

# News story: Ministry of Defence confirms the death of Guardsman Mathew Talbot

It is with great sadness that the Ministry of Defence must confirm the death of Guardsman Mathew Talbot of The 1st Battalion Coldstream Guards, who has tragically died on counter poaching operations in Malawi on 5th May 2019.

On completion of his military training at AFC Harrogate and then ITC Catterick Gdsm Talbot was posted to Number 7 Company Coldstream Guards, based in London where he spent the first, formative year of his career conducting State Ceremonial and Public Duties. Since then Gdsm Talbot has been serving with The 1st Battalion Coldstream Guards, based in Windsor. This deployment to Malawi was his first operational deployment. Mathew took great pride in being a Counter Poaching Operator and in what he and the rest of the team was doing in Malawi.

Mathew was an exceptionally kind and friendly individual. In Malawi he was often to be found befriending the locals and learning their language, which he did remarkably quickly. He became good friends with the Gurkhas attached to the team and took time to try and learn Nepali. Mathew was a very keen photographer, documenting his time in the military with countless albums of his work. He particularly enjoyed capturing his time in Malawi. He loved music and his close friends will remember him as a big fan of Frank Sinatra. Mathew was an avid reader of military history and he was incredibly proud to serve in a regiment that had such a long and illustrious history.

Lt Col Ed Lauanders MBE Commanding Officer said:

I will always feel honoured to have served alongside Guardsman Mathew Talbot. He was a determined and big-hearted Coldstreamer who devoted his life to serving his country. It was typical of his character to volunteer for an important and challenging role in Malawi. He was hugely proud to of his work as a Counter-Poaching Operator, and tragically died doing great good.

Mathew was loved by his brothers in arms in the Coldstream Guards. We will sorely miss his humour, selflessness and unbeatable spirit.

My deepest condolences go to his parents, family and loved-ones. My thoughts and prayers are with them at this desperately sad time.

Major Richard Wright, Company Commander said:

As his Company Commander I only had the pleasure of Commanding Gdsm Talbot for a short period of time, but in the little time that I did have, my abiding memory of Gdsm Talbot will be that he never failed to make me smile. A real character who was always full of wit and never short of a joke or two, he quickly and easily made lifelong friends in the team.

During his time in the Army he enjoyed the adventure of training overseas. This included a recent exercise in Kenya where he found himself training in a harsh and demanding environment. Shortly afterwards, he volunteered to mentor and partner the Malawian Ranger Force in their fight against the illegal wildlife trade. A true Coldstreamer, fit, energetic and full of selfless commitment, Gdsm Talbot bravely lost his life whilst ensuring that endangered species will be around for future generations to learn from and enjoy. The loss of Gdsm Talbot will be felt throughout the Battalion and in particular by the soldiers and officers of OP CORDED and Number 2 Company, who knew him best. It is with great sadness that he leaves behind, his father Steven, his mother Michelle and sisters Aimee and Isabel and Olivia his girlfriend.

Lt Hugo Cazalet, Platoon Commander said:

Gdsm Talbot was an exceptional and unique personality, possessed of a quick and dry wit. He was a proud "Brummie" with an epic work ethic, he always worked hard for his mates and put the needs of the team before his own. He was a constant source of morale, even in the direst situations and his infectious humour ensured that his team were constantly smiling too.

Gdsm Tyler Ashton said:

Matt was a very close friend, with many good memories and he never failed to amuse me and make me laugh.

LSgt Louis Bolton said:

It's hard to find words at a time like this but I can honestly say he will truly be missed and remembered. Mathew was a unique character and genuine guy. Loved and trusted by all who cared for him. I can honestly say that no matter the time of day or situation he was in, he was always laughing and cracking jokes – we loved him for it.

Defence Secretary Penny Mordaunt said:

I was deeply saddened to hear of the death of Guardsman Mathew Talbot, who died while carrying out vital counter-poaching work in Malawi. This tragic incident is a reminder of the danger our military faces as they protect some of the world's most endangered species from those who seek to profit from the criminal slaughter of wildlife.

Throughout his career with the Coldstream Guards, Guardsman Talbot served with great courage and professionalism, and our thoughts and prayers are with his family and loved ones at this terrible time.

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## **Press release: Embrace the benefits of public scrutiny, councils told**

Councils are encouraged to embrace scrutiny of their spending decisions to achieve value for money, improve services and address the public's concerns in [new guidance](#) published today (7 May 2019).

