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OUR WORK SUPPORTING  
TECHNICIANS



GATSBY



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## TECHNICIANS: A CRITICAL CHALLENGE FOR THE UK ECONOMY

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Technicians are the linchpins of the UK economy. They work alongside scientists and engineers throughout many of the high-growth industries, from food and health to aerospace and construction. The average technician will work as part of a team, be highly skilled (to around Level 3 or 4), and will apply their knowledge of science, technology, engineering and maths (STEM) in a practical setting. Typically, technicians will be responsible for overseeing production and solving any practical problems that arise in the workplace, but many also work in research and will often help their businesses to develop new products and processes.

Indeed, technicians will be integral to overcoming some of the great challenges of the coming years and decades – from updating our transport infrastructure and local internet access, to securing our future energy supply. Currently, over 1.5 million technicians are employed in the UK.



The majority of these technicians are employed in engineering roles but there are also significant numbers working in science, health and technology. However, an ageing workforce means that 50,000 of our best technicians are retiring every year, and forecasts show we will need as many as 700,000 more technicians by 2020 to meet demand from employers.

Working as a technician is a highly-varied and rewarding role with good levels of pay and opportunities for career progression. But the best technician jobs do not make it on to the radars of most young people. As a result, large numbers of young people are leaving school without the qualifications employers look for when recruiting technicians.



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The lack of good careers advice in schools and colleges does not help, but this is also symptomatic of a wider cultural problem – for decades, government and society at large have overlooked how important technicians are to the economy.

At Gatsby, working in partnership with a range of stakeholders, we are trying to correct some of these long-standing problems. We are supporting projects and ideas that aim to provide a steady stream of new technicians into the labour market, and open up technician occupations to all young people as they progress through the education system.

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# GIVING TECHNICIAN OCCUPATIONS THE STATUS THEY DESERVE

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The occupations and professions with the strongest reputations gain their status and identity from the public, not from government or its agencies. These professions prize highly their independence and, crucially, they use professional standards and schemes of professional registration as a means of self-regulation.

All training and qualifications must meet these standards, which guarantees a minimum level of occupational competence and reinforces the strength of the profession and its reputation amongst the public.

We believe that a robust set of professional registers for technicians will help to give technician occupations the status they deserve. While technician registers have existed in a limited form for a number of years, we are working with professional bodies in science, engineering and technology to expand this activity and make professional registration for technicians the new norm.

Advances in science and technology are changing the nature of the technician labour market. Certain occupations, such as plumber, now require more knowledge and skills than they have done in the past, and technological developments have also created new and additional technician roles in sectors such as health, agriculture and the creative industries. Gatsby will be working with other stakeholders to explore how best to recognise these new technician roles.

ENGINEERING	<p>The three largest engineering professional bodies (the Institution of Civil Engineers, Institution of Mechanical Engineers and the Institution of Engineering and Technology) have agreed to work together to grow the number of registered engineering technicians (EngTech) in their membership to 100,000 by 2020. The coordinated campaign, 'EngTechNow', is working with major employers and their supply chains to help them understand how EngTech registration can benefit their businesses.</p>
SCIENCE	<p>The Science Council has licensed nine professional bodies, including the Royal Society of Chemistry and the Society of Biology, to elect technicians to two new science registers – Registered Science Technician (RSciTech) and Registered Scientist (RSci). Gatsby is supporting the Science Council to work with the professional bodies in their efforts to register 30,000 technicians by 2018.</p>
IT	<p>BCS, the Chartered Institute for IT, is working with employers and other stakeholders to promote a new Registered IT Technician (RITTech) register that will recognise the many different roles of an IT technician, from front-line IT support through to database management. The new register will be launched in the spring of 2015.</p>
THE UNIONS	<p>UnionLearn, the education and skills arm of the TUC, is working with the unions to promote technician registration in unionised workplaces. Through their negotiations with employers, unions can make sure their technician members have the opportunity to work towards professional registration as part of employers' continuing professional development (CPD) programmes.</p>

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# STRENGTHENING APPRENTICESHIPS AND REIMAGINING THE UK'S TECHNICAL EDUCATION

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We need to establish a national system of technical education that provides business with a world-class cadre of technicians and gives young people a clear, distinct route from education into high-skilled, technician occupations. In order for this to happen the country needs:

- Technical qualifications that are respected by employers and therefore have value for the individual in the labour market
- Infrastructure that delivers high-quality teaching using industry-standard facilities and equipment
- A funding system that enables colleges, individuals and employers to participate in technical education.

As things stand, however, a number of barriers in the FE sector prevent this from happening.

FE colleges are rightly proud of their capacity to provide a diverse curriculum, which accommodates a range of age groups and abilities. But this need for diversity makes it hard for colleges to specialise – particularly in more technical, STEM-based education that often requires longer-term planning and can be expensive to teach.

In order to establish a truly nationwide technical education system, we believe the institutional framework of the post-secondary sector will need to be re-configured. We are currently talking to partners about what this new institutional framework for technical education might look like. But we are also supporting projects and ideas that aim to expand the excellent technical education that already exists in this country, especially in apprenticeships.





Apprenticeships have become very popular with young people, and most apprenticeships in technical roles are now heavily over-subscribed. A good apprenticeship, in the eyes of young people and their parents, has become the credible alternative to university.

However, the current apprenticeship system does have its weaknesses. Too many apprenticeships are not worthy of the name. Narrow, low-level or job-specific training that lasts just a few months is not an apprenticeship, and the dramatic rise of this type of training in recent years is beginning to take its toll on the apprenticeship brand.

At the same time, there has been too little growth in technical apprenticeships – STEM-based programmes at Level 3 and above that last at least three years and train (predominantly) young people towards mastery of an occupation.

Below is some of the work we are supporting to help increase the number of technical apprenticeship places and the quality of the apprenticeship programme in general.

#### APPRENTICESHIP TRAILBLAZERS

Gatsby has been supporting groups of employers that are 'trailblazers' for the government's apprenticeship reform programme. As part of the reforms, employers are creating new standards for apprenticeships that are linked to professional standards – this will allow apprentices to register with a professional body when they complete their training.

#### TECHNICIAN APPRENTICESHIP CONSORTIUM

Over two years ago, a group of engineering consultancy firms came together to design and plan the provision of a new technician apprenticeship for their industry. The Technician Apprenticeship Consortium is now a self-financing part of the Association of Consulting Engineers, and is responsible for recruiting and training over 200 technician apprentices per year. Importantly, the apprenticeship was designed to meet EngTech standards, which enables all the apprentices to become registered technicians when they complete their training.

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