MAKE uk
The Manufacturers' Organisation

SKILLS FOR SUCCESS:

THE REFORMS ESSENTIAL TO OUR ECONOMIC FUTURE

The report of the Make UK Industrial Strategy Skills Commission

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Introduction

The UK is in the midst of an economic and productivity crisis. Since the turn of the century, our economy has underperformed while over the last decade it had struggled to regain its pre-financial crisis momentum. Industry is plagued by sluggish growth, stagnant wages, and a widening productivity gap. Despite great efforts, growth has been weak, with the UK failing to reach the heights of other major economies.

Brexit added complexity, triggered uncertainty, and disrupted trade and investment. The COVID-19 pandemic caused a sharp contraction, widespread business closures, long-lasting disruptions to the labour market and the supply chains manufacturing businesses rely on. The result is an economy caught in a cycle of underperformance, where our potential is under realised, and opportunities are passing us by.

The most important asset to any economy is its people. Britain's economic and productivity crisis can only be solved if we have a highly skilled workforce in place, embedded in the latest technologies and equipped with the skills to use them effectively. Yet, there are currently 55,000 unfilled long-term vacancies in the UK manufacturing sector. The failure to fix this growing skills gap is costing the economy £6bn in lost output each year. The proposals in this report would pay for themselves if we fix this skills gap by enabling industry to recruit and train the people they need to fill long-term vacancies. With a robust industrial strategy central to the new government's growth plan, however, multiple obstacles remain to deliver the UK's economic and industrial success.

Foremost among these is the 'perfect storm' facing the manufacturing workforce. Increased early retirement, an ageing workforce, and elevated occupational ill-health have hit our sector hard, alongside an alarming drop in the number of apprenticeship starts, down 42% since the Apprenticeship Levy was introduced seven years ago.

This has particularly impacted SMEs' ability to recruit, retain and train the people they need. The result is that demand for skilled workers has increased at the very same time as the pipeline for workers, teachers, and talent, is diminishing. The sector's skills shortage is now a critical issue for many companies, not just affecting their growth, but their ability to maintain daily operations and to fulfil contracts with customers.

Added to this, technological advances are transforming our economy and society – but again British industry is lagging behind its international competitors. The Prime Minister has committed to making the UK the world leader in the adoption of Artificial Intelligence. From supporting small businesses with their record-keeping and data analytics, to automating and speeding up production processes for large multi-national corporations, this Fourth Industrial Revolution offers huge opportunities but at the moment the UK lags far behind our international competitors. The UK has the sixth largest economy in the world but we are languishing at 24th in the world industrial robot density rankings, in part, because we lack the workforce skills to adopt and apply these cutting edge technologies. The lesson from previous technological revolutions is the importance of enabling people to re-skill and upskill in order to succeed in the future economy.

As these advances in technology begin to alter businesses and the world of work, adapting our education and skills system to meet our future industrial needs will be of vital importance.

A successful industrial strategy therefore hinges on the skills of the workforce who deliver it. Government, industry, providers, and learners must work together to deliver a dynamic, knowledgeable and experienced workforce, equipped with the skills demanded by industry both now and into the future. This report proposes the immediate solutions needed in the short to medium term to fix the foundations of the skills system, enhance the pipeline of young talent and create a better approach to upskilling and retraining.

We need to take a long-term strategic view of our skills system. Critical to this is the development of an ecosystem of educators and training providers necessary to deliver regional support in a way that responds to local employer needs. There are many different models to do this but geographic clustering of training providers working closely with the manufacturers in their region has been proven to deliver the highly skilled workforces needed to boost business and grow the economy.

In this report, our recommendations are split into two categories: immediate actions which will have an impact in the short term, and longer-term issues which will require further work and collaboration between industry, education and Government to address. Both are important and must be addressed.

Summary of Immediate Recommendations

Government and industry should agree a Skills Covenant, committing to an increased investment on both sides in training and upskilling the existing and future workforce. This should include urgent short-term measures such as:

FIXING THE FOUNDATIONS

Ringfence skills funding

- All revenue from the Growth and Skills Levy should be ringfenced for investment in skills, including the £800 million of employer contributions currently spent by HM Treasury on other things.
- Government should also ensure that revenue from the Immigration Skills Charge – which exceeded £650 million in 2022/23 – is reserved for investment in skills provision as was intended when the charge was first introduced.

Support further education college and independent training providers

- The Government should legislate to revise the maximum funding band up to £35,000 to make more costly courses such as those in engineering and manufacturing more financially viable for providers to offer.
- Skills England should immediately revise the funding band review process to ensure more regular reviews across all levels, so that the system responds rapidly so that sudden changes in delivery costs are reflected in funding settlements.
- Rules should be amended to permit training providers to purchase capital equipment, making it easier to offer courses in capital-intensive subjects such as engineering and manufacturing.
- The Government should expand existing incentives for teacher training by focusing on bursaries for training of specialist FE lecturers in priority and shortage subject areas to ensure there are enough trainers to teach the future workforce.
- Regional authorities should introduce local workforce industry exchanges to help employers to second staff to providers to support the development of young people.

BOOSTING HIGH-QUALITY TRAINING FOR YOUNG PEOPLE

More effective careers information, advice and guidance (IAG)

- The Government should commission its proposed new jobs and careers service to work with local government, employers and education providers to develop regional, sector-based IAG to support local industrial strategies, supporting both young people and working-age adults.
- The Department for Education should take a more prominent role in co-ordinating and supporting industry-led careers IAG for young people and engagement with schools.
- Following the Curriculum and Assessment Review, the Government should ensure that careers education is embedded across the curriculum.
- Employers should commit to using the Careers and Enterprise Company's Employer Standards to improve their outreach and engagement with schools and young people.

Expand the University Technical College model and preserve academy freedoms to offer more technical routes in pre-16 education and increase the whole sector's talent pipeline

- The UTC Sleeve model should be supported to embed technical and employability skills across the pre-16 curriculum.
- The Government should reconsider its approach in the Children's Wellbeing and Schools Bill to restricting academy freedoms, which risk preventing innovative approaches from schools to focusing on the application of skills and knowledge; it will ensure that neither the legislation nor the Curriculum and Assessment Review remove or restrict the ability of employers to shape pupils' access to technical options and employability skills in school.

ENABLING EMPLOYER INVESTMENT IN THE SKILLS THEY NEED TO GROW

Map the skills needs for industrial strategy growth sectors

- Skills England, the Migration Advisory Committee and the Industrial Strategy Council should produce in-depth labour market information and forecasting of skills needs which can be used to inform policy-making and direct investment in training to support the industrial strategy.

Incorporate Skills Bootcamps and Higher Technical Qualifications into the Growth and Skills Levy

- As a starting point for including a wider range of training in the Growth and Skills Levy that is focused on pathways for upskilling and retraining, the Government should include employer contributions to Skills Bootcamps and HTQs in the levy.

Enhance tax relief for training in targeted growth sector

- The Government should evaluate the cost, use and impact of the existing 100% Corporation Tax deduction for work-related training expenses.
- There should be an enhanced rate of tax relief for investment in accredited skills training for existing workers relevant to the sectors and occupations identified by Skills England, Migration Advisory Committee and Industrial Strategy Skills Council.

Make UK to explore developmentof an engineering and manufacturing skills passport

- Make UK will lead work with other sector organisations and skills groups – including Enginuity – to explore the potential to develop a sector skills passport, with a view to supporting employer investment in skills training currently outside of directly-funded government programmes.
- This could follow existing examples of successful industry-led initiatives to develop digital training records which follow employees between companies, and can be checked and added to by their employer as they complete additional accredited training.
- The purpose of the passport would be to enable individuals to engage in lifelong learning and have a record of transferable skills at a time where they are unlikely to stay with one employer/sector for their whole working life.

ADDRESSING THE LONGER-TERM STRATEGIC ISSUES:

In order to ensure that major long-term issues in the skills system are fully addressed, work will continue beyond the scope of the immediate recommendations set out above. Make UK will lead a stakeholder group tasked with developing further solutions in the areas listed below.

Evaluating the opportunities and skills implications of AI and wider technological change

- Make UK will convene a stakeholder working group to consider the full implications and make recommendations on how the skills system needs to be adapted to incorporate flexible learning options for AI skills, equipping young people and adults with the skills to use AI tools effectively, and the wider impact on the labour market and future of work in the UK.
- We would envisage bringing together people from industry, Government, education and others who have a strong interest in engineering and manufacturing for the future prosperity of the UK.

Restructuring careers education, information, advice and guidance

- Careers education must present young people with up-to-date information about the exciting opportunities which exist, rather than outmoded models and perceptions of engineering and manufacturing. Make UK will work with organisations like the Gatsby Charitable Foundation and sector bodies like Enginuity, EngineeringUK and the Royal Academy of Engineering to make further recommendations on improving careers IAG, employer engagement with schools, and legal protection for engineering occupation titles.
- We are conscious that there is already a lot of well-intentioned work taking place in this space but it is not well coordinated. Our goal would be to develop a workable plan for the future with strong involvement and support from industry.

Overhauling skills training for the adult workforce

- Make UK will lead further work to explore and develop clearer, more consistent pathways to upskilling and retraining for existing workers. This will include considering scope for further flexibility in models of apprenticeship training to ensure there are suitable options for working age adults in employment to access the right training for them and their employer.
- Ultimately, this should be focused on establishing and embedding a culture of lifelong learning in the UK with a system that delivers high-quality, flexible options for upskilling and retraining.

Redesigning models of education delivery

- Following the examples of good practice seen by the Commission, Make UK will lead on making further recommendations on the future organisation, structure and governance of FE colleges and other education institutions to ensure they are capable of delivering the training needed by employers in different parts of the country.
- This could include considering federated or ‘hub and spoke’ models of FE colleges, and the role of higher education institutions and the quality and capacity of their employer engagement.

