

Precarious to prepared

A manifesto for supporting the six million most at risk of losing their jobs in the next decade

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As a result of technological progress and demographic changes, more than six million people in the UK are currently employed in occupations that are likely to change radically or disappear entirely by 2030.¹ Without immediate action, there's a risk these people will be trapped in insecure, low-value, low-pay employment – or worse, forced out of work altogether.

But it doesn't have to be this way. Nesta's evidence shows which skills people will need in the coming years as jobs change,² and new, tech-based training and careers solutions are becoming available for people who want to reskill so they are ready for the future. We also expect millions of new jobs to be created, including in occupations which don't currently exist.

The problem is that many people who are in low-paid work - or who aren't working at all - aren't able to access the information they need to plan for the future or the relevant training they need to gain new skills. They also tend to work in places and industries that are likely to lose out over the next decade, making it harder than ever for them to access good jobs. Half of adults from poorer backgrounds have had no training since leaving full-time education, whereas people who are highly skilled are much more likely to receive public and private funding to gain new skills.

Nesta's vision is for a labour market system where information about skills and careers is open and empowering for workers; where technology is harnessed to reduce – not drive – inequalities in access to jobs; and where policies give everyone the power to overcome systemic barriers that stop them participating in good-quality, meaningful work.

Governments around the world, from Canada and Singapore to Denmark and France, are experimenting with solutions, through a combination of new approaches to data and information; new rights and entitlements; and new kinds of skills provision. At Nesta, we are tackling the challenges presented by the changing labour market through our unique combination of expertise, skills and funding. Our approach is practical and collaborative, driven by the rigorous use of evidence and data, emerging technology and the power of people.

We are urging the UK to support people at risk, and have been developing practical, evidence-based ideas on how to:

- **Empower workers to navigate their way to the jobs of the future** by making information and guidance available to more people. We are doing this through linking skills data at city, regional, and national level, and running a Challenge Prize (in partnership with the Department for Education) to develop new digital career information, advice and guidance tools.
- **Tackle personal and systemic barriers to learning** such as lack of time, motivation and money to undertake training. We've been testing tailored interventions for training at-risk workers both in the UK and in the Nordic and Benelux regions. We've invested in promising interventions that help people into work through Nesta's impact investment fund, while gathering international examples of new rights and entitlements that enable people to reskill and upskill.
- **Future-proof the workforce** by supporting interventions that develop social and emotional skills and resilience in young people, and by supporting teachers, parents and carers with the latest information about the changing world of work.
- **Stimulate the adoption of management practices and social policies that raise productivity and enrich jobs.**

What needs to be done?

① We need open data on jobs and skills

To help workers at risk navigate their way to better jobs, it's crucial we open up and share relevant data to help cities and regions to develop solutions for addressing local skills challenges.

A mismatch between the skills that people have and the skills that the economy needs is a major issue in the UK. Without guidance on which skills are going to be needed, many workers face stagnant pay and low social mobility. Meanwhile, businesses are unable to find workers with the right skills. The Open University estimates that skill shortages cost the UK £2 billion a year in higher salaries, recruitment costs and temporary staffing bills.³

Big data and machine learning can offer timely, granular and accurate insights on jobs and skills, as demonstrated by Nesta's first data-driven taxonomy of skills.⁴ This taxonomy used over 40 million UK online job adverts to help people learn more about the skills that they need, and how much those skills are valued by employers. However, even more relevant information and data is privately owned and not accessible to people and organisations (like career advice providers) who could use it to better understand how to navigate from one job to another.

To make sure more people can benefit from new data on jobs and skills, we are calling for action at a national and local level. We want:

- The Minister of State for Universities, Science, Research and Innovation to lead on creating a national jobs and skills data commons: a framework that would include, for example, shared language on occupations and skills, as well as ways of linking and accessing data. We've seen this work already when the Swedish Public Employment Service launched Jobtech,⁵ a platform that provides access to datasets such as occupation forecasts, current and historical job adverts, and a data-driven dynamic competence map. A similar platform would allow and encourage the UK Government, the employment industry and the education sector to share data and use it to inform skills solutions, helping current and future workers plan their careers.
- The UK Government to fund the development of a standardised taxonomy of skills to be used by national and local services, building on Nesta's own taxonomy of skills. This would allow workers at risk to search and understand the available data at a local level, and to develop realistic plans for transitioning between occupations.
- Career advice providers to use the most accurate and relevant data to inform their services, giving people better tools for navigating their careers, taking inspiration from Bob⁶ (an open-source platform that provides jobseekers with personalised career advice, based on data from France's Public Employment Service).

