of 48%, and nearly 50% are under 35 years old. Low paid workers are more likely to work in shut down sectors and less likely to be able to work from home.



Making adult education more accessible and appealing

Adult education opportunities are least accessed by those who arguably would gain most from them – 49% of adults from the lowest socio-economic groups have received no education or training at all since they left school. Simply put: [“Adult participants in learning, whether formal or informal, are disproportionately young, middle-class, and well-qualified, in employment, living in communities where learning is valued, and with parents who experienced extended education”](#).

There are a plethora of reasons but one cause is upfront costs to investing in learning (both from a time and financial perspective) as well as a [feeling among potential learners that it is not for them](#). The sector, working with Government and others, has a responsibility to tip the scales so that motivations for learning outweigh any barriers faced.

By signposting and helping fund bite-sized industry-led training designed to fit around the learner and their life, we can address one of the biggest barriers to training and skilling. The first signs of a more inclusive workforce through remote learning are already coming through as training programmes are shifting out of classrooms and online.

For FDM Group, the pandemic occasioned a transition to virtual learning that provided the opportunity to widen participation and have greater outreach. As a result, FDM’s online training is more diverse. “Diversity is a key driver of innovation and business success,” says Sheila Flavell CBE, Chief Operating Officer, FDM.

“Currently we have 90+ nationalities working together and 32% of our workforce are female – far exceeding the UK sector’s average. We see this diversity as one of our core strengths at FDM. The disruption caused by COVID-19 has only reinforced our commitment to ensure everyone, regardless of their background, is empowered and enabled to build an exciting career in technology.”

“Through storytelling, and recruitment and retention policies that support building and keeping an inclusive workforce, we can support diverse candidates to pivot to digital.”

Similarly, research has shown that as we add more flexibility to methods of learning, we see a [positive change in demographics](#). To take gender as an example, today [women taking Computer Science related degrees in the UK make up just 13% of students](#). This rises to 35% for degree apprentices on digital pathways at Manchester Metropolitan University and to a 50-50 split for QA’s first digital bootcamp. Positive outcomes have also been recorded for BAME participation and those from low socio-economic backgrounds.

Additionally, T-Levels can be excellent entry points on digital pathways and we encourage companies to do more to support and promote T-Levels, in particular by providing placements for students. We also welcome the fact that the Department for Work and Pensions is seeking to align T-Levels with the wider apprenticeship programme so that students can use apprenticeships as the next step on their digital pathway.

Challenging stereotypes and surfacing diverse stories

Industry also recognises the role it must play in producing inclusive spaces and supporting those from underrepresented groups to thrive in their businesses and in digital tech roles, which have previously been so heavily stereotyped as being the preserve of the few.

As one interviewee put it: “Talent is everywhere. It’s not just in the relatively small pool of technologists out there today - it’s in our gamers, it’s in retail, it’s in warehouses, it’s in those who are currently unemployed, and in our graduates that have studied something non-technical. There are so many technologists out there that we can find through a more flexible and open recruitment assessment and attraction process.”

In a nationwide poll of 1,000 16 – 18-year-olds by the Institute of Coding, more than half believe the digital workforce lacks diversity. 70% of youth surveyed think the sector is run entirely by those of white, British ethnicity, and over a third (34%) think there are [unequal opportunities for women](#). One in ten admitted they are actively discouraged from pursuing digital education and jobs due to the lack of people that represent them⁵. While some of these opinions echo what many people in the industry may already feel, it is shocking that these are the perceptions of young people who have yet to set foot in the industry.

⁵ ibid

Stories and case studies are of critical importance when inspiring and motivating someone to take the plunge and try something new. Early signs show there is positive movement. For example, last year saw [more than a 20% increase in the number of girls taking A-level Computing](#). This new generation of talent will take a while to come through so, against the backdrop of today’s job crisis, now is the time to recommit to reaching those who may be considering switching careers or looking to return to work with an updated skill set.

The Taskforce members already collect and publish stories of their own mid-career switchers and those from under-represented groups who have come to tech through a multitude of routes. However, these are disparate and therefore do not get the ‘eyeballs’ they deserve. That is why we recommend bringing these stories together in one place as an open resource that can be accessed by anyone from anywhere.

Secondly, we recommit to sharing tried-and-tested best practice of recruitment and retention policies that help create a more inclusive workforce. We have seen first-hand how changes to policy, initiatives such as mentoring schemes and simply taking the time to listen to the aspirations and concerns of our own workforce, can move the needle towards a diverse workforce that is fit for the future.

Recommendation one

Showcase the life changing opportunities of digital skills and jobs

techUK should work with the sector to run an inspiring campaign telling the story of how people from all walks of life have successfully reskilled in digital technology and benefited from life-changing career opportunities through diverse pathways, from T-Levels and apprenticeships and onto degree level qualifications. It should highlight the diversity and effectiveness of pathways and jobs available to all, regardless of background. This campaign should reach out to those people who have traditionally been less confident or aware of their ability to access the opportunities available.

Combining a refreshed career in computing with family life – Sara's story



Having taken a career break to raise her three children, Sara Matthewman knew she was ready for a new challenge but with commitments at home, she needed to find a role that had flexibility and she wasn't too sure where to start.

"I knew I had value to give, I just wasn't sure how or where to apply it," she explains. "I had graduated with a BSc in Computing and my career had been very techie but [technology had moved at such a pace, I was out of date skills-wise.](#)"

Sara came across the Return@Capgemini programme. Following an interview, she was accepted and immediately started working towards getting her Java SE 8 Oracle Certified Associate (OCA) certification.

"Every day I'm learning new technologies and ways of working," she explains. "I'm growing in confidence and my technical knowledge has grown immeasurably. Tackling my knowledge gap will be ongoing, it's hard to catch-up and keep up with everything."

It's a challenge Sara is relishing, especially as she has learned that she can juggle home life and her new career. "Most importantly for me I've learnt that I can go back to work, and my family won't fall apart," she explains. "Flexibility is there in the workplace, I work a four-day week. It has been a big challenge to go back to learning. Software development has changed, but the problem-solving mindset remains the same and it is this ability to problem solve that makes a software engineer."

Returner programmes such as Capgemini's are opening doors to talented women who may have taken time-out but have a valuable role to play in the future of the tech industry.