A Skills Covenant for Manufacturing

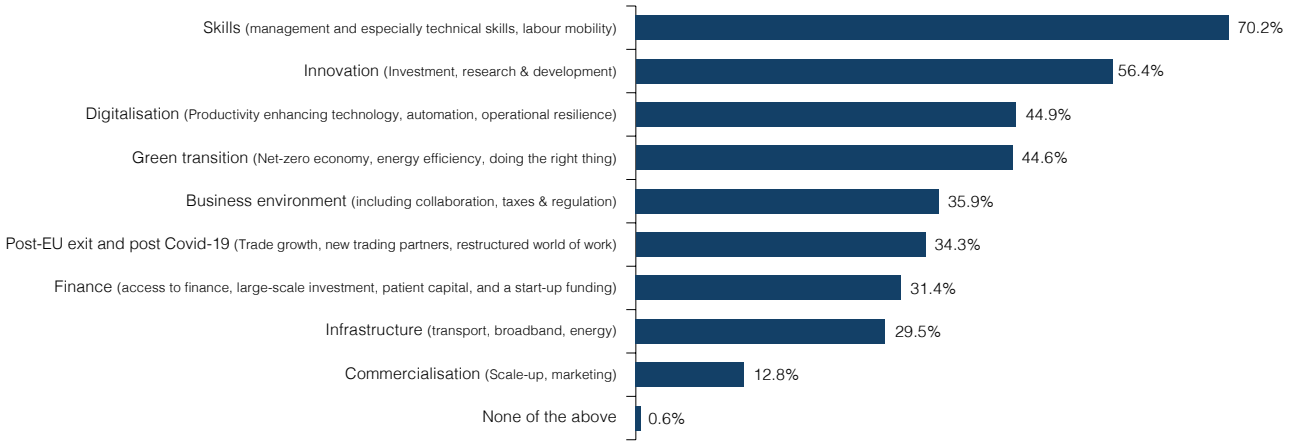
The world of manufacturing is changing. Across the UK, thousands of businesses are taking advantage of increasing digitalisation and AI adoption to adapt their processes to meet net zero requirements and increase productivity. The Government's announcement of an industrial strategy has the potential to create greater confidence in long term investment, only accelerating the transformation of manufacturing. However, for the sector to truly deliver economic and sector growth, there must be an equivalent transformation in skills provision and development[1].

Government investment in skills is down by £1 billion since 2010, despite the need for skills in manufacturing and sectors across the countries ever increasing. This has undermined employer confidence in the skills system and led to an environment in which provision is struggling to meet business needs, despite constant efforts by previous governments to create an 'employer-led system' for skills.

The goals of the Government's industrial strategy can only be met by reversing the long-run decline in both public and employer investment in skills.

The UK must move away from a reactive approach to skills. An approach that is reliant on responding to demand when technology and industry is already mature has resulted in the UK playing catch-up to competitor nations that have already invested in skills while developing technology and industrial policy. Continuing down this path compels a continuation of our reliance on foreign labour to fill our skills shortage vacancies and makes the UK less attractive to foreign investment and less capable of self-determined growth.

Chart 1: What should the core focus on an industrial strategy be?



Source: Make UK, Industrial Strategy Survey, 2023

[1]Make UK and the TUC, The Skills Needed for an Industrial Strategy, 2024

Together, industry, Government, providers, trade unions and learners must take ownership of the skills system. We know that the foundation of any successful Industrial Strategy is people – what we must acknowledge is that only through collaboration, openness and shared responsibility for planning for, recruiting and upskilling the workers of tomorrow can we ensure its successful implementation.

We cannot achieve success without greater investment from both Government and businesses – but investment must be targeted in the right way, at the right time and to the right people.

Make UK's Industrial Strategy Skills Commission has been assembled to sow the seeds of a skills transformation, work which will underpin and define a new Industrial Strategy for the UK. Building on the Government's *Invest 2035* industrial strategy green paper, which identified key growth sectors such as Advanced Manufacturing and Clean Energy Industries, the Commission has developed proposals to support these sectors, which will also aid both overlooked and emerging areas of manufacturing, unaccounted for in the Government's initial assessment.

Chief among these is a Skills Covenant between Government and industry. For years, manufacturers have been promised that they would receive more than they contribute to the skills system, and, for years, they have received even less than equal. Thus, in exchange for greater investment from business, there must be equal (or greater than equal) investment as consideration by Government, conveyed with an understanding of not only the short term changes required to fill skills gaps now, but the long term commitments required to deliver a successful industrial strategy built for the twin transition, with people at its heart.

To restore much worn down industry confidence, initial steps must be made by Government to restore belief in Government's promise of parity of esteem between vocational and academic training. This is the starting point for the recommendations in this report – ensuring that educational pathways have sufficient focus on skills and the application of knowledge, and technical routes are available and well-supported in both the pre-16 and post-16 education system.

Beginning with reform to the Apprenticeship (soon to be Growth and Skills) Levy as an immediate priority, the Commission has recommended increased flexibility, encompassing expanding use of funding for pathways in upskilling and retraining of existing workers. This, alongside use of apprenticeship funding towards apprentice wages (corresponding to time spent completing off-the-job training), would make an excellent first step in incentivising employer investment into the skills system.

However, more can be done. For providers, Government adaptation of apprenticeship funding rules to include capital expenditure as an eligible cost and increasing funding bands will support providers to continue to offer valuable, high-quality engineering and manufacturing courses across the country. This will help to create more training opportunities at levels 2 and 3, the most crucial routes for young people entering the sector, whilst simultaneously providing the infrastructure needed for upskilling and retraining the existing workforce to move into the digital age of manufacturing – supporting learners into better and more innovative work.

Employers must play their part too. While the Government can help to create the conditions to support employer investment, businesses themselves must take action. The urgent challenges created by an ageing workforce, long-running skills shortages and a changing workplace mean that it is not just down to government to invest. Our recommendations rely on employers taking steps such as improving their engagement with schools, more effectively working with training providers to develop the right provision, and together exploring what we can do as an industry – not just as individual businesses – to look at sector-wide solutions such as a skills passport.

The time has come for businesses, providers, learners and Government to boldly step into the future of manufacturing: to take accountability for the issues in the skills system and develop a long- term strategy to fix them. By bringing together businesses and trade unions, vocational and traditional education representatives, policy-makers and researchers, the Industrial Strategy Skills Commission has created proposals that will tackle the skills deficit in industry, breathing life into a vision for vocational education grounded in innovation, productivity and economic growth.

The Skills Needed to Support an Industrial Strategy

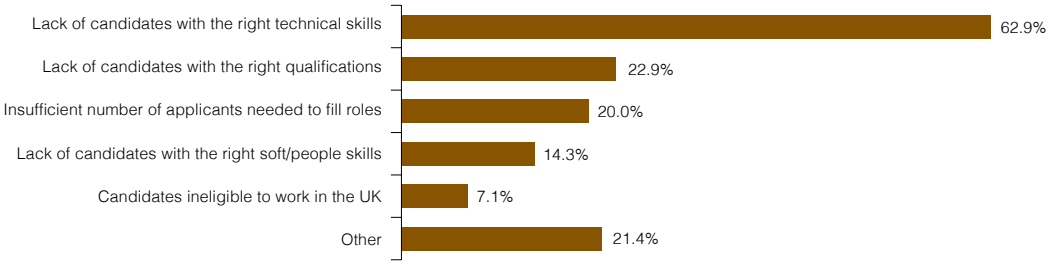
A successful industrial strategy hinges on the skill of the workforce who deliver it. Government, industry, providers and learners must therefore work together to provide a dynamic, knowledgeable and experienced workforce, meeting the skills demand both now and in the future. Respondents across our call for evidence focused on how a dearth of skills has a domino effect on innovation, slowing down production and growth. As one participant emphasised, 'a lack of leadership and management skills within the sector remains a barrier to technology adoption and best practice'.

What skills do we need?

There are currently 55,000 live vacancies in the manufacturing sector[2]. Across industry, occupations in shortage include welders[3], toolmakers, maintenance and process technicians, and electrical and mechanical engineers[4], with 4 out of 5 firms attempting to fill these vacancies in the last 3 months[5]. Meanwhile, the latest sector recruitment data demonstrates that the most significant barrier to filling vacancies remain a shortage of the right technical skills[6].

However, the skills we need now will not be the same skills that we need in the future. The call for evidence demonstrated that manufacturers are concerned not only with a labour and skills shortage in their current workforce, but with competition for future skilled workers as we enter into Industry 4 and 5.0. It is therefore critical that, at the same time that we fill existing skills gaps, we plan for future skills demand and gear up industry and suppliers to deliver upcoming industrial opportunities.

Chart 2: Main recruitment barriers to manufacturers



Source: Make UK, HR Bulletin Q1, 2025

[2]UK Job Vacancies (thousands) - Manufacturing - Office for National Statistics
[3]Skilled Worker visa: immigration salary list - GOV.UK
[4]Named roles from Call for Evidence 2024
[5]Make UK, HR Q1 Survey, 2025
[6]Ibid

CASE STUDY

Innovate UK's Workforce Foresighting Hub - understanding future skills demand

Workforce foresighting identifies what organisations' capabilities and workforce skills are needed in the future to help us adopt and exploit innovative technologies. The Innovate UK Workforce Foresighting Hub (IUKWFH) brings together industry, policymakers and educators to help shape the future occupational profiles and educational provision required for a high skilled workforce that can exploit innovative technology in the UK. Using AI, the hub uses data sets generated by partners involved in workforce foresighting process. In collaboration with IfATE, it combines this data with UK and international open-source data, analysing and generating outputs to help industry, and workforce and skills professionals make decisions.

Workforce Foresighting - Innovate UK Business Connect

For this reason, Skills England must work together with wider Government bodies to understand and deliver necessary reform to the Growth and Skills Levy. This should be informed by a skills strategy, providing an understanding of the skills need, now and in the future, for industry to maximise economic growth and increase employment opportunities.

Skills identified from our call for evidence

Green Skills
Green skills are the skills needed for the transition to net zero. For example, to meet the demand for (mainly) EVs, by 2040, the UK manufacturing sector will require nearly 200GWh of battery manufacturing capability - generating nearly 100,000 new roles. While the L3 Battery Technician apprenticeship 'matches closely to the capabilities identified for these role types', adapting and changing this standard will be key as technology develops.

Functional Skills
Functional skills for manufacturers largely involve foundational maths and literacy capacity for business. Throughout the call for evidence, it was made clear that, while functional skills should not hamper an apprentices' progression where they are otherwise competent, the ability to understand 'the basics' remains important.