New statutory guidance for local and combined authorities in England stresses the role of their scrutiny committees – made up of councillors – in holding them to account over local decision-making.

Developed by the government in consultation with the public sector, the guidance outlines what effective scrutiny looks like and the positives it can bring to local authorities.

Key points include:

- councils should adopt a position of sharing any information asked for by their scrutiny committee, and if information can't be shared in public they should consider sharing it in a closed session
- scrutiny committees should be constructive 'critical friends' with a vital role of amplifying the voices and concerns of the public when councils take important decisions
- local authorities should also consider whether contracts with companies delivering services should include a requirement to supply information to scrutiny committees

Minister for Local Government, Rishi Sunak MP, said:

Scrutiny committees form an integral part of the work of councils in delivering services by acting on behalf of residents to hold councillors and staff to account for the important decisions they

make.

That is why I have set out new guidance to ensure authorities and residents can reap the benefits of effective scrutiny, by instilling a culture that welcomes challenge.

Jacqui McKinlay, Chief Executive of the Centre for Public Scrutiny, said:

We welcome government's timely revision of its statutory guidance on scrutiny, and particularly its focus on leadership buy-in, culture and behaviours that are so central to ensuring that effective overview and scrutiny can operate, and make an impact, at local level.

We look forward to working closely with our colleagues at the Local Government Association and individual councils to use the new guidance as an excellent opportunity to reflect and review their current approach to scrutiny".

The [guidance](#), which applies to local and combined authorities in England, has been published on Gov.uk.

The guidance was developed by the Ministry of Housing, Communities and Local Government (MHCLG) with the assistance of the Centre for Public Scrutiny.

The government consulted widely with the sector to shape the new guidance.

MHCLG held a roundtable event in September 2018 attended by the Local Government Association, the Institute for Local Government, Association of Democratic Support Officers, the Committee for Standards in Public Life, Centre for Public Scrutiny, councillors and council scrutiny officers.

Submissions were received from more than 30 authorities, organisations and individuals with involvement in conducting, researching and supporting scrutiny, and MHCLG attended a County and Unitary Scrutiny Officers Network meeting to gain insight. Work was also informed by the Housing, Communities and Local Government Select Committee's report and submissions to it.

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## [News story: Probation reform](#)

We want a probation system that does just that while protecting the public, commanding the confidence of the courts and reducing reoffending.

The probation reform programme aims to improve probation services across England and Wales. We are ending current community rehabilitation company

contracts early and have sought feedback on our proposals to improve the structure and content of probation services.

## Progress

In the summer 2018 we launched our Strengthening probation, building confidence consultation on the future of probation services. We received 476 written consultation responses, heard from more than 1,100 delegates at 39 engagement events and engaged with staff across England and Wales. We have analysed the responses and have been engaging with a wide range of stakeholders to test our proposals. We will publish our response to this consultation in spring 2019.

We have taken steps to stabilise the current probation system and to improve the delivery of probation services. This includes changes to our 'through-the-gate' services including additional investment and a guarantee that service users will see their probation officer more frequently.

We are focussed on getting future changes right. Our team is designing new and improved services so that we have the necessary resources and the right structures to deliver locally. We will also support probation as a profession. We will make sure our staff receive the training they need and are recognised as probation professionals.

## Reform events

We are committed to engagement and [will hold consultation events](#) during the programme.

## Links

[Consultation events and materials](#)

[Consultation response](#)

If you would like to ask a question or send us your opinion please email [strengthening.probaton@justice.gov.uk](mailto:strengthening.probaton@justice.gov.uk)

If you have a commercial question please email [ProbationCommercialTeam@justice.gov.uk](mailto:ProbationCommercialTeam@justice.gov.uk)

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**[Press release: Minister for Europe accompanies The Prince of Wales and](#)**

# The Duchess of Cornwall on Their official visit to Germany

The Minister for Europe, Sir Alan Duncan will join Their Royal Highnesses, The Prince of Wales and The Duchess of Cornwall, on a visit to Germany, to celebrate the strong and enduring friendship between the UK and Germany.

During his visit – May 7-9 – Sir Alan will accompany Their Royal Highnesses as they attend The Queen’s Birthday Party, an annual event hosted by the British Ambassador at his residence in Berlin. On Wednesday (8 May) the Minister and Their Royal Highnesses will explore Leipzig’s cultural heritage and learn about the role the people of Leipzig played in the ‘Peaceful Revolution’ that helped to reunite Germany in 1989.