"I'm excited by technology and feel very fortunate that Capgemini have envisioned a place for women returners," says Sara. "With continued emphasis on diversity and inclusion, and with returnships evolving and adapting, the future for women returning to work looks really promising."

Embracing independence and a new career in technology with Sally



When Sally left sixth form college, she felt she had gotten everything she could from the mainstream education system and she was ready to start a new chapter and her career.

“I knew I wanted to go into the technology industry so I felt that experience in a tech role would be much more valuable than a degree, which was validated by a lot of people I spoke to in the sector,” she explains. “Being able to earn while I learned was

also [one of the main reasons I chose to go down the apprenticeship route.](#)”

Starting an apprenticeship with UKFast, Sally says she had all the usual experiences you might get at university – meeting new friends, going out with the team and learning new skills – but that was combined with the freedom to follow some of her biggest passions. “I feel strongly about increasing the number of women in STEM careers, particularly women in tech, and I have been given the opportunity to ignite the passion for tech in young girls and women with projects such as the UKFast Digital Challenge Badge that we created in conjunction with Girlguiding.”

The strength-based approach to developing talent at UKFast has really suited Sally. “If you’re good at something then you will probably be doing it in your job! This means you’re constantly building on your strengths and refining your skills. We also get as much support as we need in areas we may feel we are less strong, that means knowledge and skills are continually improved across the board at UKFast.”

2. Champion bite-sized flexible learning

The continuous waves of technological change will require workers to constantly update their skills incrementally and at pace. The problem is that the UK lacks a culture of lifelong learning. The Learning and Work Institute highlights that 38% of adults have not participated in any learning since leaving full-time education.⁶

Giving evidence to the House of Commons Education Select Committee, the Association of Colleges remarked that: “There is a long-standing problem in the way that the current funding rules focus on full qualifications and on people taking them for the first time. This does not reflect the needs of adults in a [rapidly evolving labour market with changing technology](#).”

Reforming adult education to power the future of work

Those who find themselves newly unemployed or who want to “future-proof” themselves are often adults juggling full lives. Learning should not be seen as a luxury, but the traditional trappings of education – full-time courses, high fees and learning in the constraints of a physical location, can make it seem that way.

⁶ Learning and Work Institute, Adult Participation in Learning Survey (September 2019)



“There is a way to reach groups that we don’t reach otherwise,” explains Rachid Hourizi, Director, Institute of Coding. “Modular learning has clearly made a huge difference – the separation of advanced level teaching from the three-year course has made a huge difference. We’re too early to see what difference that makes to employability and employment, but it does open up the access to skills pathways and we think we have early data now on employment pathways and we see encouraging signs there too.”

The Government has already started the process of reforming adult education to make it more accessible to all. The publication of the Skills for Jobs White Paper in December 2020, for example, aims at addressing the [imbalance between FE and HE](#). Similarly, adult education is starting to form one of the core pillars of regional budgets. The West Midlands, for example, has earmarked £142 million in its most recent budget to help people gain the skills they need to get back to work quickly.

There has also been a strong focus on vocational education, with the introduction of Institutes of Technology and T-Levels, targeted at both young and adult learners and created through partnerships between institutions and employers. These are all welcome steps that are supported by industry which is an active partner in delivering this change. However, it would be wrong to focus solely on formal education – defined as learning “[which takes place in institutions and is structured to their requirements](#)”.

Looking beyond existing formal education

Outside the parameters of formal learning, there is an enormous opportunity to support adult learning in a flexible and specific way. Thought must be given to those forms of training that fall outside the walls of institutions and we must create more learner-centric models that are responsive to both the lives

of individuals today and the needs of employers operating in a far more dynamic and agile market.

From interviews conducted with tech sector leaders, we found that someone working in tech today is required to update their skills every six months. Despite adaptations and attempts to reform, FE or HE courses cannot stay current in this regard given the length of time it takes to design and deliver curricula (up to six years in some cases).

The recent announcement of an £18 million investment in digital skills bootcamps in nine areas across England is a welcome addition to the skills landscape and will embed some of the requirements that industry has been a vocal advocate of, namely a focus on meeting the needs of employers and on the eventual employability of learners. The qualifying criteria for those looking to bid for the tender to deliver these bootcamps is extremely forward-looking, including requirements on:

- » Designing training solutions that meet employer requirements
- » Flexible delivery that suits individual needs
- » A demonstration of employer engagement

This will no doubt form the foundations of a continued evolution of Government thinking and policy development towards delivering more flexible, efficient learning, centred on employability rather than qualification. It is therefore vital that this first phase is closely monitored and evaluated in order to measure the success of the bootcamps in delivering on these objectives. This will ensure we can continue to do what works and ensure that this type of learning is ‘mainstreamed’, allowing it to sit alongside more traditional routes through FE and HE institutions and, importantly, allowing it to be funded through mechanisms that currently exist such as student finance.

Recommendation two

Champion bite-sized flexible learning

While the Government focuses on addressing the discrepancy between Further Education (FE) and Higher Education (HE) it should also look beyond these traditional routes to consider new approaches to learning that are fit for purpose for the 21st Century. Government and industry should work together to champion and expand the development and take up of short modular online courses, including bootcamps, that have been proven to be a flexible, affordable and effective route for learners to acquire productive digital skills that are valued by employers.



Creating an externally valued career currency with EY Badges

As IT environments become more customised and requirements for new skills grow, an increasing number of companies are building their own certification programs. Many of them are using vendor certification training paths in connection with internal training materials to stand up certification tracks specific to their business needs such as techUK member [EY's Badges Programme](#).

While the EY badges are not externally accessible or accredited, EY's strong brand has helped to develop the badges into its own externally valued career currency. Platinum level certification means expert level competence on a global level and comes as a physical plaque.

Employees recognise the programme to prepare themselves to manage future disruptive technologies, deliver better services to clients and further their own careers by developing their personal branding. EY people can share their badges on social media, and badges are also used to match EY people with relevant projects. The adoption of the programmes differs inside EY but is particularly high in regions where there is strong leadership buy-in and where learning is rewarded and recognised as part of the company's culture.