Digital Skills
Digital skills are the skills required for the technological transformation the sector is already undergoing and will continue to be influenced by in the future. While basic digital literacy (use of communication technology, such as Microsoft software or Zoom) must improve, more complex digital skills, such as coding, programming and data analytics, will also increase in demand, especially given the advent of AI. For example, as quantum sensing technology in transport evolves, software and system engineers will be critical.

How do we deliver skills?

A skills strategy should take account of how manufacturers are currently delivering training and upskilling, and how this will evolve with new teaching tools. It is clear that practice cannot and will not remain static given the way we learn and work is already changing with the advent of AI. Indeed, while qualifications like apprenticeships, NVQs and T Levels are here to stay, the scope, speed and delivery of training will shift as standard teaching practice grows to encompass a new world of possibilities.

Who will be the makers?

With most of the 2030 workforce already in employment[7], it is critical that business and Government understand the imperative to upskill the existing workforce as well as attract new recruits.

Nonetheless, to ensure a pipeline of future makers, both industry and Government must also work to improve perceptions of the sector and improve the inclusivity of the workplace. An effective skills strategy should acknowledge the importance of incentivising a gender balance, with PwC estimating that, by 2030, 'continual improvements in female participation rates would lead to an aggregate increase in UK GDP of approximately £43.5 billion'[8].

EngineeringUK estimates that 115,000 more girls would need to study maths or physics A Levels to bridge the gender gap in higher education[9] – similar increases are needed to boost the number of women taking T Levels and apprenticeships, given only 1 in 10 of these in manufacturing and engineering are women.

However, the manufacturing sector should also commit to widen access even further, recruiting talent from other underrepresented groups, such as SEND students, ethnic minorities and veterans. As hiring and engineering technology improves to ensure more accessible and inclusive workplaces, manufacturers must take advantage of, for example, blind recruitment processes, to help to change the profile and perceptions of the sector to fill skills and labour shortages.

CALL FOR EVIDENCE EXTRACT

Upskilling and retraining for Industry 4.0: Changing roles in Food and Drinks manufacturing

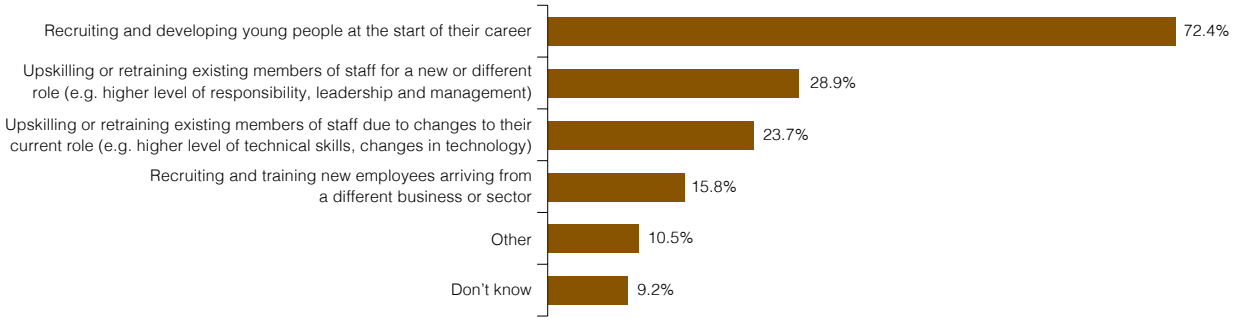
*'[Updated in 2024], the Level 3 Food Technologist and Level 6 Degree Apprenticeships are particularly vital for fostering innovation and sustainability within companies. As the demand for skilled professionals in food science continues to rise, these apprenticeships serve as a crucial pathway for career development and workforce readiness in this dynamic sector… [These roles] are critical to ensure we have a future pipeline of talent into the key roles in industry.'**

Government sources show that the Level 3 courses teach apprentices to utilise a range of IT systems in analysing and interpreting data, stepping into the digital future of manufacturing to drive continuous improvement.

*FDF Response to Make UK Call for Evidence, gov.uk
Food industry technologist (level 3) - apprenticeship training course

[7] Rebooting Lifelong Learning For a Skilled Workforce - Business in the Community
[8] Women in Work 2025 - PwC UK
[9] 115,000 more girls need to study maths or physics A levels to bridge gender gap in higher education

Chart 3: How are manufacturers using apprenticeships now?



Source: Make UK, HR Q4 Survey, 2024

CASE STUDY

The David Nieper Academy

The David Nieper Academy in Alfreton is an excellent example of how building 'life' skills throughout a student's education journey gives all learners the opportunity to go onto further education, employment or training at every stage of life.

The secondary school 'consistently achieves less than half the national average for NEETs at age 16+', and this year, the academy produced zero NEETs for those over 18. This means that every single pupil has graduated from the sixth form with a job, an apprenticeship or a place at higher education. This is particularly impressive, as Alfreton is a former mining town and one of Britain's left behind communities, with the lowest decile socioeconomic group in the country.

The results produced by the David Nieper Academy have the potential to significantly reduce youth unemployment and reverse economic inactivity trends, particularly as a Multi-Academy Trust which continues to take on other schools in the area.

The Commission are keen to see the adoption of similar innovative educational approaches across the country, which have the potential to unlock unparalleled economic growth and help to resolve the skills crisis in manufacturing.

The Scale of the Challenge

The scale of the skills challenge facing industry is stark. Public and private investment in skills training has fallen consistently over the last 25 years, with 70% fewer qualifications started by adults since the early 2000s and 19% fewer days of workplace training received by employees in England since 2011.

Average employer spending on training has fallen by 27% since 2011, while public funding for adult skills has fallen 31% from its peak in 2003/04.[10] In engineering and manufacturing alone since the introduction of the Apprenticeship Levy, the number of new apprentices has fallen by 42%.[11] The most recent Employer Skills Survey shows that the number of skills-shortage vacancies in manufacturing has risen significantly while employer investment continues to decline.[12]

In order to meet the workforce demands of employers and for the industrial strategy to succeed, business, education providers and Government must work together to find solutions to the challenges each face.

CALL FOR EVIDENCE EXTRACT

'The UK needs a better integrated strategy on skills and inward investment to attract international firms to more parts of the UK. If the UK fails to recognize the importance of technical and vocational skills, it will be left behind as other countries reap the rewards of foreign direct investment.'
Enginuity

'I've had young people, who, when shown a 95mm nail and a small piece of 15mm copper pipe, could not tell me which was copper and which was iron.'
Fluid Engineering

'[We need] adaptability skills for an ever-changing workplace dominated by technological advancements.'
Heathrow

'Research has identified that 70% of young people say that they want an employer that invests in their digital skills, a recruitment tool that could be used to bring talent into the advanced manufacturing sector.'
Association of Colleges

'Any plan for skills must adopt a triple helix approach, with industry, education providers and government working together to achieve success. A plan needs to account for where key industries are based… and what specific requirements they have.'
Nissan

[10] Investment in training and skills | Institute for Fiscal Studies
[11] Make UK analysis of Department for Education statistics Apprenticeships, Academic year 2024/25 - Explore education statistics - GOV.UK
[12] Employer Skills Survey, Calendar year 2022 - Explore education statistics - GOV.UK

Challenge 1: Employer Confidence in the Skills System

One of the major challenges since the introduction of the Apprenticeship Levy has been the lack of transparency over where and how employer contributions are used.

The Levy is not hypothecated – in simple terms, the revenue it generates from employers is not reserved only for spending on apprenticeship training. Therefore, while Apprenticeship Levy contributions made by employers have risen over time – as businesses have grown and more fall within scope of the £3 million paybill threshold for paying the 0.5% levy – not all of this money is allocated to the apprenticeship programme. Some allocations are also made by the UK Government to the devolved administrations, since the Levy is collected from employers in all parts of the UK, but as skills policy is a devolved matter, funding for individual nations' apprenticeship programmes are decided by their respective administrations. The UK Government does not publish information on what allocations are made to the devolved nations, meaning there is also no visibility of what proportion of Levy contributions are reflected in apprenticeship programme budgets outside of England.

In the early days of the Levy, the primary concern in England was underspending the apprenticeship programme budget – large employers were not spending all of their Levy funds within the 24-month time limit, after which it is reclaimed by the Treasury. This is by design; unspent funds by levy-payers are intended to trickle down to SMEs to pay for their 95% government funded apprenticeships, with the employer making up the remaining 5% from their own investment (except for SME apprentices aged 21 and under, for whom the training is 100% funded as of 2024). However, as SME starts declined drastically under the new system, a large amount of the apprenticeship budget was left unspent.

As changes to the Levy have been made – improving the digital apprenticeship system for SMEs, increasing the amount of money that can be transferred by levy-payers to other employers, removing the 5% co-payment for SMEs – this underspend has decreased dramatically and now stands at under 1% of the budget. However, as Levy receipts have grown over recent years, the budget – set by Treasury at the Spending Review every three years – has not kept pace. This year, levy receipts are expected to exceed £4 billion, while the apprenticeship budget in England will reach £2.8 billion. Including the estimated approximately £400 million allocated to the devolved nations and the administrative costs of running the system, it is estimated that there remains a surplus of almost £800 million in Apprenticeship Levy contributions which appears to be unaccounted for.