② We need learning that fits individual needs and circumstances

Individual barriers to learning – such as lack of motivation, time and money to learn – must be tackled both through design of training (which needs to be tailored to the learner) and additional rights and entitlements that enable more at-risk workers to participate in learning.

While there are numerous initiatives, trials, programmes and types of provision that aim to provide skills solutions, Nesta's review of evidence⁷ shows that people in low-paid work often don't have the time, motivation or money to undertake training. Those in temporary or precarious employment, or those who are unemployed, often miss out completely because training is usually provided by employers. Almost half (49 per cent) of adults from the lowest socioeconomic groups in the UK have received no training at all since leaving school.⁸

Nesta is working to identify and develop new products and programmes that could motivate people in low-skilled, at-risk jobs to learn skills relevant for the future. In the UK we've partnered with the Department for Education, and in the Nordics and Benelux regions we've partnered with Google.org.

To support more people to develop the skills they will need for the future world of work, we are calling on:

- Learning providers to take into account barriers to learning and an understanding of people's motivations to learn, through personalisation of content and delivery and through the use of behavioural nudges that increase the agency of participants as they learn.
- Local governments to experiment with individual learning accounts (such as the ones piloted in Scotland and Wales) to enable at-risk workers to learn, even when they can't access training through their jobs. To test what levels work best in stimulating change, we propose initial annual entitlements of £500-£1500 supported by rights to paid time off, and shared learning with other countries like Canada, France and Singapore that are attempting similar experiments.

- Government departments (for Business, Energy and Industrial Strategy, for Work and Pensions and for Education) to work together to provide additional rights for workers who have been identified as being at risk of job loss. This might include, for example, the right to take time off work to re-train (updating the currently restrictive time off work policy), and the right to financial support to re-train (similar to Swedish job security councils⁹ that provide financial and job counselling support, financed by employers, to help people back into work).
- The UK Government to establish a cross-departmental agency or partnership that brings together policymakers, employers, unions and training providers to address challenges in the work and skills arena. Taking inspiration from the Danish Disruption Council¹⁰ and the Dutch Technology Pact,¹¹ this agency should take responsibility for setting the agenda for and promoting adult learning, ensuring that learning programmes are supported by wider policies, such as access to financial support or affordable childcare.

③ We need a broader range of skills

To help young people to prepare for uncertainty around future employment, the education system must teach a much wider range of skills, including social and emotional skills and creativity.

Nesta's collaboration with Pearson and Oxford Martin School of Business showed that in the future there will be high demand for interpersonal skills, such as collaboration and coordination; higher-order cognitive skills, including fluency of ideas and originality; and systems skills, for example judgement and decision making.¹² At the moment, learners are not being consistently supported to develop those skills.

Recent OECD research¹³ shows that the UK has the highest level of prevalence of memorisation in classrooms, which has also been shown to reduce a child's ability to solve problems and think critically. Countries like Japan and China that used to depend on rote learning have shifted to a much greater emphasis on understanding and critical thinking.

At Nesta, we have focused on ways to embed these skills in the school system, developing a toolkit¹⁴ to equip teachers, parents and carers with the latest information about the changing world of work and the skills that will be in demand in the future. Through the Future Ready Fund¹⁵ we've also supported a number of high-potential interventions that promote wider skills in young people aged 11-18, especially social and emotional skills and resilience.

To ensure that young people have the chance to learn and develop skills relevant for the future, we are calling for:

- The Department for Education to create a digital-complementary skills framework that can be used by industry and training providers to ensure skills such as creativity, complex problem solving and collaboration are taught across the school curriculum and adult-learning systems.
- Schools to embed evidence-based solutions for teaching these same skills, drawing on resources such as Nesta's toolkit.¹⁶
- Employers to invest at scale in the development of young people's creativity and problem solving skills outside the classroom, for example, through initiatives that Nesta has pioneered: competitions like Cracking the Code,¹⁷ a competition for children to design maths-based escape rooms, and the Longitude Explorer Prize,¹⁸ which challenges 11-16 year olds to solve problems using satellite data, Internet of Things technologies and AI.