From the armed forces to Salesforce – Shane's journey to a new career in tech



Having spent 17 years in the army, serving in the likes of Iraq, Afghanistan and Kosovo, Shane Whittingham was not sure where to go next. An ankle injury meant he could not join the family construction business – but having worked in communications while on the frontline, looking after the IT infrastructure for the forces – [he had the kinds of skills the UK tech industry is looking for and he just had to find a way in.](#)

Shane discovered Vetforce, a Salesforce programme supported by FDM Group, which prepares current service members, veterans and military spouses for civilian careers in IT, consulting or sales, through career specific training.

“The Vetforce programme provided me with a new lease of life that enabled me to learn at my own pace through the virtual learning environment while sustaining employment,” explains Shane. “I’ve had the opportunity to take world-class certifications that will enhance my career prospects.”

Just a few weeks after passing his exam, Shane joined St James’s Place, as a Salesforce Product Support Manager and he has since gone on to join global communications network, OneWeb.

“At home and through after hours work, I was able to grow my profile and skills, get some experience in cloud-based systems and in CRM, and to step into a new career,” he explains.

“After 17 years in the army, I’ve already had a full career, but this has given me the opportunity to grow in a new direction and show employers that I have that ability to take on new skills. It’s a massive drive for me to still provide for my family. That’s very important.”

3. Help learners meet the cost of retraining

There is a strong appetite to continue learning among both people looking for jobs and those already in them. A recent survey by Savanta ComRes for Universities UK in October 2020 showed that 82% of prospective students in England who are unemployed, at risk of unemployment or looking to learn new skills were interested in studying individual modules of a university degree. The number is even higher for those currently still in full-time work who are simply looking to upskill and reskill, with [85% of respondents showing interest in modular study](#).



The COVID-19 pandemic also seems to have had a positive impact on motivation to learn. A techUK survey conducted at the height of the first lockdown last year, revealed that [58% of respondents reported being interested in gaining more digital skills in the next 12 months](#).

Adult education, however, has significantly declined over the last decade. This suggests that the current system is discouraging some adult learners from investing in their learning. We must act quickly to provide this new-founded enthusiasm for learning with the investment and resources it needs to ensure there are pathways to lifelong learning that are accessible to all.

Expanding Government support

There has been an important recognition of this requirement from the Government, which has committed to a Lifelong Loan Entitlement (LLE) in its Skills for Jobs White Paper – responding in part to the Augar review which called for an individual lifelong entitlement to student finance.

Early indications suggest that this will open up new financing options for lifelong learning and adult education. However, if this is restricted to courses delivered by FE and HE institutions, it risks unintentionally freezing out swathes of learners for whom learning at traditional institutions is either unworkable or unappealing.

The LLE is a once-in-a-generation opportunity to fundamentally shift adult education in the UK. We must, however, give individuals the agency, tools and resources to make the right decision. There are multiple state-led initiatives emerging internationally which seek to equip and empower individuals to take charge of their skilling needs - Singapore's Skillsfuture initiative is one such example – we hope that the Lifelong Loan Entitlement will add to the fount of international best practice.

Using the evidence available from promising initiatives across the globe, the Government and tech industry should work together to explore how the LLE can be used to unlock financing of industry certifications.

Singapore Skillsfuture

Skillsfuture is a national movement providing Singaporeans with the opportunity to learn new skills regardless of their starting point. For 'mid-career' learners, an enhanced subsidy of up to 90% of the course fees supports an individual's retraining efforts. To further encourage reskilling and upskilling, in December 2020 the Government announced that every citizen aged 25 and over would be given a \$500 credit to access mid-career support and career transition programmes.

In 2020 alone, 540,000 individuals and 14,000 enterprises benefitted from the Skillsfuture Singapore initiative. Enrolment for tech related courses such as "Artificial Intelligence for Everyone" and "Data Analytics Begins with Me" remained some of the most popular.

Building on progress already achieved

Understanding that technology continually evolves at pace, the sector has worked to create a training model that matches tech's evolution in speed, agility and dynamism, and that is underpinned by certifications that have the trust of employers and individuals alike.

These certifications have evolved from being product-based to role-based, ensuring a greater level of transferability of competences. Research demonstrates that those who have achieved a relevant role-based technical certification perform on average 26% better than their uncertified colleagues with the same responsibilities. It is no surprise, therefore, that these certifications have become synonymous with quality within the technology sector.

Awareness of the rigour and quality of these courses outside the technology profession and amongst the general public, however, is relatively low. This impacts trust and confidence and may even discourage individuals from retraining or upskilling, stop them from completing a course, or cause them to choose a low-quality provider.

Giving quality courses the distinction they deserve

There is no greater signal of quality, trust and confidence than the Government's stamp of approval. Therefore, if the Government's Lifelong Learning Guarantee and Loan Entitlement is to provide a truly 21st century provision, industry-led certification which is proven to increase employability must be an option open to learners who we know value the flexible, on-demand and modular elements of this type of training.

The Taskforce proposes a second phase of work to establish how industry certifications can be made eligible to Government-backed financing whilst retaining the hallmarks of their success to date – an unyielding focus on employability, the ability to respond to evolutions in technology, and global standard setting.

techUK will seek to convene industry leaders together with Government and education providers to explore how to expand awareness and accessibility of programmes delivering recognised industry certifications, with a view to providing financing through the Lifelong Loan Entitlement and supporting the Government Plan for Jobs. Priority areas should include: Cloud architecture, Cyber security, Software development, Data analytics, Project management.

Recommendation three

Help learners meet the cost of investing in certified digital skills

The Lifelong Loan Entitlement and Lifetime Skills Guarantee lay the foundations for a culture and system of lifelong learning. We urge the Government to extend this financial assistance to cover industry certifications from a wider range of providers.

The sky's the limit for Alexander Gittings with Cisco Networking Academy



As he was approaching the end of school, [Alexander Gittings had two big passions: PE and IT](#). After considering his options, he decided to go down the IT route, knowing his experience as a PC Gamer, hosting LAN parties, could be leveraged and enhanced. This pushed Alex to apply for a few Universities with computer networking courses, and he ended up selecting Birmingham City University (BCU) for several reasons, including its close affiliation with Cisco Networking.

Cisco Networking Academy leverages its expertise in Cyber security, Programming, Networking and IT to deliver courses that help develop these skills through public-private partnerships. Since 1999, more than 260,000 students in the UK have participated in the Cisco Networking Academy program. Courses prepare students for industry-recognised certifications (like Cisco Certified Network Associate - CCNA, or CCNA Cybersecurity Operations), further education, or entry-level and intermediate careers.