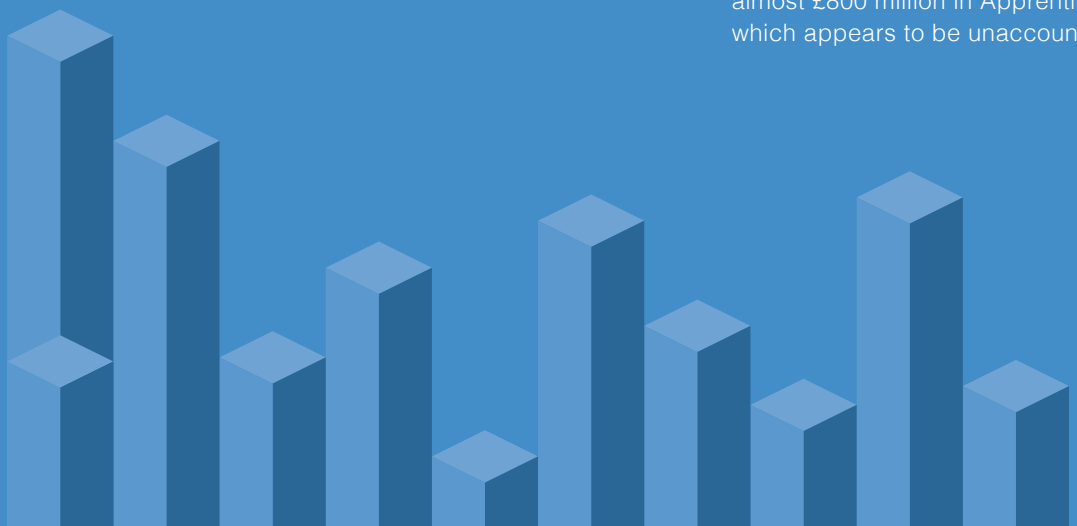
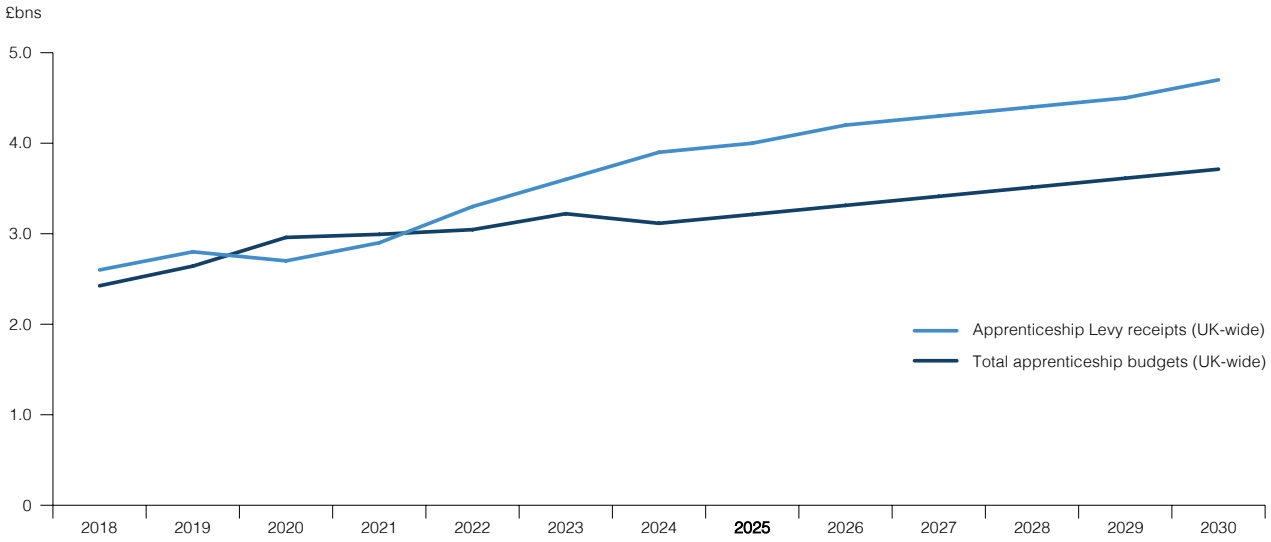


Chart 4: The growing gap between Levy receipts and apprenticeship budgets



Source: Levy receipts according to data from HMRC annual report and accounts, 2018-2024; and the Office for Budget Responsibility's October 2024 forecast revenue from the levy to 2029-30. Total apprenticeship budgets represent the combined programme budgets set for England, Wales, Scotland and Northern Ireland to 2025; in order to give a conservative estimate of the growing gap between revenue and budgets, future budget growth is calculated on the assumption of a similar rate of increase in England over the course of the levy to date, while Wales, Scotland and Northern Ireland are held at the same cash terms as 2024-25 budgets (all three devolved administrations have made spending reductions in the last 1-2 years). The UK Government does not publish information on what proportion of levy receipts are allocated to the devolved nations.

Even if the Treasury were to continue taking the same topslice in cash terms over the next Spending Review period (2025-28), further growth in Levy receipts over this time forecast by the OBR would still mean additional revenue flowing into the programme budget. Ensuring these additional funds are made available for skills provision will help to address concerns about the amount of money left in the system to support SMEs to access training.

There is a similar lack of transparency over the Immigration Skills Charge, a fee paid by employers when recruiting skilled workers through the immigration system. According to the most recent data published by the Home Office, the revenue from this stands at over £650 million, and yet there is no clarity as to how this money is used or how it supports domestic skills training.

Recent reports have suggested that the apprenticeship programme budget could otherwise be increased by lowering – or even scrapping altogether – the threshold at which employers start paying the Levy, or increasing rate at which the Levy is paid. While in theory expanding the scope of the Levy may have some merit in increasing 'skin in the game' among SMEs in particular, in practice yet another increase in employment-related costs at a time when businesses are already considering freezing or reducing headcount would be counter-productive. The focus should instead be on ensuring a more productive use of the funds already being raised from employers.

Utilising all of the money raised from employers for skills provision would mean that the Government can achieve its aim of the Growth and Skills Levy funding a wider range of programmes without having to impose unnecessary cuts to the apprenticeship programme. Employers are frustrated by the decision taken to remove level 7 programmes from the scope of the Levy and the Government must not place further restrictions on employers' ability to access valuable training, including at level 6, as a result of withholding Levy funds from the programme.

While overall participation in level 7 apprenticeships in engineering and manufacturing is relatively low, the growing importance of both higher-level technical skills and leadership and management skills means that removing support for training at this level is a concern for the sector. Given the major impact of technological change – not least AI – on the current and future workforce across industry, enabling employers to invest in higher level digital skills and leadership skills is critical to the successful implementation of this technology.

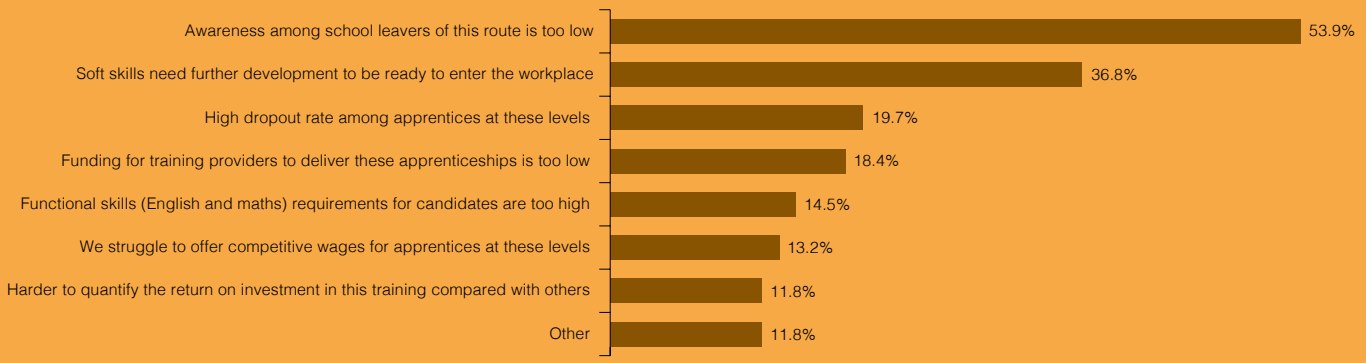
Challenge 2: Recruiting and Retaining Young Talent

A significant majority of engineering and manufacturing employers who are recruiting apprentices prioritise investment at levels 2 and 3 as the main way to bring new, young talent into their workforce.[13] It is crucial that alongside growing investment in higher-level provision, these valuable entry-level opportunities remain open to young people as a route into skilled work.

While it is welcome that the Government has sought to prioritise lower-level training with its new proposals for foundation apprenticeships, employers are concerned about the false dichotomy the Government has set out of restricting Levy funding of level 7 apprenticeships to pay for this. If the aim is to encourage more employer investment in entry and intermediate level skills training, this is best achieved by ensuring that training providers are adequately supported to continue to provide apprenticeships at these levels.

One of the biggest challenges reported to the Commission was the lack of support for providers to sustain this valuable training at levels 2 and 3. A combination of little or no increase in the relevant funding bands despite the growing cost of delivery, and alongside the exclusion of capital investment from funding support, has meant that an increasing number of providers are scaling back or withdrawing provision, leaving employers unable to access what they need. If the Government is to make a success of its proposed foundation apprenticeships, the fundamental challenges in capacity at levels 2 and 3 must be addressed.

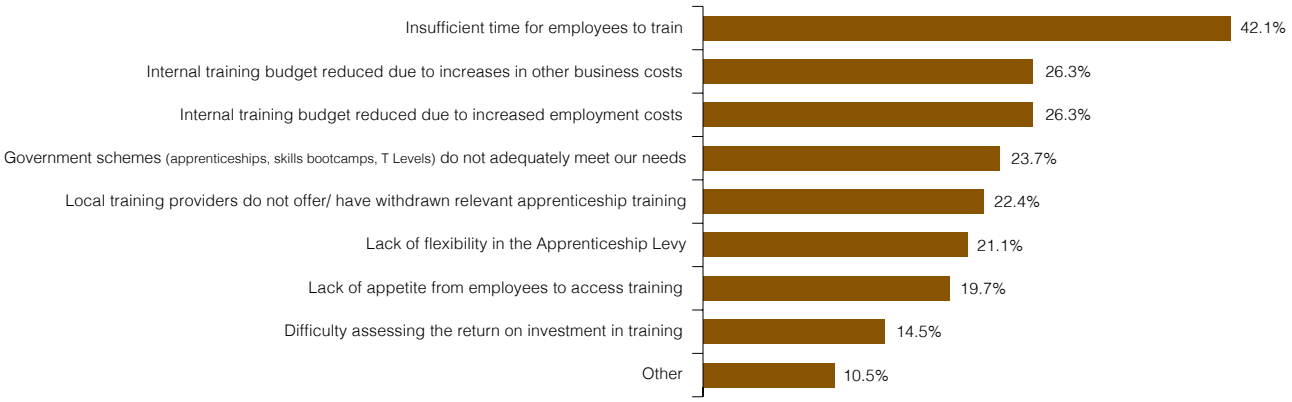
Chart 5: Specific challenges for level 2 and 3 apprenticeships



Source: Q4 2024 Make UK Skills Survey

[13] 2030 Skills: Closing the Gap | Make UK

Chart 6: Main barriers to employer engagement in skills training



Source: Q4 2024 Make UK Skills Survey

CASE STUDY

Tresham College

Understanding youth recruitment issues with Tresham College

At Tresham College, part of the Bedford College Group, members of the Commission spent time speaking to students, apprentices and the senior leadership team to understand issues surrounding recruitment of young people into manufacturing and engineering.