④ We need better quality local jobs and services

When planning for the future, it's not just about making sure people have access to skills and training to get into any job – we want those jobs to be good, rewarding jobs. For this, the job-enriching practices of innovative firms need to be spread across the economy and applied to workers across different types of employment contracts.

Good quality jobs are not available everywhere. Workers in highly innovative firms tend to be paid more and have more autonomy and control over how they work, as well as more opportunities to apply their imagination and creativity. But these innovative and productive firms are concentrated in specific places and their workforces are dominated by particular demographic and social groups. Too many people work in parts of the economy that are at risk of being devalued and left behind, for example in retail or care services.

According to Eurofound data,¹⁹ many new jobs created in the UK between 2011-15 were actually decreasing in quality. Two-thirds of the jobs created at the low-paid end of the spectrum were less secure, offering only part-time or temporary contracts or self-employed work. On the other hand, two-thirds of the most highly-paid jobs created were full-time, permanent jobs. Without innovation in how jobs are valued and organised, and new social policy that helps people cope with uncertainty around jobs and skills, there is a risk that we will end up compensating people who will lose out as a result of changes in the economy, instead of bringing many more people and places to participate in the future of work.

Nesta has been working with author and academic Roberto Mangabeira Unger and politicians, researchers and activists from across the OECD countries to explore policy options for an inclusive knowledge economy.²⁰ This has included ideas on how governments can respond to new patterns of work and changes in jobs through new welfare provisions (such as basic income), new channels of power for citizens and workers (such as trade unions for the self-employed), and business support to incentivise firms to invest in the local economy and the workforce.

We have also led the Inclusive Economy Partnership Accelerator, supported by the Cabinet Office and the Department for Digital, Culture, Media and Sport. Through partnerships between business, civil society and government, the accelerator supported seven organisations that help young people transition from education, unemployment or inactivity into paid work.

To start raising the quality of jobs across sectors and regions, we are calling for:

- The Department for Business, Energy and Industrial Strategy to fund the testing of job design and management practices across industry sectors, to find out how best to enrich jobs while raising productivity, similar to the Business Basics Fund.
- The UK Government to support the development and adoption of collective-intelligence based tools and platforms, similar to ones supported by Nesta,²¹ that give greater voice to workers on flexible employment contracts and the self-employed.
- Local enterprise partnerships to align the investments around climate change to create local jobs suited to the people most at risk of losing their jobs and incentivise businesses to raise the quality of jobs across their workforce and the supply chain through Sector, City Region and Growth Deals. This can be done in a similar way to the Wales Economic Contract,²² which requires businesses seeking investment to demonstrate that they contribute to social purpose through Fair Work in particular.
- Local governments to use Challenge Funds to stimulate innovative interventions in sectors that employ lower-paid people, such as those in the foundational economy.

Find out more at [nesta.org.uk/work-and-skills](https://www.nesta.org.uk/work-and-skills)

Nesta's work on jobs and skills

Open Jobs

The Open Jobs programme is focused on helping individuals, organisations and governments take more informed labour market decisions through carrying out data-driven research, place-based experimentation and advocating for smarter labour market policies. We are working with national and local partners to open up and connect data on jobs and skills, and to develop methods, tools and platforms for addressing local challenges on skills, careers and jobs.

The CareerTech Challenge

The CareerTech Challenge is a £5.75m partnership between Nesta and the Department for Education aiming to stimulate innovation in careers information, advice and guidance, and online training provision. The Prize will reward digital solutions that improve access to accurate, data-driven career information, advice and guidance. The Fund will provide grant funding for innovative tech solutions which motivate people and support them to learn new skills and retrain.

FutureFit

FutureFit is a major training and research project led by Nesta and supported by Google.org in partnership with trade unions, researchers and adult learning experts from across the Nordics and Benelux region. Through innovative training interventions and robust research and evaluation about 'what works', the programme aims to empower workers with the skills they need for tomorrow and improve the wider adult learning system across Northern Europe.