Alex's time at BCU had opened many pathways. He completed computer networking certifications such as CCENT, CCNA and CCNP, some of which were achieved through the Cisco NetAcad platform. He was also one of four students accepted for an internship role at Cisco with the Solutions Validation Services team. During the internship, he learned many things like virtualisation, automation, ACI, large service provider, testing and much more. Furthermore, this enabled him to work part-time at Cisco for the same team remotely as a PHP developer.

A few years on and now he is a full-time Professional Services Consultant at Axians UK. He followed pathways that aligned closely with his passion and throughout this journey he never gave up until he accomplished his aim. Looking towards some future goals, he would like to teach, to impart his skills and knowledge gained, and also pursue a pilot's license.

Supporting employers

4. Help SMEs to invest in digital reskilling

Employer investment in training of existing employees has faced a substantial decline, particularly amongst the SME community. Businesses should be supported and incentivised to invest in the upskilling and retraining of their employees. The Taskforce recommends a Skills Tax Credit, similar to the R&D tax credit system, and the creation of a resource within Local Digital Skills Partnerships to help SMEs network and pool resources to achieve economies of scale with regards to investment in training.

SMEs make up 99% of all UK businesses, employing three-fifths of the UK's working population and making around half the turnover in the [UK private sector](#). With many businesses now running leaner operations because of the pandemic, there is a real concern that investment in skills and training, which is already low, falls even further down the list of priorities.

The Government's recently announced Help to Grow scheme recognises the importance of both skills development and digital as a driver of growth and productivity. These two programmes, which together make up Help to Grow, will help businesses invest. The issue, however, is that they remain time-limited and only available to a small proportion of SMEs.



Enabling more SMEs to invest in skills

Studies show that SMEs face a number of obstacles to investing in their workforce, including a lack of information about what training is available, access to economies of scale (smaller employers typically pay three times more per member of staff than larger firms for formal training) and [accessing training that is flexible and specific to their needs](#).

A skills tax credit could work in a similar way to the R&D tax credit, which encourages and incentivises businesses to invest in research and development. In the same way that Government supports investment in physical capital, it could also support investment in human capital. Some form of tax relief can help businesses, particularly SMEs, reduce lost earnings for those periods in which an employee is 'learning', [as well as offsetting other costs such as the training itself](#).

The evidence shows that for each taxpayer pound spent on the R&D tax credit system there is a return of between £1.53 and £2.35 in terms of R&D generated⁷. Given the well-established relationship between human capital and growth and case studies from the US and other countries that offer tax incentives for training, there is a strong case for offering SMEs relief on an investment that enhances productivity and redresses what has been described as an ["imbalance between investment in physical and human capital."](#)

Flexible learning will benefit SMEs and their employees

This type of intensive, specific and modular learning can also be helpful to SME employers looking to train existing employees. While it has become standard practice for larger corporates to incorporate learning into the working day, with entire teams dedicated to 'Learning and Development' for their workforce, SMEs were underfunding employee training even before the pandemic began. 53% of SME employers had not arranged or funded training in 2018, compared to 4% of organisations with 250 or more workers – the lowest rate since the surveys began in 2010.

Recent research reveals that in about two-thirds of organisations (regardless of size) the [majority of learning and development content is developed in-house](#). Whilst that might be appropriate for larger businesses who have entire directorates and teams assigned to L&D, this can be very time-consuming for smaller teams. Furthermore, this training is often informal in nature, making it hard for employees to have their skills recognised on CVs. Similarly, face-to-face delivery remains the most popular mode of on-the-job learning, making it rigid and less personalised.

⁷ Learning and Work Institute, Adult Participation in Learning Survey (September 2019)

Digital bite-sized learning can help remedy this by:

- » **Being on-demand:** employees can access training at any time, making it more learner-centric and helping employees in workplaces with small headcounts manage their training to match the ebbs and flows of the business. The added benefit is that where an element is not understood, employees can revisit it, pause and seek out explanation elsewhere or ask for help in a way that is sometimes lacking in face-to-face environments delivered to larger audiences.
- » **Delivering recognition and credibility:** many online learning courses incorporate a certification process that allows individuals and employers alike to recognise the investment and build confidence that the training is of a high-quality. This can help motivate and incentivise workers to learn by identifying a tangible and transferable learning outcome that can contribute to their professional development.
- » **Getting down to specifics:** Every business is different and, cost aside, this is why some smaller businesses prefer informal in-house training to off-the-shelf offers which can be overly generic and broad in nature. Digital training, due to its sheer scale, can cater to every need – provided you know where to look. Helping businesses build bite-size curricula that speak to their needs creates a much more personal and customizable approach to learning. Despite these benefits many SME employers are unaware of these more innovative forms of training and lack the support necessary to invest.

Recommendation four

Help SMEs to invest in digital reskilling through a Digital Skills Tax Credit

The Help to Grow scheme should now be matched with a skills tax credit to incentivise SMEs to invest in training their workforce. This could be modelled on other tax credits for SMEs such as the existing relief for R&D investment.

Bringing apprenticeship opportunities to a new audience with Microsoft



20-year-old Elliott Garwood was struggling to find the right apprenticeship but found the perfect role at change management business and Microsoft partner, Hable, using [Microsoft's Apprenticeship Connector](#). "Apprenticeship pathways are not easy to find or navigate and you can be put off in thinking a digital apprenticeship is not for you," says Garwood.

"I believe COVID-19 will open this route up to a lot more people – the team works fully online and the flexible training means I have been able to move cities while earning and learning. I have also quickly realised that I am working for a company that

listens to my ideas and I feel I have a role to play in shaping their future, which may not have been my experience if I had taken a different route."

Microsoft launched its online apprenticeship platform to connect more jobseekers with companies who need apprentices. A partnership between GetMyFirstJob and Microsoft, it aims to simplify the apprenticeship process by listing vacancies across Microsoft's network of partners and customers. The Connector also helps Microsoft's partners and customers promote their apprentice vacancies to a larger and more diverse range of candidates.

"Digital apprenticeships are one of the best routes to well-paid careers in businesses of all types, not just in tech," says Clare Barclay, CEO, Microsoft UK. "Yet even in the current jobs market, the reality is there are many vacancies going unfilled."