The primary concern raised was the absence of good careers education at the right time. Both students and tutors raised that there was little information received by young people to help them find out about careers in manufacturing – something that employers and Government must work on together to improve. Even where careers advice was offered, it wasn't always made clear how vocational pathways, like apprenticeships and T Levels, could offer entry into skilled employment, nor were these necessarily encouraged at the expense of, for example, A Levels or university.

However, it was further emphasised that there are some difficulties in making the newest vocational qualifications, T Levels, work well for employers and students. Issues with placements, varying from length to access to employers, highlighted a need for closer communication between industry, providers and Government to ensure that training is optimised for learners and sponsors of learning.

Some organisations have suggested that a portion of the Levy should be used only for apprentices under a certain age. This would create yet another unhelpful restriction for employers on how they can spend the money available to them. Moreover, without any changes to the funding of provision at levels 2 and 3 or support for young learners to take up training opportunities, this strategy risks increasing the amount of Levy funds left unspent and returning to the familiar problems experienced after the Levy was first introduced.

There are a number of other challenges across the system when it comes to attracting and retaining young talent in particular. The Commission has regularly heard feedback on the lack of prominence given to vocational and technical routes in pre-16 education, including a paucity of suitable careers information, advice and guidance, which should be a priority for both national and regional government to address. The starting point for this is the Government's proposed merging of the National Careers Service and employment support services to create a unified jobs and careers service. The Commission has also heard compelling evidence for local and regional government to be given greater responsibility for advertising apprenticeship vacancies and other skills training routes.

Concerns have also been raised about perceptions of poor pay on the apprenticeship route, not least the separate, lower rate of the National Minimum Wage to which apprentices are entitled, and accessibility of employment and training opportunities for young people with limited transport options.

Finally, the Commission is concerned at the ways in which the skills system has evolved in recent years to discourage investment – particularly from large employers – in 'overtraining'. Prior to the introduction of the Apprenticeship Levy, some large companies would regularly invest in training more people than they were likely to employ fully once the training programme was complete; this enabled smaller companies in the same region and/or the large company's supply chain to recruit recently trained people ready to work.

The Commission has visited manufacturing sites including JCB in Uttoxeter and David Nieper in Alfreton where an innovative approach has been taken to the sponsoring of and engagement with local schools, with the employers investing in a pipeline of skills which are not limited to their own commercial needs but which benefit the wider sector and local community. Such models could be the starting point for recreating an approach to employer 'overtraining'.

CASE STUDY

JCB World Headquarters and the JCB Academy

The JCB Academy is one of 44 UTCs across the UK, specialising in manufacturing and engineering. With a clear curriculum that combines functional skills and technical specialisms, it takes an alternative approach to the traditional academic syllabus, offering projects like the Harper Adams Challenge, as well as core qualifications at GCSE level.

This has proved to be an incredibly successful model for students, with Baker Dearing (the central coordinating body for UTCs) reporting that 25% of leavers at 18 start an apprenticeship – 5 times the national average – and the academy themselves report that 82% of learners felt that they were making more progress at the academy than at their previous school. JCB emphasised that the vast majority of apprentices trained at the Academy work with employers in the wider sector, with only a small percentage retained for the company.

Members of the Commission reported the clear case for incorporating this model more widely, bringing local employers on board to broaden the academic curriculum and create better support for pupils to develop the skills and knowledge they need for future study, life and work.

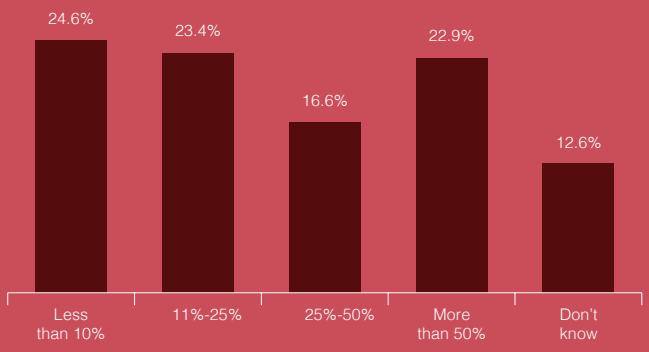
In this context, the Commission is concerned at the Government's proposals for restricting academy freedoms – including UTCs – over the national curriculum. It is important that the Government recognises the importance of integrating both technical education options and employability skills into the pre-16 education system, and the role of local employers working with schools to support this. The Government should reconsider its approach to the legislation and ensure that its response to the current Curriculum and Assessment Review does not limit schools' freedom to involve employers in the design and delivery of technical and employability skills.

Challenge 3: Upskilling and Retraining the Existing Workforce

Taking the timeline of the industrial strategy green paper as a starting point, 80% of the 2035 workforce has already left full-time compulsory education.

The pace of technological change, particularly the impact of generative AI, as well as the push for net zero emissions across industry will mean that the skills needed of those already in work will evolve dramatically over their careers. Simply put, to make sure that we have the skills needed for the industrial strategy to succeed, a much stronger and coherent focus on access to training for existing workers is needed.

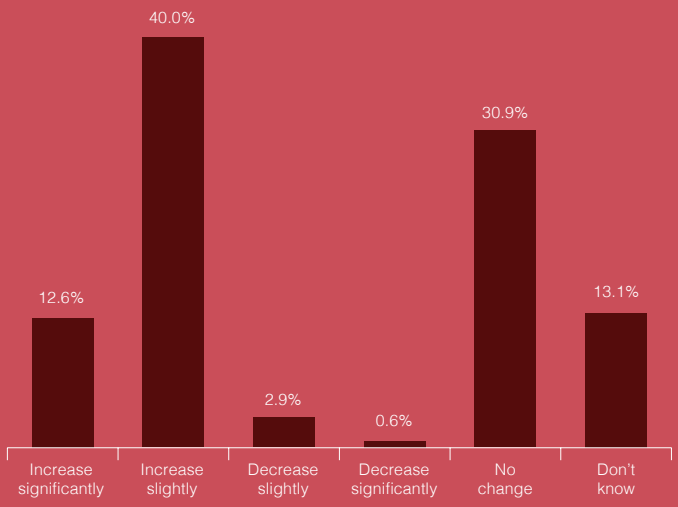
Chart 7: Proportion of manufacturers' training budgets spent on upskilling and retraining the existing workforce



Source: Make UK 'Sustainable Workforce' survey, April 2024

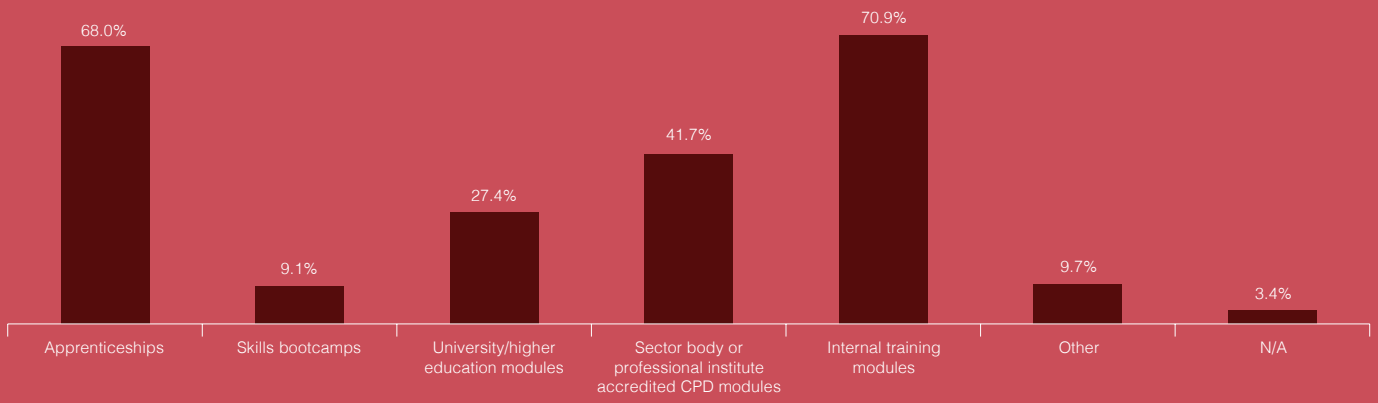
Evidence gathered by Make UK in relation to UK manufacturers shows that businesses are increasingly expecting spending on training for existing employees to increase, both in relation to apprenticeships and other forms of training, as shown below.

Chart 8: Expected change in spend on upskilling and retraining in the next 5 years



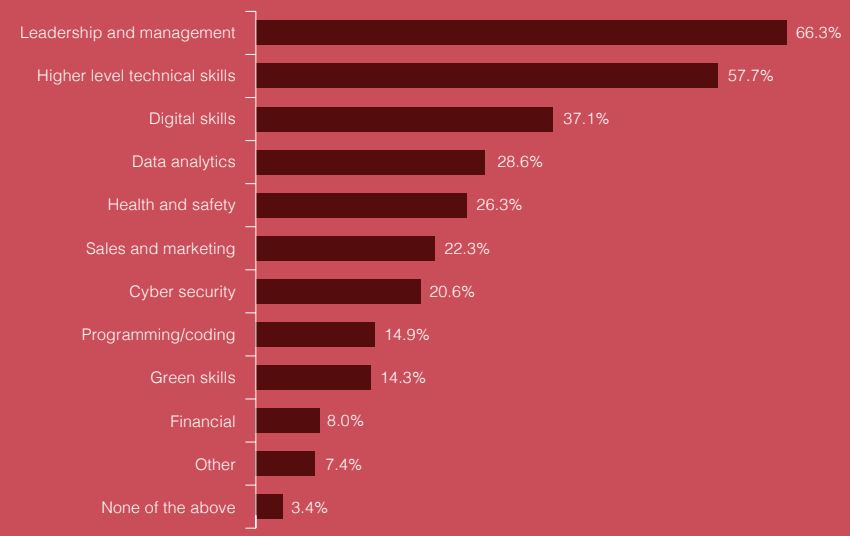
Source: Make UK 'Sustainable Workforce' survey, April 2024

Chart 9: How are manufacturers training and upskilling existing workers?