On the final day (9 May), Sir Alan will accompany Their Royal Highnesses to Munich, and join The Prince of Wales as he visits the headquarters of Siemens, to discuss the technological and scientific cooperation between the UK and Germany including in the areas of renewable energy and future workforce training.

The Minister for Europe Sir Alan Duncan said:

It is a great privilege to be representing the British Government on this important visit of Their Royal Highnesses, The Prince of Wales and The Duchess of Cornwall. The Royal Family play an important role as Ambassadors for the UK and in strengthening the ties between us and other countries and cultures across the world.

This visit will demonstrate the depth and breadth of the friendship between the UK and Germany, and its enduring importance to both countries. It will underline the strong historical and cultural connections between our countries, and ensure that our future relationship will be just as rich; through cooperation in technology, science and the economy, and building links directly with the German people.

The UK and Germany proudly cherish the same freedoms, defend the same values and champion the same system of international rules that keeps our societies safe. We both believe in democracy, transparency and equality as the fundamental values that underpin our societies and institutions. I am confident that our strong ties, shared beliefs and firm friendship will continue to flourish in the years ahead.

**Further information**

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## Speech: Reaching 2.4%: Securing the research talent of tomorrow

Good morning. I'm delighted to be here at the LSE today. This is the first in a series of four speeches on how I believe the UK can best achieve our ambition to invest 2.4% of GDP in research and development by 2027. And, later, 3%.

This is an important target, and one which sits firmly at the heart of this government's Industrial Strategy and our aim to make the UK the most innovative country in the world.

Achieving this goal is going to require significant investment. In 2017, the UK spent almost £35bn on research and development – or R&D – representing just under 1.7% of GDP.

To achieve our target of 2.4%, total UK R&D investment would need to rise to around £60bn in today's money. More than double our current investment levels. This would require us to have invested an additional sum of over £80bn cumulatively each year from 2017 across the public and private sectors.

But we are on the right track. This government has pledged to increase spending on R&D activities by £7bn over 5 years by 2022. This represents the largest increase this country has seen in R&D investment in nearly 40 years.

And as Minister for research and innovation, I will be making the case for this investment to continue as we approach the comprehensive spending review.

This case is made easier by the fact that we are already quite good at maximising our returns on R&D investment. Despite being home to just 0.9% of the world's population, the UK hosts more than 4% of the world's researchers; we have three of the world's top ten universities; and we produce more than 15% of the world's most cited research articles.

The UK really is one of the most innovative countries in the world and rightly deserves its title as an 'innovation leader', having scored 21% above the EU average in the 2018 European Innovation Scoreboard.

Maintaining and strengthening this position in the face of growing international competition will be key to our success over the years ahead. So, in the course of this series of speeches, I want to take us back to first principles and unpick, bit by bit, what achieving our 2.4% target really means. And in my first speech on this topic this morning, I want to move us away from our usual focus on money and investment, and turn our attentions instead to the people we are going to need to make our ambition a reality.

After all, it doesn't matter how much money we pump into R&D over the years

ahead. It won't make the intended difference if we don't have the right people in place. People to perform the ground-breaking research of tomorrow. People to develop world-leading innovations. And people to solve some of the world's most challenging problems.

Ensuring a strong pipeline of talent will be essential for bolstering the UK's research prowess. This means making sure we have the required number of scientists, researchers and technical support staff to support our pioneering R&D efforts.

The fact of the matter is, if we need to increase R&D spending by more than double our current investment levels by 2027, then we are also going to have to substantially increase the numbers of people we have working in R&D in the same period – perhaps by as much as 50%.

To put that in figures, that means we need to find at least another 260,000 researchers to work in R&D across universities, across business and across industry.

This is a big ask. So, we need to stop and ask some serious questions: where are these highly-skilled scientists, researchers and technicians going to come from? And what are we going to do, not only to tempt people to embark on a career in UK research, but also to get them to stay here and make the most of their talents and expertise?

These are the questions that I want us to address this morning.

## **Nurturing homegrown talent**

As it stands at present, the UK is the third largest producer of PhDs in the world. However, much of that is down to our ability to attract and educate talent from across the globe. When it comes to educating our own students to PhD level, we know we need to do much more. Both to encourage undergraduates to stay on for postgraduate-level study – and to address the gender imbalances and race disparities that continue to haunt the research profession.

Of course, we're continuing to make progress in these areas. The number of women accepted on to full-time STEM undergraduate courses has increased by almost 30% – largely thanks to the number of girls taking STEM A-Levels in England increasing by over 25% since 2010. But the proportion of women studying Physics is still notably lower than it should be.