Small businesses in particular are struggling to fill apprenticeship vacancies, and Sean O'Shea, Managing Director of Hable, believes the Connector will put him in touch with the talent he is looking for. "We were in a fortunate position that our business was thriving during the pandemic. Despite our eagerness to help people start their career, we struggled to promote and reach candidates. We really value the fresh perspective apprentices bring to our business and, backed by the Microsoft brand, the Apprenticeship Connector will fast track the apprenticeship process to find talent to build our workforce and transform the future of work."

Developing an inclusive and diverse pipeline of new cloud talent with AWS re/Start

Amazon Web Services (AWS) first launched AWS re/Start in the UK in January 2017, and works with local collaborating organisations to deliver the programme in the UK and around the world.

AWS re/Start is a skills development and job training programme that aims to build an inclusive and diverse global pipeline of new cloud talent. The programme prepares learners from unemployed and underemployed populations for entry-level careers in the cloud – at no cost to the learner. The full time, skills-based training programme covers fundamental and transferable AWS Cloud skills alongside practical career skills, and helps to prepare participants for entry-level cloud roles such as cloud operations, site reliability, infrastructure support, and technical-adjacent business support functions. On completion of the programme, graduates are connected with potential employers.

To date, numerous organisations have hired AWS re/Start graduates such as: Sage, Direct Line, The Funding Circle, Zopa, Equal Experts, Cloudreach, Splunk, Rackspace, Rebura, KPMG, Centrica Hive, Scape, Onfido, Daemon Solutions, Bytes, Financial Times, Cancer Research UK, Infinity Works, Dunelm, Sony PlayStation, PA Consulting, SteamHaus, ECS, TransACT, Accenture, and Sainsbury's.

AWS re/Start graduate, Charlotte, is just one example of this. After being furloughed from her job as a Shift Manager at a fast food retail outlet during the COVID-19 pandemic, Charlotte decided to look for courses to keep herself busy. She had an interest in technology and was keen to learn coding but wasn't sure what skills were needed to launch a career in tech. After graduating from AWS re/Start, Charlotte

posted her certificate on LinkedIn and Twitter and was noticed by a hiring manager at cloud data integration platform, Matillion, who contacted her AWS re/Start mentor to arrange an interview. She is now an Associate Solution Engineer at Matillion where she uses the skills she learned during the AWS re/Start programme, for example, Linux, SQL and Python.

"AWS re/Start has really changed my life and made me so much happier. Last year, while I was on furlough, I felt lost in what to do with my life. The programme really put me back on track. One word to describe the AWS re/Start programme is difficult but also transformative. I felt I really transformed my life in the 12 weeks, and became confident in myself again. My family were so happy for me and proud of my achievements."

Cloud computing is one of the most significant technological advances of our time, and it has become vital for businesses in the UK and Ireland. It is no surprise that, [according to LinkedIn](#), cloud computing skills were among the top three most in-demand skills for employers in the past three years – particularly in the context of COVID-19, which prompted businesses to move online and led to soaring demand for cloud skills and training.

A report published by economic consultancy Public First reveals that [companies running on the cloud are nearly three times as likely to be growing over 5% a year compared to those not on the cloud](#). For example, boosting cloud prevalence in North East England to match London could help boost productivity and wages by 2.6% - [the equivalent to £1.4 billion, or three years' of pay rises in one go](#).

5. Enable more SMEs to benefit from the Apprenticeship Levy

Even with the incentives mentioned in the previous chapter, it will be crucial to support SMEs to understand what training is available. We have already explored how training online through trusted, quality vendors who provide certification and have a proven track record is particularly useful for SMEs looking to digitise. However, whilst these industry certifications are well understood within the tech sector there is less awareness in other sectors of the economy.

The Apprenticeship Levy is an important part of the changes to raise apprenticeship quality and supports techUK members to make a long-term and sustainable investment in training.

Although the number of new apprenticeships may be down, for the tech sector we continue to see an increase. These longer-term initiatives have already proved to be effective at moving the dial on investment in skills.

Apprenticeship Levy payers should be given greater flexibility to transfer funds down their ecosystems to support the digital transformation of their clients, partners and the communities they are based in.”



Enabling more SMEs to invest in skills

The Apprenticeship Levy, for example, has been successful at increasing the number of digital apprentices (up from 3% to 6% from 16/17 to 20/21 and approaching one quarter of all starts at Level 4 now), bucking an otherwise disappointing trend of falling apprenticeship starts. Engineering and Manufacturing Technologies and ICT apprenticeships continue to remain in the top six sector areas of apprenticeship starts in England, [with 81,000 starts in 2018](#).

As we look to the future of apprenticeships and the use of the levy, we must ensure that it works for all employers and supports the needs of the current and future workforce. Given the success of digital apprenticeships, there is a need to pivot more people currently in the workforce to digital and provide entry points for young people who have been hit hardest by the pandemic. The Taskforce is aware that Government is testing flexi-job apprenticeships with a focus on the creative and construction sectors; there may be an argument to expand this to the tech sector, but for now the Taskforce believes small changes to the Apprenticeship Levy could have significant positive outcomes and widen the market recognition of apprenticeships.

Evolving apprenticeships

Apprenticeship Levy payers should be given greater flexibility to transfer funds down their ecosystems to support the digital transformation of their clients, partners and the communities they are based in, by allowing them to take on digital apprenticeships. Currently, levy-paying employers can only transfer a maximum amount of 25% of their annual funds. In

2019/20 alone, £330m of levy funds went unspent. By allowing levy payers to transfer more of their unspent funds to their ecosystem, we can support more apprentices to enter the SME community.

Accelerating impact

Many employers value being able to front load occupational skills early in an apprenticeship aligned to the standard. This approach works particularly well in digital, giving the apprentice critical technical skills to apply to their jobs and deliver real impact quickly.

At the moment employers find it difficult to negotiate with training providers to deliver this training due to the way that apprenticeship funding is profiled. The provider carries all the risk with this employer-led model as they only get paid a flat monthly fee based on the cost of the apprenticeship. It is not encouraging the kinds of innovative apprenticeship delivery that adds more value to the apprentice and the employer. By using this model and not allowing employers and providers to design front-loaded⁸ “bootcamp skills training” with the commitment to complete the apprenticeship, we are stunting growth and not encouraging employers to use apprenticeships to fill the urgent skills they have.