Source: Make UK 'Sustainable Workforce' survey, April 2024

Chart 10: Areas of highest demand for upskilling and retraining



Source: Make UK 'Sustainable Workforce' survey, April 2024

The Commission has heard concerns across the board on the suitability and accessibility of current available options for upskilling and retraining. In particular, there is a significant concern about the lack of provision at levels 4 and 5 – something which will be partially addressed by the Government continuing with the development and implementation of new higher technical qualifications (HTQs) and the Lifelong Learning Entitlement (LLE) from 2027 – and flexible, modular and shorter courses that are appropriately structured for people already in work. Given the primary barrier to investment in training identified by manufacturers is time and capacity, increased flexibility and modularity in delivery is key to enabling businesses to invest more training the existing workforce.

The high level of demand for higher level technical, digital and data skills is abundantly clear.

Evidence shows that a large proportion of manufacturers currently investing in upskilling and retraining existing workers are using apprenticeship training for this. While businesses trust the apprenticeship model as a way of securing high-quality work-based training, there may be other training options which also meet their needs where awareness of the training or support for investment is lower. A combination of a lack of employer awareness and minimal flexibility in funding means that apprenticeship training may be used when shorter, modular programmes might be sufficient and easier to manage for the employer.

The Commission has seen evidence of effective, industry-led programmes focused on upskilling and retraining, such as the Food and Drink Federation's work with the Greater Manchester Combined Authority, which sit outside of the apprenticeship system but could be more effectively supported across the country.

In this context, one of the key challenges for policy-makers is the considerable use of internal training modules or courses to deliver upskilling and retraining as an alternative to government-designed skills 'products'. By its nature, it is difficult to measure and assess this training in terms of its impact on productivity, which it makes it harder for the Government to support or enable effectively while ensuring it is funding the most relevant provision and securing effective value for public money. In turn, this leaves employers feeling unsupported with the significant level of investment they commit to this training to ensure their workforce remains productive.

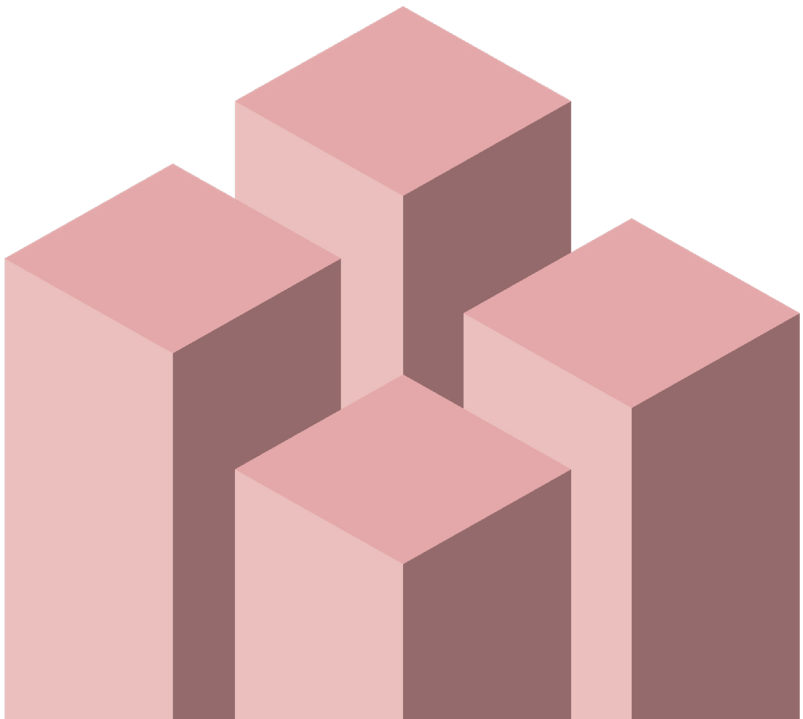
There are a number of proposals for some form of tax relief on skills, via a tax rebate or credit, similar to the model for relief on investment in research and development. Comprehensive analysis conducted by organisations such as the Centre for Social Justice/Christopher Nieper Foundation and the Learning and Work Institute suggest that basing skills tax relief on the R&D model could present the Government with a significant return on investment.[13,14]

There is strong support for tax relief on skills investment among manufacturers – while previous governments have used the tax system to great effect to incentivise and reward investment in physical capital, not just through R&D tax relief but more recently full expensing of capital allowances, there is very little of this kind of support for investment in the development of human capital.

There is an existing tax relief available for work-related training expenses, expenditure on which the Learning and Work Institute estimated in 2022 at between £1.3 billion and £2 billion.[15] With no publicly available assessment from the Government as to how widely this relief is currently used, what types of training it is used to fund, and its economic value or contribution to productivity, it is difficult to reach a clear view as to exactly how effective an enhanced tax relief for skills training would be, especially in the fiscal context of this parliament.

However, there is an opportunity to consider how the tax system can be used to provide targeted support for employers to invest in industrial strategy priority sectors and occupations. As Skills England, the Industrial Strategy Council and the Migration Advisory Committee work together to identify shortage and high-demand occupations and skills relevant to the priority sectors, the Government could pilot an enhanced tax relief – similar to the apprenticeship growth sector pilot announced in 2023 - to support a higher level of investment in key skills for existing workers.

[13]The case for a Skills Tax Break – Centre for Social Justice
[14]Raising the bar: Increasing employer investment in skills - Learning and Work Institute
[15]Ibid



The Commission visited the new XR lab at West Suffolk College

CASE STUDY

Warren Services and West Suffolk College

Upskilling the workforce using AI

The Commission's visit to Warren Services and West Suffolk College involved the experience of the new XR Lab. Sponsored by college alumni, the XR Lab is an innovative, AI-led initiative that exists to train and upskill the workforce of today and tomorrow. Learners interact with digital replicas of the working environment before entering onto the factory floor and can simulate the processes and exercises that they may be asked to complete in the course of their day-to-day employment. As the College noted, this gives users a chance to make mistakes and learn from them in a safe space, where there are no dangerous consequences that could knock their confidence.

Learners are also given access to their own AI assistant, which provide advice during the learning process and ensures that teaching staff can dedicate more time to students or course areas which require greater support.

Moreover, the software, designed in house, is being further developed to provide a wider income stream for the College by training local businesses. By simulating, for example, a warehouse environment, new employees can explore the virtual space at their own pace before entering the workforce. This has led to greater productivity rates and a reduction in health and safety incidents, as employees are better acquainted with the site before they ever set foot on it in reality.

This equipment is an excellent example of the use of AI technology to innovate and improve experiences for learners, whilst at the same time creating an opportunity for effective ROI on capital costs for providers – something the Commission hopes that employers and providers can learn from.

Finding the solutions: The Commission's Recommendations in Full

FIXING THE FOUNDATIONS

All revenue from the Growth and Skills Levy should be ringfenced for investment in skills, ending the Treasury's £800 million 'topslice' from employer contributions

The Government should also ensure that revenue from the Immigration Skills Charge – which exceeded £650 million in 2022/23 – is reserved for investment in skills provision

To both meet the immediate challenges facing the skills system and ensure that the right provision can be developed to reflect future needs, the Government should take the opportunity of the forthcoming Spending Review to change its approach to the Levy, the apprenticeship programme budget and wider skills funding by ringfencing revenue from the Levy and Immigration Skills Charge.

Ending the Treasury's siphoning of Levy funds away from investment in skills provision would support the Government's aims of broadening the range of eligible training without having to restrict eligibility elsewhere (as it has with the decision to remove level 7 apprenticeships from Levy funding). It would also begin to address the wider challenges faced by training providers by providing the resources to enact the Commission's other recommendations.

The maximum funding band should increase from £27,000 to £35,000 and Skills England should formalise the review process

Rising costs across the board have left training providers struggling to continue to offer valuable training. While in some cases this is because funding bands have not been updated to account for high inflation over recent years, the £27,000 maximum funding band, set in legislation, prevents any standard already at this ceiling from receiving a higher level of funding, even if employer and provider agree that the cost of delivery exceeds this cap. On the basis of evidence received by the Commission, the Government should legislate to increase the maximum funding band to £35,000, better reflecting the cost of delivery of some of the most expensive and high-value standards. This should include new bands in between the current £27,000 maximum and the new limit. This should be kept under regular review to ensure that this can rise in line with inflation when necessary.

Skills England should also prioritise establishing a clearer process for funding band reviews, including an automatic trigger for inflationary increases and a published timetable for future reviews for each standard ensuring that it must be reviewed at least every three years to reflect any significant changes in delivery costs. This will reduce the risk of valuable provision at levels 2 and 3 in particular of being scaled back or withdrawn, leaving businesses unable to access the training they need.

Provider funding rules should be amended to permit capital expenditure as an eligible cost, enabling more investment in capital-intensive areas like engineering and manufacturing

The previous government recognised this, introducing a £50 million apprenticeship growth sector pilot for a small number of key apprenticeship standards and training providers in 2023. As a first step, the Government should publish an evaluation of the success of this pilot and its impact on starts in the eligible standards.

The Government should then consider expanding the pilot across apprenticeship standards relevant to the key sectors of the industrial strategy, enabling providers to invest more in up-to-date, industry-standard equipment and machinery on which apprentices can learn in their off-the-job training. This will support more providers to meet rising delivery costs and sustain the training that employers need to access.

The Commission would also encourage combined authorities and other local and regional government bodies to consider where they can provide additional support for capital investment for providers in their area, reflecting local demand and strengths.

Expand bursaries for the training of specialist tutors in priority and shortage subject areas

Improved revenue and capital funding for training providers will not be effective unless there is a workable solution to addressing the challenges they face in recruiting skilled tutors.