Digital Frontrunners

Digital Frontrunners is an international network of over 300 future of work experts, policymakers and practitioners who are working collaboratively to develop inclusive skills policy solutions. Supported by Google, the programme is co-designed with government departments in the Nordics and Benelux, and provides inspiration for countries beyond those regions on policy initiatives and solutions to digital transformation challenges.

Imagination Unleashed

Imagination Unleashed is a Nesta report, written in collaboration with Professor Roberto Mangabeira Unger, to explore policy options for an inclusive knowledge economy. It recommends action including widening access to capital and productive opportunity, transforming models of ownership, addressing new concentrations of power, and democratising the direction of innovation.

Future Ready Fund

Future Ready Fund is a £500,000 Nesta grant fund that supports high-potential, early-stage interventions that promote wider skills in secondary-age (11-18) young people, focusing on social and emotional skills and resilience.

Nesta Impact Investments

Nesta Impact Investments is a £17.6 million fund investing in life-changing innovations that help tackle the major challenges faced by older people, children and communities in the UK. Examples of our investments that are particularly relevant to the future of work and skills include GetMyFirstJob, Profinda and BeApplied.

The Inclusive Economy Partnership

The Inclusive Economy Partnership brought together businesses, civil society and government to solve some of society's toughest challenges, including developing tools to improve young people's access to the job market. Led by Nesta, the Partnership was supported by the Cabinet Office and the Department for Digital, Culture, Media and Sport.

The Future of Skills: Employment in 2030

The Future of Skills: Employment in 2030 is a Nesta report that maps out how employment is likely to change in the future – including the implications for skills. It also anticipates a number of new occupations for the future, which will require creativity, interpersonal skills, higher-order cognitive skills, and systems skills.

Endnotes

1. <https://www.nesta.org.uk/report/the-future-of-skills-employment-in-2030/>
2. <https://www.nesta.org.uk/report/the-future-of-skills-employment-in-2030/>
3. <https://www3.open.ac.uk/media/fullstory.aspx?id=31527>
4. <https://www.nesta.org.uk/report/which-digital-skills-do-you-really-need/>
5. <https://arbetsformedlingen.se/other-languages/english-engelska>
6. <https://www.bob-emploi.fr/>
7. https://media.nesta.org.uk/documents/Digital_Frontrunners_Motivation_to_Learn_report_final_published.pdf
8. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/774085/Adult_skills_report_2019.pdf
9. <https://www.eurofound.europa.eu/observatories/emcc/erm/support-instrument/job-security-councils>
10. <http://www.oecd.org/mcm/latestnews/keynote-address-at-the-oecd-ministerial-council-meeting-by-danish-prime-minister-lars-lokke-rasmussen.htm>
11. <https://www.technikpact.nl/>
12. https://media.nesta.org.uk/documents/the_future_of_skills_employment_in_2030_0.pdf
13. <https://www.nesta.org.uk/blog/creativity-and-critical-thinking-and-what-it-means-schools/>
14. <https://www.nesta.org.uk/toolkit/future-skills-briefing-teachers/>
15. <https://www.nesta.org.uk/project/future-ready-fund/>
16. <https://www.nesta.org.uk/toolkit/future-skills-briefing-teachers/>
17. <https://www.nesta.org.uk/blog/cracking-code-maths-challenge-students-open/>
18. <https://www.nesta.org.uk/project/longitude-explorer-prize/>
19. https://www.cipd.co.uk/Images/understanding-and-measuring-job-quality-1_tcm18-33193.pdf
20. <https://www.nesta.org.uk/report/imagination-unleashed/>
21. <https://www.nesta.org.uk/project/collective-intelligence-grants/>
22. <https://gov.wales/over-200-companies-sign-economic-contract-first-year>

About Nesta

Nesta is an innovation foundation. For us, innovation means turning bold ideas into reality and changing lives for the better.

We use our expertise, skills and funding in areas where there are big challenges facing society.

Nesta is based in the UK and supported by a financial endowment. We work with partners around the globe to bring bold ideas to life to change the world for good.

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