And we still have some way to go to eradicate gender pay gaps in the sector and increase the proportion of women in academic and research leadership. Not to mention the number of Black and Ethnic Minority role models that will inspire others and show them a research career can really be for people like them.

As a government, we are thinking hard about the financial incentives that will also encourage more people to continue in higher education and research.

Not only do we have a comprehensive student support system for students



embarking on higher education across the UK. But, for students supporting their own postgraduate studies, we introduced Master's loans in 2016. And these are already having a visible effect on the number of students opting to stay on for postgraduate education.

Research commissioned by the Department for Education into the performance of the Master's loan in its first year of operation has found the number of England-domiciled students opting to study for a Master's degree at English universities grew by over a third (36%) in the academic year 2016/17.

It also found that these loans have led to a significant increase in the number of Black students to study for a Master's degree, a group historically under-represented in postgraduate education. Additionally, almost three quarters of the students surveyed who took out a loan said that they just couldn't have studied without one. This is welcome evidence that the loan is helping remove financial barriers and supporting individuals from all backgrounds to study for an advanced qualification.

And loans were extended to those studying at doctoral level from August 2018. Where we hope they will have a similar effect.

## **Attracting international talent**

But as well as developing domestic talent, I want us to attract the best and the brightest from across the globe.

As Universities and Science Minister, I am immensely proud that the UK boasts one of the strongest higher education sectors in the world. That it is home to many of the world's leading universities and research institutes. This is a great national asset and a major draw for international talent.

And this government is serious about making the UK their global go-to place. That's why we set out a clear ambition in our International Education Strategy earlier this spring: to grow the numbers of international students studying in UK universities to 600,000 by the end of the next decade.

Many of these students will be studying here at the postgraduate level, for Master's degrees or PhDs. And we will introduce an automatic one-year 'leave to remain' period following the completion of all doctoral degrees.

This will give international PhD graduates the time they need to find an appropriate research position after their studies – whether that be by continuing as post-docs or early career researchers in our universities and colleges. Or by taking their skills over to industry and bringing their ideas and innovations to market.

On this, we are making it easier for international graduates to move into skilled work. International students studying for undergraduate level and above will be able to apply for a visa three months before their course finishes. Enabling them to take up skilled work after their degree. They will also be able to apply for a skilled work visa out-of-country under the same preferential conditions as they would experience if they were to apply for a

visa in-country.

In addition, a reformed sponsorship system will provide a simplified and more streamlined system. This will be less burdensome for employers and will enable businesses to harness the talent they need more easily.

We are also investing in more international experiences for our own UK students. This will help develop them as 'global citizens', and ensure students of all backgrounds can add to our pipeline of talent on their return.

International experiences enrich the education and personal development of our citizens, not to mention break down barriers to social mobility. That is why I was delighted to announce new DfE funding that will support UK undergraduate students from disadvantaged and under-represented backgrounds to take part in short research internships at Canadian universities through the Mitacs Globalink scheme.

And I hope this is just the first partnership of many to help boost opportunities for UK research talent going forwards into the future.

As a government, we want to be doing all we can to protect and grow our share of research talent. And we are serious about working together with the sector to ensure we are giving early career researchers, regardless of where they come from, sufficient opportunities for progression.

## **Funding PhDs and other programmes**

But if we are to attract, retain and develop the research talent we need – both domestic and international – we must ensure we have the programmes we need too.

And we have invested significantly in programmes, delivered by UKRI and the National Academies, to make sure this is the case. In 2017, we announced funding of over £300m over four years to increase the number of PhDs and fellowship programmes.

We have committed more than £100m to the Rutherford Fund to deliver around 1,000 fellowships and placements for early-career and senior researchers.

And, in June 2018, we announced a £1.3bn investment in UK talent and skills to grow and attract the best in science and innovation. As well as £350million for prestigious National Academy fellowships. This included £900million for the new flagship UKRI Future Leaders Fellowships, open to the very best researchers from around the world.

Well, today I am pleased to announce the very first 41 Future Leaders Fellowships. Who will be provided with funding and support. And who will be instrumental in developing the next generation of research and innovations in their chosen disciplines – from the natural environment to big physics.

It's an incredibly exciting programme and I am delighted to have been able to announce the Fellows today.

And I am just as excited to announce a first call for the new Stephen Hawking Fellowships. Working with the Hawking family, UKRI will support up to 50 postdoctoral scientists in theoretical physics over the next five years. In recognition of Professor Hawking's exceptional contributions to scientific knowledge and the popularisation of science. This call is now open. And I would encourage anyone eligible to apply.