The recommendation to the Government is to explore the opportunity to pay providers based on the training actually delivered each month, over the lifetime of the apprenticeship, and give flexibility on ILR submissions to reflect this different method. This is something that would not impact the quality of apprenticeships, but in fact enhance the apprenticeship brand and respond to an urgent need that employers have.

⁸ Reference to front-loading was made in the Spending Review in November 2020: “From April 2021 allowing employers in construction, followed by health and social care, to front-load training for certain apprenticeship standards. The government will explore whether this offer can also be made available in other sectors.” [Spending Review 2020 documents - GOV.UK](#)

Recommendation five

Enable more SMEs to benefit from the Apprenticeship Levy

Employers should be further encouraged to invest in skills to maximise the number of apprenticeships and the effectiveness of the levy. This should include increasing the percentage of unspent funds from levy-payers that can be transferred to smaller companies in their ecosystem and supply chain.

BT's partnership with Exeter University powers a pipeline of talent



Degree Apprenticeships offer an [innovative and cost-effective way of attracting, training and retaining high-calibre employees and graduates to your business](#). Any organisation that pays the apprenticeship levy is able to hire an apprentice to recoup the investment already made. BT has been attracting high calibre digital apprentices after partnering with the University of Exeter on the delivery of Degree Apprenticeships.

"As an employer, we pay a lot in levy funds each year and it is in our interest to work out how best to use this money," explains Carol Fletcher, Head of Academic and Research Partnerships at BT.

"Apprenticeships are a really exciting opportunity for us to mold apprentices into what best suits our business needs, and a great opportunity for the apprentice to earn valuable industry experience while gaining a degree."

Carol chose to partner with the University of Exeter – a Russell group institution already delivering the programme to many different companies from a variety of industries. BT has recruited apprentices for two consecutive years to the four-year programme, with a cohort spread across two departments.

However, it hasn't always been plain sailing. Carol explained: "Being a manager at BT during the running of the programme has been a learning experience, particularly as we weren't used to employing 18-year olds. But the relationship with Exeter has been fantastic. We know that we can always email or phone the Degree Apprenticeships team and they will respond promptly to support us in overcoming any problems."

The partnership is developing and BT intends to recruit more apprentices each year. In conjunction with the apprenticeship programme BT has also developed research relationships, and has PhD students with Exeter. "We are involved in the Level 7 Data Science trailblazer and would be keen to develop our relationship with Exeter in this area. In general, we are interested in the variety of potential business partnership offerings that we can develop in the future with Exeter, not just apprenticeships."

6. Ensure education providers focus on job readiness

We have already established that there is great demand from individuals for training that will open up opportunities within the digital technology sector. However, to ensure that training leads to good employment outcomes we need to ensure that courses are developed and delivered with a clear focus on the job-readiness of learners.



Increasing employer confidence that quality training delivers on job-readiness

The Lifetime Skills Guarantee sets out the Government's commitment to invest in the skills that lead to well-paid jobs. It is essential that in implementing this commitment we learn the lessons from the past. In 2016, against a backdrop of great demand for digital skills, the Shadbolt Review was commissioned to investigate the particularly low employment rates of computer science graduates⁹. The report highlighted the benefit of engagement between business/industry and the HE sector, finding that "95% of respondents agreed that engagement leads to enhanced employability" and that "bridging the two worlds is part of the role of accrediting bodies." This led to a recommendation that employers and the HE sector should, "strengthen the current accreditation framework so that it's more focused on outcomes and links more closely with employability".

The Government has subsequently demonstrated the importance of bringing employers and educators together more closely through its fresh approach to digital bootcamps which carry a strong focus on employer engagement and job-related outcomes. This approach is most welcomed and should be scaled-up based on success.

There is an opportunity to take this further in a way that would use accreditation to enable a more diverse range of courses and programmes to be developed and delivered with business and industry engagement that delivers on job-readiness. This should mean that courses deliver good employment outcomes for learners.

A tried and tested accreditation solution

The Tech Industry Gold industry accreditation is the result of a unique collaboration between universities and industry, successfully addressing the low employment rates of computer science graduates. Employers and HEIs work together to co-create curricula that develop the capabilities most sought after in the workplace, covering technical, business, project and professional skills. Employers also remain engaged with students through the delivery of the programmes. The results from this collaboration have been exceptional, reducing unemployment rates from 8% to 3% when compared to traditional computer science degrees, whilst also encouraging greater diversity, doubling the proportion of females on programmes with 37% of graduates identifying as BAME.

Gold-standard apprenticeships

The same employer and university collaboration sits behind Tech Industry Gold accredited digital degree apprenticeship programmes, including the highly successful programme at Manchester Metropolitan University. This programme boasts degree apprentice graduates earning £18,000 more than the average computing graduate salary just one year after graduation, [benefiting students from hugely diverse backgrounds and greatly enhancing social mobility](#).

⁹ "Some felt that their technical skills could have been more relevant (in terms of particular coding or language development) and had become outdated in a fast-paced sector." [Shadbolt review of computer sciences degree accreditation and graduate employability](#) (2016).

Ensuring that public investment in training leads to employment and jobs

The experience of Tech Industry Gold shows that industry-led accreditation can act as a clear signpost to both employers and learners that courses and programmes are clearly focused on employment outcomes. Such industry-led accreditation has the potential to operate more broadly across the training landscape, especially where industry is not directly involved in the delivery. However, the extension of accreditation would need to be carefully developed to enable flexibility and agility so that courses stay up to date with the ever-changing tech landscape.

The aim should not be to add bureaucracy to what already works, such as those programmes already offering well established and in-demand industry certifications. However, a broader approach to accreditation would galvanise the industry and education providers to ensure that all government funded courses and programmes can demonstrate a strong grounding in industry and business requirements. Ultimately, we have to ensure that public investment in training leads to employment and jobs.