As a starting point, the Commission recommends expanding national bursary funding for individuals to train or re-train as tutors, building on existing schemes to support people into initial teacher training and employment. Local and regional government should also work with industry and education providers to explore options for local support to enable industry employees to be seconded to providers to embed employer involvement in training delivery and ensure the practical relevance of the off-the-job training completed by apprentices and other learners.

Combined authorities to broker regional workforce industry exchanges

The previous government pledged to create a workforce industry exchange to support employers to second members of staff to their local training providers, helping to address the staffing challenges in the sector and providing up-to-date industry expertise to learners. The Government has not since taken this forward.

There should be a role for combined authorities to make arrangements at a local and regional level to enable employers to share skilled, experienced staff with providers in their area.

BOOSTING HIGH-QUALITY TRAINING FOR YOUNG PEOPLE

Expand the University Technical College model and preserve academy freedom to offer more technical routes to young people and increase the whole sector's talent pipeline

The Commission was impressed by its visits to the JCB Academy and David Nieper Academy, and has been considering how best to replicate the best of these at a larger scale across the country. While on a practical level they utilise different models of operating, they are underpinned by the common principles of developing local talent and ensuring the sustainability of not only individual employers, but the wider sector of which they are a part.

The quickest and most cost-effective way to achieve this is by committing to expand UTCs through England. The Baker Dearing Educational Trust has proposed a UTC Sleeve programme which would enable existing schools to follow the principles of UTC provision, including a greater focus on technical routes and strong employer engagement. This would be an effective starting point to stimulate employer investment in a sector-wide talent pipeline and facilitate earlier careers engagement.

The Government should reconsider its approach to academy freedoms in the Children's Wellbeing and Schools Bill and ensure that there remains a strong role for both technical routes in the pre-16 curriculum and employers in shaping pupils' experience and understanding of employability skills in school. The examples of both David Nieper and JCB in the Commission's work show the significant positive impact these freedoms can have in terms of employer engagement, employability skills and developing technical skills from an earlier age, and the Government should ensure its legislation and Curriculum and Assessment Review do not restrict these opportunities.

Develop more effective careers information, advice and guidance

The desire for the education system to be equipped to provide young people with the right support and advice on their future options has been heard consistently throughout the Commission's work. Improving perceptions of vocational and technical options for young people both pre- and post-16 is a

familiar challenge, but remains an important potential area of collaboration between industry, government and the education sector.

One of the first tasks of the Government's new jobs and careers service set out in the 'Get Britain Working' white paper should be to work with local and regional government, employers and education providers to develop local, sector-based IAG which focuses on promoting and raising the profile of vocational and technical routes into employment or further training. This would benefit both young people and working-age adults who may need support moving into different roles through their careers.

The Department for Education should take greater responsibility for co-ordinating and supporting industry engagement with schools across government departments to ensure a more strategic approach to pre-16 careers education. This should focus on making sure that there is effective and consistent signposting to up-to-date information and the routes available to young people coming through the education system.

The Government should also take the opportunity of the Curriculum and Assessment Review to look to embed careers education across the school curriculum, equipping school leaders and teachers with the resources they need to provide it effectively and giving young people the opportunity from an early age to better understand the employment and training opportunities available to them as they consider the decisions they will make approaching the age of 16.

The Careers and Enterprise Company has developed Employer Standards for careers education, and it is important that industry uses this tool to improve their understanding of the effectiveness of their own outreach. The Standards help employers to develop meaningful opportunities for young people by providing support for effective school engagement, and enabling businesses to evaluate how they are able to inspire and prepare young people for the world of work through their outreach. The Employer Standards are a tool that should be used by employers to maximise their opportunities to engage with schools and young people.

ENABLING EMPLOYER INVESTMENT IN THE SKILLS THEY NEED TO GROW

Develop a clearer picture of skills needs in industrial strategy growth sectors

In order to enable employer investment in skills in the right areas, the industrial strategy must give clarity over the Government's plans for investment and the workforce which will be needed to deliver on its priorities.

The Government has already laid out its ambition for Skills England, the Migration Advisory Committee and the Industrial Strategy Council to collaborate on assessing and forecasting skills needs across the country. Using the timeline of the *Invest 2035* industrial strategy green paper and the key growth sectors, these three bodies should develop a clear picture of skills and labour market demands over this time period across key occupations. This work should not be focused on merely describing the problem, but be used practically by the Department for Education, HM Treasury, Department for Business and Trade and other relevant parts of government to inform policy-making and funding decisions.[16]

It is also important that this does not duplicate or override work done at a local level through Local Skills Improvement Plans (LSIPs). There should be a co-ordinating role for central government in developing policy and funding at a national level across the UK. The work of LSIPs should factor this in, while enabling local and regional government to tailor skills solutions to the needs of employers in their area.

Incorporate Skills Bootcamps and Higher Technical Qualifications into the Growth and Skills Levy

The intention of both the Growth and Skills Levy and an enhanced tax relief for skills training should not be to create a free-for-all for business or simply a 'pick 'n' mix' approach – it should be focused on supporting employer investment in the high-value skills needed for an industrial strategy. It should also be focused on supporting a model of training in which employers, training providers and government have confidence; where an individual is in work with high-quality off-the-job training, demonstrating the immediate practical application of technical skills and knowledge.

[16]The case for a Skills Tax Break – Centre for Social Justice

The first step towards achieving this is to include two key existing programmes into the Growth and Skills Levy – skills bootcamps and higher technical qualifications (HTQs).

This will foster a much stronger focus on upskilling and retraining for existing workers – including both at lower levels and in the critical gap identified by the Commission at levels 4 and 5 – and potential pathways into apprenticeships, rather than diluting the importance of apprenticeships and technical training. Skills Bootcamps in particular will help to meet significant and growing demand for training of operative-level employees in manufacturing sectors like automotive.

Both routes also reflect a greater role for local decision-making, with Skills Bootcamps typically already co-designed by regional government with local employers, and LSIPs should have a strong role to play in developing new HTQs as this new higher-level provision comes into the training market.

Pilot an enhanced tax relief on skills training linked with growth sector occupations

There has been a strong call for the Commission to consider what more can be done through the tax system to enable more employer investment in training. Many businesses and stakeholders have referred to the value of current tax reliefs available for research and development, and the desire to have a similar programme for investment in their workforce. This could be an effective way of encouraging employer investment by helping SMEs with the upfront cost of investment and addressing the perceived risk of individual employers losing their investment once an employee leaves the business by guaranteeing a level of financial return.

However, the design of such a scheme is complex. Firstly, there is an existing tax relief for business expenditure on work-related training expenses; a Corporation Tax deduction set at 100% of eligible costs. There has been limited evaluation of the success of this relief, its economic value or what types of training employers are typically claiming this relief against.

Secondly, any tax relief should work for both SMEs and current loss-making companies. This makes corporation tax a potentially tricky option for a relief to be claimed against; the CSJ and Learning and Work Institute proposals for relief to be based on R&D tax relief, where loss-making companies receive a payable credit, is one option here. Depending on the scope of the qualifying expenditure, they estimate the return on investment could be as large as £23 billion.

Thirdly, the relief should be robustly targeted to avoid deadweight and ensure that it is training linked to growth sector occupations in line with the industrial strategy. Qualifying expenditure should be set in line with current funding rules, and the scope of the relief in terms of training programmes and occupations should initially be defined by Skills England, MAC and ISC according to their forecasting of skills demand.

The Commission calls for an enhanced tax relief for growth skills to be piloted in a similar way to the previous apprenticeship growth sector pilot. A small number of industrial strategy growth sector occupations identified by the triumvirate of Skills England, the MAC and ISC should be eligible for an enhanced rate of tax relief on accredited training linked to those specific occupations.

Make UK to explore development of a pilot of an engineering and manufacturing skills passport

As part of defining and formalising this training to become eligible for tax relief, Make UK will work with sector skills bodies including Enginuity to explore the creation of a skills passport for engineering and manufacturing. The rationale behind this would seek not only to ensure that any tax relief was not leading to deadweight government investment by recognising the acquisition and development of a clear and defined set of transferable skills, but also to support a sector-wide approach to skills where it is recognised that employees will move between companies and investment in their training will benefit the sector as a whole.

There are existing good examples of how this might work in practice, such as the approach of industry training boards to enabling digitised records of training for employees, and work by the energy sector, supported by the Government, to develop an Energy Skills Passport.[17,18] We would seek to learn from these examples to explore how a similar approach in engineering and manufacturing could help the development of shortage and high-demand skills, employer investment in these skills, and a cross-industry approach to workforce planning and development.

[17]Check a Card or Training Record [Online] - CITB
[18]OEUK/RenewableUK: Energy Skills Passport launches, helping workers transition across the energy mix https://oeuk.org.uk/energy-skills-passport-launches-helping-workers-transition-across-the-energy-mix

BUILD FOR THE FUTURE

The Commission's work has identified the need for transformational change in the UK's skills landscape which can only be achieved through a long-term vision for re-design of the system. Nothing less than the future of UK industry depends on a successful skills ecosystem, both within the Government's initial 10-year industrial strategy vision and far beyond it. Driven by fundamental change in workforces and workplaces as a result of new technology, this systemic change is both urgent and complex, and requires further in-depth consideration across business, education and government.

Below are recommendations for these stakeholders to work in partnership to develop detailed solutions to these challenges over the longer term. This will be overseen by Make UK with sector partners.

Generative AI and technological change

The need for a strategic national approach to the impact of AI on the current and future workforce requires in-depth work spanning a range of areas of business and government decision-making.

The Commission's report sets out the need for long-term skills foresighting, building on the work already undertaken by High Value Manufacturing Catapult. Given this is already a proven model for effective and actionable insight on current and future workforce needs, there should be a unique focus on creating an AI-specific model which will inform the development of skills policies and programmes.

Upon this, approaches to AI-specific skills development – for both young learners and existing workers – can be developed which reflect:

- Use of AI tools to improve performance and productivity
- Impact on nature of work and structure of the labour market
- Need for flexible options for training such as dedicated bootcamps
- Need to revise existing training routes e.g. develop a new AI-focused apprenticeship standard, revise existing apprenticeships to incorporate AI-related skills

Make UK will convene a working group to take forward this work and design policy solutions to meet the scale of these challenges.