Because we need to ensure the very brightest minds are in a position to help us address the huge environmental, social and technological challenges the world is facing today.

That is why we're focused on supporting highly-skilled people across disciplines to tackle these issues – what, in our Industrial Strategy we have called our Grand Challenges – from Artificial Intelligence to Clean Growth.

In the field of AI, we have recently announced a package of measures. Including Master's degrees, funded by industry. Alongside an additional 1,000 new PhD students across 16 dedicated AI Centres for Doctoral Training. And new Turing AI Fellowships. The first wave of fellowships was launched earlier this year as part of a scheme designed to attract, develop and retain global AI talent in the UK.

## **Boosting researchers' skills and success**

But success in research isn't just about knowing your subject inside out – though undoubtedly this is essential. It's about other skills and experiences too, particularly when making the move from academia to industry. And we need to encourage these if we are to create the UK research environment we want to see in the future.

Between six and seven thousand PhD students per year are funded through UKRI, through its studentships and training grants – including Centres for Doctoral Training and Doctoral Training Partnerships. These models allow students to be trained in cohort environments and take a collaborative approach. Working with partners – including from industry – to create well-rounded researchers who are able to continue and pursue R&D careers.

Recent investments in Centres for Doctoral Training will support more than four and a half thousand PhD students, in fields from quantum, to medical technologies.

I was particularly pleased last month to see the University of Liverpool leading an innovative new project worth almost four and a half million pounds to boost the success of post-doctoral researchers outside academia. The 'Prosper' project is funded largely by Research England and other industry partners. It seeks to break down the barriers facing early career researchers when moving from careers in academia to industry.

Because, to make it in industry, as well as having specialist technical knowledge, today's researchers need core transferable skills – things like an ability to communicate effectively, to influence, and to work collaboratively.

The Prosper model seeks to give post-doctoral researchers the “soft skills” they need. And, so, should help them develop into the high-performing technical and business leaders of tomorrow.

I also know schemes like the Brilliant Club, whose founders I met earlier this spring, are doing highly valuable work. Not just in reaching out to school pupils from under-represented backgrounds to raise their aspirations. But also by training and developing doctoral and post-doctoral researchers to become highly effective communicators and leaders. These skills won't just help them if they choose to stay on in education. They are vital for a whole host of business and industry careers too.

## **Towards better research careers**

But as well as ensuring people have the skills they need to pursue a career in research, we need to ensure conditions are such that they want one. Currently, there are problems here.

According to research by Vitae, over 70% of post-doctoral research staff in higher education are employed on fixed-term contracts, with 20% employed on contracts of a year or less.

Many researchers, especially at the early stages of their careers, can find themselves going from one short-term research contract to another, without any job security or, indeed, any inclination of where they might end up next.

It is this uncertainty and insecurity that drives many talented researchers out of academia and perhaps out of research altogether. And this is particularly true of female researchers, who are already under-represented in STEM disciplines and may be unable to realise their full potential.

But it doesn't need to be this way.

Admittedly, the Roberts Review back in 2002 did much to shine a light on the precarious nature of academic research careers. And thankfully, it led to many UK universities thinking seriously about how they employ and develop research talent.

In many respects, the UK has long been a world leader in this area – not least through its Concordat to Support the Career Development of Researchers, first launched in 2008.

However, with more researchers needed in the future to power our national R&D ambitions, now is the time to increase our support for researchers. And to look again at how we can ensure they have a healthy and attractive working environment in which all researchers can flourish.

I am pleased that an independent review of the Concordat has just taken place to ensure it is up-to-date to meet the needs of today's researchers. And I look forward to seeing the revised version of the Concordat when it is published later this summer.

As Universities and Science Minister, I am serious about taking the Concordat

forward. And I am pleased to be hosting a high-level meeting with the Chair of the Concordat Strategy Group, Professor Julia Buckingham. Alongside Sir Patrick Vallance and other key sector leaders, to discuss how we can further improve research careers in the UK.

I have said it before and I will say it again today: I am keen that postgraduates and early career researchers do not get lost from current and future policy debates – particularly around key issues like mental health and wellbeing.

Post-docs are increasingly the Cinderella of the academic community – being neither students nor conventional academic staff members. So, their stories often go unheard and their concerns unaddressed.

Yet, these are the people who are often juggling job insecurities with poor work-life balance. And all against a culture that many feel prevents them from speaking out and admitting their struggles – for fear they will be perceived as weak and not fit for the job at hand.