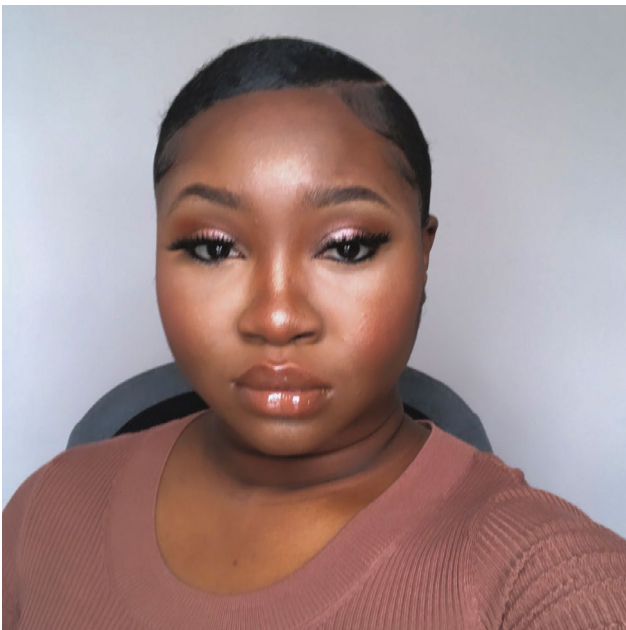
“There is an opportunity to use accreditation to enable a more diverse range of courses and programmes to be developed and delivered with business and industry engagement that delivers on job-readiness.”

Recommendation six

Ensure education providers focus on job readiness

Education and learning providers should work more closely with employers to understand and deliver programmes that develop the skill sets that employers need. Industry-led accreditation focused on job-readiness would act as a positive signpost to build employer and learner confidence in a market with more diverse provision.

Cinderella combines caring responsibilities with learning thanks to a degree apprenticeship



After completing her A levels, Cinderella looked at various routes to continue her higher education including full-time degrees and degree apprenticeships. However, she faced resistance from her family to consider the apprenticeship route as they felt that a full-time degree was the only option.

As her mother was seriously ill, Cinderella decided to look at full-time degree options closer to home. Cinderella embarked on an electronics and engineering degree but felt that the degree wasn't right for her and after her mother died, Cinderella became a full-time carer to her siblings and put her studies on hold.

Over time, Cinderella decided to review her study options and resonated with the degree apprenticeship route. She needed to earn a salary, and this seemed like a viable option. "I kept hearing more and more about degree apprenticeships and liked the idea of learning while earning. By this point, after a lot of searching, I'd set my heart on doing software engineering."

Cinderella is now encouraging her younger siblings to pursue a degree apprenticeship and they are all looking forward to the opportunity. The Tech Industry Gold degree apprenticeship opportunity at Fujitsu and studying at Manchester Metropolitan University has provided Cinderella with an abundance of work prospects and offers excellence in academia.

Cinderella is now a Software Engineer studying for a Tech Industry Gold Digital Degree Apprenticeship at Manchester Metropolitan University.

AWS re/Start expands to 'level up' cloud skills across UK

AWS is expanding its [cloud computing skills development and job training programme, AWS re/Start, across the UK](#). Supported by professional mentors and AWS accredited instructors, learners will build Linux, Python, networking, security, and relational database skills through real-world-scenario-based learning, labs, and coursework. The programme also prepares and covers the cost for participants to take the AWS Certified Cloud Practitioner exam, validating their cloud skills with an industry-recognised credential. This training helps to prepare participants for entry-level cloud roles such as cloud operations, site reliability, infrastructure support, and technical-adjacent business support functions.

"AWS re/Start is more than a training programme – it's also a 'change your life' programme," explains Tejas Vashi, Global Leader for AWS re/Start. "We work with populations who are unemployed, or underemployed, reskilling them and connecting them to real job opportunities. Our aim is to reach different groups who wouldn't otherwise have a pathway to technology careers."

Janine O'Connor is one example of the programme's impact. After helping young people find jobs, she found herself unemployed. She was interested in launching a career in technology and working towards becoming a software engineer. After completing the AWS re/Start programme in London, she is now an Associate Consultant at ECS helping to develop contact centres in the cloud using AWS.

The programme also benefits employers by expanding the availability of trained staff. For example, Michael Fordham, UK Platform Capability Lead at Manchester-based technology consultancy BJSS, has overseen the recruitment and development of graduates from AWS re/Start.

"The alumni that we have recruited from the AWS re/Start programme are delivering solutions for our clients, and they contribute significantly to our organisation internally," Michael explains. "It's a testament to these recruits that we're expanding the idea and looking at other ways to attract more diverse candidates, particularly from disadvantaged backgrounds."

Delivering change at scale

7. Develop an online 'Digital Skills Toolkit 2.0'

For too many, the digital technology sector and digital tech roles remain incomprehensible. People write themselves out of the picture before they even get started because of misconceptions about what a role in digital technology is and what is required to get there. With a significant rise in unemployment, now is the time to make a concerted effort to demystify tech and signpost opportunities and training. We know for most people time is a significant investment and therefore it is crucial that investing in learning is shown as time well-spent.



“A big part of meeting the challenge is helping people find and understand what existing digital skills resources are already out there as well as how to access them, and, importantly, what the relevance of the learning from those resources can be in a business setting,” says Matt Houlihan, Cisco.

Research for the Department for Education identified that ‘time’ was the most commonly cited barrier to engaging in learning, selected by [52% of respondents](#). Therefore, plotting out clear pathways is absolutely crucial if we want to encourage individuals to invest their time in upskilling or retraining. Demonstrating the clear connection between doing ‘z’ and becoming more eligible for ‘x’ or ‘y’ role is key.

The UK already has a strong foundation

The UK Government has already stepped into this space with the creation of the [Department for Education’s Skills Toolkit](#) - launched at the height of the COVID-19 lockdown in April 2020. This resource helped signpost individuals to quality resources available online in core areas. The Government was implicitly nudging individuals to specific core skills that it had identified as valuable. As a trusted resource, this message was heard and translated into action.

The appetite for this type of intervention was evidenced by the volume of uptake, with tens of thousands of interactions in the first month alone. This is despite the fact that the Skills Toolkit is a fairly rudimentary resource – for example, it does not allow for self-assessment of an individual’s current skill level or an explanation of what digital jobs might become more accessible after the completion of these courses. Nevertheless, the Skills Toolkit has been a huge success, with Taskforce members seeing a surge in participation. For example, Cisco’s Programming Essentials in Python Networking Academy had 17,811 registrations and 13,870 people following through to participate in the course.