Careers education, information, advice and guidance

While the report sets out where there are existing examples of resources available to employers and education providers upon which to build, a more radical approach is needed over the longer term to restructure careers education and IAG, and embed it fully across the curriculum. This should be a priority area for a working group to consider.

This work should explore where the current Gatsby Benchmarks can be built upon, as well employer representatives, education providers and professional engineering institutions. At its core, this should focus on increasing and improving pupils' experiences of employers and the workplace across the curriculum, and ensuring that IAG is able to fully reflect evolving labour market demands.

Make UK would also seek to work with engineering and manufacturing sector stakeholders to propose legal protection for fully qualified engineering job titles as part of boosting the status and attractiveness of job roles in the sector, and to distinguish them from other occupations which may currently use the word 'engineer' in the job title or description.

Skills training for the adult workforce

The Commission's work has explored the pressing need for better support for upskilling and retraining the existing workforce, and made immediate recommendations for how access to this could be significantly improved through policy change. However, there is a longer-term need to consider how the system as a whole can adapt to the quickly changing nature of work and the skills that are needed in the future, not least in response to the challenges explored above in relation to generative AI and wider technological change.

This should include:

- Developing clearer and more consistent pathways for upskilling and retraining, resolving the current patchwork of different provision and enabling proper flexibility between different levels
- More modularity and flexibility in existing areas such as apprenticeships – how to balance the rigour of long-term work-based training with flexibility for the employee and employer, for example through more flexibility on duration for learners with significant prior learning and experience, or allowing learners to access shorter modules as part of an apprenticeship
- Establishing and embedding a culture of lifelong learning

Make UK would work with organisations such as the Learning and Work Institute to explore potential solutions in these areas.

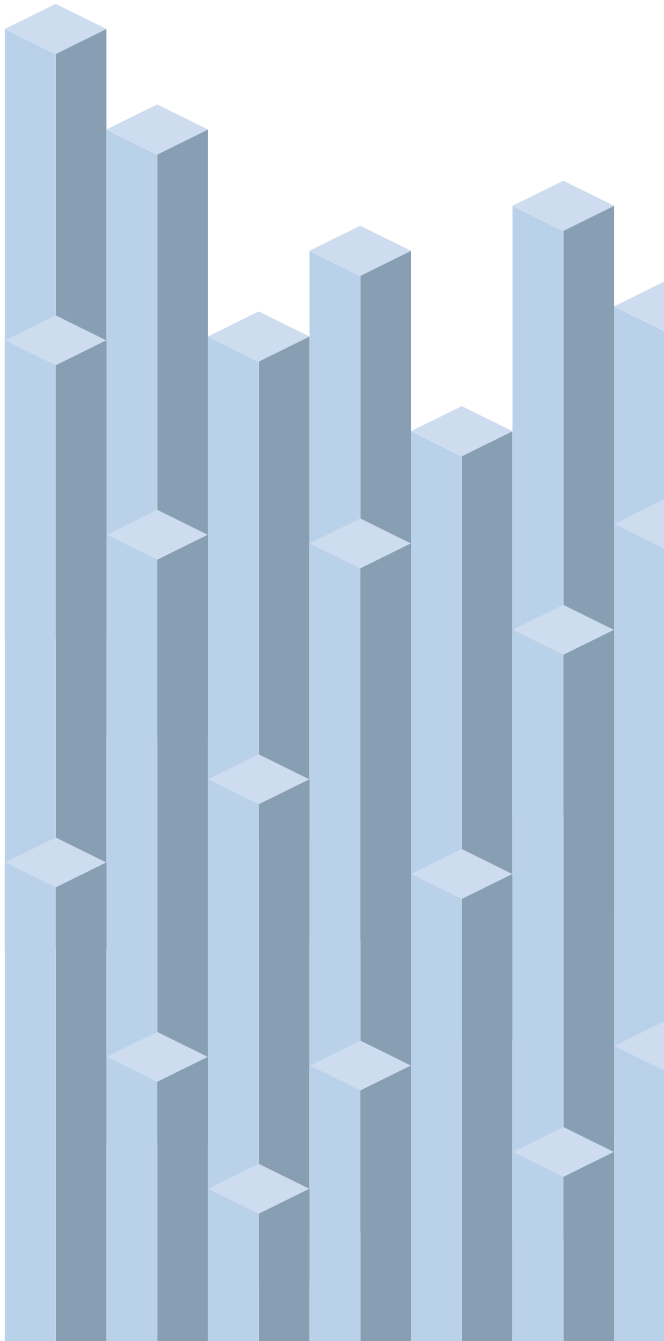
Models of education delivery

Alongside the short-term solutions of expanding UTC capacity and preserving the freedom of academies to offer technical and employability skills beyond the standard pre-16 curriculum, there is scope to consider how education providers are structured, organised and governed to ensure that they can most effectively and efficiently meet the needs of their local employers.

Building on the Commission's experience of visiting provider sites, a working group should look at similarly effective models of delivery and how this can be supported both nationally and regionally. This could include a federated or 'hub and spoke' model for post-16 providers, allowing for more effective governance, employer engagement and flexibility for individual sites to develop sector specialisms.

This should also cover the role of higher education institutions and how they can improve their employer engagement and tailoring of provision to the local labour market.

Make UK would work with the education sector – including provider representative bodies in further and higher education – to develop potential ways of improving the capacity of the education sector to engage effectively with employers and deliver the training needed locally.



About the Industrial Strategy Skills Commission

Chair of the Industrial Strategy Skills Commission

Robert Halfon
Robert Halfon is a former Member of Parliament for Harlow 2010-2024, and has previously enjoyed roles as Minister of State for Apprenticeships at the Department for Education (2016 to 2017 & 2022 to 2024), Minister without Portfolio attending Cabinet (2015 to 2016), Deputy Chairman of the Conservative Party (2015 to 2016), PPS to the Chancellor of the Exchequer, Rt Hon George Osborne MP (2014 to 2015), and Lifetime Privy Counsellor using the title Rt Hon. He was awarded Minister of the Year in 2024, Spectator Backbencher of the Year 2022, the AAC Special Recognition Award 2018 and Spectator Campaigner of the Year 2013.

As the Minister, Robert boosted apprenticeships with a new UCAS service and launched the Skills for Life campaign to encourage more employers to take on apprentices. He also scrapped the cap on the number of apprentices an SME can employ to maximise opportunities across the country, tripled the Care Leaver Bursary to £3,000 and tabled the Lifelong Learning Bill to revolutionise student finance to suit the needs of students and employers.

In 2017, he was elected as Chair of the House of Commons Education Select Committee (re-elected in 2019). During this time, he published reports on apprenticeships and the quality of apprenticeship provision, prison education, SEND, careers advice and guidance and actively spoke out against school closures, holding the Government to account over the COVID-19 catch-up programme.

Adviser to the Industrial Strategy Skills Commission

Lord Tom Watson
Lord Watson of Wyre Forest is a sitting member of the House of Lords. He served as Deputy Leader of the Labour Party from 2015 to 2019. Before this, he was the member of Parliament (MP) for West Bromwich East from 2001 to 2019 and served in a number of positions, including on the Culture, Media and Sport Select Committee.

Lord Watson also won the New Statesman New Media Award in the category of elected representative for being one of the first MPs to use his blog to further the democratic process (2004).

Commissioners

Dame Judith Hackitt DBE FREng

Kevin Fitzpatrick CBE

Sian Elliott

Fiona Aldridge

John Neill CBE

Yiannis Koursis OBE

Advisory Board

- **Ann Watson**
- **Ben Rowland**
- **Clare Porter**
- **Stephen Evans**
- **Dr Hilary Leevers**
- **Neil Carberry**
- **Brian Holliday**
- **Rowan Crozier MBE**
- **Professor Liz Mossop**
- **Philip Bouverat**

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The Commission would also like to thank Make UK's Labour Market and Skills Committee, all those who participated in evidence gathering roundtables, and members of Make UK's Regional Advisory Boards, whose feedback helped to build a complete picture of the skills need.

Methodology

In order to understand issues within the skills system, the Commission issued a call for evidence, which asked the following questions:

1. What are the skills needed for an industrial strategy, and where are they needed?
2. Where are the most significant gaps in employers' access to skills training? This could be broken down by:
    a. Age groups of learners
    b. Sector
    c. Level
    d. Individual qualifications
    e. Company size
    f. Region/devolved nation
3. What skills initiatives are you aware of? In the current skills training landscape, which things:
    a. Work well and should be retained?
    b. Do not work well and should be reformed?
4. What do you consider to be the biggest challenges in relation to employer investment in skills training for:
    a. Businesses
    b. Education providers
    c. Young learners and employees
5. The Government has proposed a new Growth and Skills Levy – a more flexible alternative to the apprenticeship levy. How should this flexibility work, and what training should be included or excluded from its scope?
6. What other policy measures could help to stimulate more employer investment in training? Please include, if possible, in your answer, initiatives you feel would work specifically for SMEs.
7. Finally, how can we ensure that marginalised groups (e.g. SEND/disabled people, women and non-binary people, ethnic minorities) can benefit from upskilling opportunities?

The Commission would like to thank the following participants for their written responses:

- David Nieper
- Brandauer
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- Baker Dearing
- Richard Bridgman
- Penta Precision
- Heathrow
- Association of Colleges
- Institute of Mechanical Engineers
- Cumbria CC
- Speakers for Schools
- Product Change/AMR
- Edge Innovate
- BCAS
- Fluid Engineering
- Eastern Education Group
- Next Gen Makers
- Nissan
- FDF
- Enginuity
- FashionEnter
- High Value Manufacturing Catapult
- Jaguar Land Rover

In addition to the call for evidence, the Commission received evidence from employers through survey responses, online roundtables and wider site visits, reaching hundreds of stakeholders across the skills system.

Make UK is backing manufacturing – helping our sector to engineer a digital, global and green future. From the First Industrial Revolution to the emergence of the Fourth, the manufacturing sector has been the UK's economic engine and the world's workshop. The 20,000 manufacturers we represent have created the new technologies of today and are designing the innovations of tomorrow. By investing in their people, they continue to compete on a global stage, providing the solutions to the world's biggest challenges. Together, manufacturing is changing, adapting and transforming to meet the future needs of the UK economy. A forward-thinking, bold and versatile sector, manufacturers are engineering their own future.

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