The Taskforce stands ready to work with the Government to iterate on its past success and build a more interactive and tailored experience to signpost users to high-quality, easy-to-access material for digital reskilling and training.

Consolidate into a Skills Toolkit 2.0

The [UK Government is uniquely positioned to create a Digital Skills Toolkit 2.0](#) between citizens interested in entering the digital workforce, the training material and available roles. The need is for a solution that not only supports retraining of the technically savvy but is also able to map out a tailored learning journey for those wishing to enter the market but who may need significantly more support and guidance.

The Government has the credibility, profile, and network to catalyse the creation of a trusted solution positioned at the centre of the digital skills ecosystem. It is able to take a strategic view, invest over an extended period, and create and maintain a gold standard for assessing human capabilities based upon the consolidation of existing frameworks, trusted by all parties in the digital marketplace.

The proposed solution: toolkit 2.0 for a future-proof workforce

techUK has [outlined how such a toolkit could work with Deloitte](#). The creation of a toolkit tailored to the individual – backed by Government, would deliver enormous benefits for employers and individuals alike. Individual learners would feel more confident in investing their time and energy in reskilling on a tailored pathway laid down by a toolkit backed by the Government.

Employers, meanwhile, would benefit not only from a larger pool to recruit from but an ability to easily identify individuals with the skills (both human and technical) they are looking for from cohorts passing through the toolkit. Government's involvement in building and maintaining such a toolkit would also allow it to leverage a significant quantity of data to develop an analytical understanding of the future digital skills pipeline enabling Government to better target interventions moving forward.

By creating a front-end to the toolkit that assesses transferable capabilities such as 'attention to detail' or 'problem solving', citizens accessing the toolkit could be presented with a digital learning pathway made up of training material that best suited their personal profile, ensuring that the right person learned the right skills.

The [Skills Toolkit](#) is the starting point for the evolution towards Skills Toolkit 2.0. Early evaluation of the Skills Toolkit suggests that much of its success lies in its simplicity, and the toolkit proposed here builds on that design principle with the addition of surfacing earlier on the opportunities various pathways open up to the user based on their personal assessment.

techUK does not propose this toolkit to be a holistic solution to the work Government will have to undertake to get the nation back to work post-COVID. However, we believe this solution is appropriate for a specific demographic who are motivated to learn and looking to reskill but not comfortable navigating the digital landscape.

There is a huge volume of digital training available with some excellent work being done by organisations such as the Institute of Coding and The Chartered Institute for IT (BCS), complementing training material provided by businesses such as BT, Google, Cisco, IBM and others. However, the sheer volume of training can be a barrier to developing digital skills in itself.

techUK members already offer a wide variety of online and in-person training, from basic digital skills right through to courses on the latest technological developments. We need to find a way to bring these initiatives together and increase the confidence people have investing their time in training opportunities.

Recommendation seven

Develop an online 'Digital Skills Toolkit 2.0' to help people navigate to digital skills and careers

Building on the success of the Skills Toolkit, an end-to-end 'Digital Skills Toolkit 2.0' should be developed to make digital opportunities and pathways more transparent and accessible to more people. It would enable people across all areas of society to understand the digital job opportunities available to them and the skills pathways to access those jobs.

Such a toolkit would encompass many of the other recommendations in this report. It would help support a more responsive and dynamic labour market that would enable more people from diverse backgrounds to participate and thrive in our modern digital economy.



As the UK begins to reopen its doors, Google Career Certificates in partnership with the DWP, creates opportunities for jobseekers to grow

Google has launched the UK-wide Google Career Certificates in partnership with the Department for Work and Pensions (DWP), available on Coursera.org. With the opportunity to explore new freedoms being given each week, many people through both necessity and personal drive are looking for ways to grow their skill set to prepare themselves for the jobs of the present and the future.

To support the desire and need to upskill, 9,500 Google Career Certificate scholarships will be distributed in the UK through Government partnerships with the Department for Work and Pensions (9,000) and Camden Council (500). In addition, Google.org is providing grant funding to The Prince's Trust and INCO Academy to ensure that an additional 1,500 young people from underrepresented and disadvantaged communities across the UK can take advantage of the upskilling opportunity.

Claimants of Universal Credit will be able to access the scholarships via a referral from their work coach, meaning that the offer is available across the UK through the Government's network of jobcentres. Work coaches will be empowered to

use their knowledge and judgement to decide if this is an appropriate fit for the claimants they support and will be able to combine these scholarships with other tailored support within the Universal Credit system.

Those who sign up to Google Career Certificates can select any number of the four courses available to help grow the necessary skills to support a career in technology and IT. The courses which are now live to applicants include IT Support, Data Analyst, Project Manager and UX Designer. They can be completed in three to five weeks if done full time, although typically learners take up to six months to complete. Recognised by industry experts and employers, including Google, they do not require relevant experience or a degree – offering a diverse range of participants the skills they need to access fulfilling careers in technology.

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Conclusion

Let's work together to make it happen

There is a significant opportunity in front of us. If we act now, we can make a positive difference – not only to the career prospects of millions of people, but also to the wider UK economy – helping companies, big and small, build or buy the skills they need to empower their digital journeys in preparation for a future that is fast approaching.

If we are to keep innovating, evolving and growing at the current pace, we need to bring people along with us. The world of work is changing fast and so too are the skills requirements. As an industry we have a responsibility to equip people with the skills they need to thrive in a future shaped by technology.

We believe that through the conversations we have had, filled with first-hand experience and in-depth industry know-how, we have developed a series of meaningful recommendations. These action points, designed to support both learners and employers, can help us to meet the challenges ahead.

Collaboration is key. The Fast Forward for Digital Jobs Taskforce itself has shown us what we can achieve if we work together. Now we need to scale our response and bring in stakeholders across the whole technology landscape – from companies to skills providers and educators to government.

Together we can equip people with the skills they, and the UK's fast-growing technology companies, need to thrive in the future and for what comes next.

About techUK

techUK is a membership organisation that brings together people, companies and organisations to realise the positive outcomes of what digital technology can achieve. We collaborate across business, Government and stakeholders to fulfil the potential of technology to deliver a stronger society and more sustainable future. By providing expertise and insight, we support our members, partners and stakeholders as they prepare the UK for what comes next in a constantly changing world.



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