Our current research culture relies on dominant power structures, where doctoral candidates and post-docs are largely dependent on supervisors or PIs for references and progression. This puts the power firmly in other people's hands.

Is it any wonder, then, that less than half of doctoral researchers report they would be likely to disclose any mental health and wellbeing issues to their supervisors? This closed culture urgently needs to change.

So, I hope future joint work by the Office for Students (OfS) and Research England into the mental health and wellbeing of doctoral researchers can identify good practice to take forward in this area.

I also encourage the OfS, Research England, and UKRI as a whole to look more widely at how the implementation of current policies affect researchers on the ground. The three higher education excellence frameworks – namely the REF, TEF and the KEF – are all integral to the way we govern and fund higher education, science, research and innovation. But we need to make sure they are not disproportionately affecting early career researchers and putting extra strains on their work. The recent headlines about universities spending around £87m on non-disclosure agreements since 2017 doesn't help us to project an image of a sector that cares for its employees.

Non-disclosure agreements exist for many purposes – such as protecting valuable research findings should a staff member change jobs. But in no circumstances should they be used by universities to 'gag' staff after experiencing poor behaviour in the workplace, including bullying, discrimination or sexual misconduct.

Let me be clear. Any use of this sort of agreement to silence people or hide details of unfair practices is an outrage, and risks bringing the reputation of our world-leading higher education system into disrepute. Universities need to wake up to this fact and the very real threat it poses to the

reputation of the sector.

The government has recently consulted on proposals to tighten the laws around NDAs and confidentiality clauses for workers. We will be publishing our final proposals in due course. These will make clear in law that victims of harassment cannot be prevented from speaking to the police or reporting a crime. And ensuring they are clear about their disclosure rights.

We need to take collective action now to stop the misuse of NDAs if we are to prevent any more talented people from being pushed out of academia. And the wider research pipeline.

That's why I strongly support Universities UK in its call to sector leaders to make sure all staff and students have a safe experience at university.

As Minister across both the universities and science briefs, I am keen that we take a cross-departmental and cross-sector approach to the long-term career paths of researchers. And that we work together to tackle some of the systemic issues that are hampering the appeal of a research career, both inside and outside academia.

## **From academia to industry**

On this, a key message I want to get across today is that academia isn't the only place where talented researchers can have long and meaningful careers.

It is particularly important we recognise this, since very few highly-skilled researchers will stay within the academy.

Research by Vitae in 2017 showed that of the 80% of researchers in the UK who aspire to a future academic career, 60% expect to achieve one, yet only between 5 and 10% will actually ever get one.

But this doesn't mean that the other 90% or so are not pursuing worthwhile research careers. Over 70% of doctoral graduates in the Physical Sciences and Engineering, for example, work outside academic research four years after graduation.

If we are to stand any chance of meeting our 2.4% target, then we need to make sure this continues and that talented researchers go on to use their knowledge and skills in business and industry.

We also need a good number of researchers embracing their entrepreneurial spirit and starting their own spin-outs and SMEs.

For too long, there has been a stigma in this country around pursuing non-academic research careers. So, we should never look down on early career researchers if they opt for a career outside academia. Rather, we should actively encourage our PhDs and post-docs to see the merits of pursuing an R&D career in other sectors and industries.

For one, we need to stop talking about jobs outside academia as being 'second choice careers' or 'Plan B options'. For our 2.4% target to work, we need

people to be actively considering research careers across the entire science and innovation system. And aspiring to become industry employees or entrepreneurs from the get-go.

And to do this I think we need to be positive and passionate about the hugely exciting potential of such work. About the role research – and particularly the point where business and research meet – will play in helping us to adapt to our changing world.

I have already mentioned our Industrial Strategy “Grand Challenges” – the huge environmental, social and technological challenges the world is facing today. We want to make sure that the UK is leading the way in responding to these challenges.

This will require all of our best minds pushing frontiers of science and research and applying this into game-changing innovations and new ideas. This means helping researchers and academics connect better with businesses and supporting researchers to develop their own ideas. These businesses could become the industries of tomorrow. And it makes it a hugely exciting time to work in industry as a researcher.

But it's not just about meeting challenges. It's about meeting the needs of business. We know from the Employer Skills Survey that employers in the UK report a persistent demand for graduates with STEM skills. And we anticipate this demand will only continue to grow over the years ahead.

Across numerous sectors, employers report a significant demand for highly-skilled professionals, especially in IT and Engineering. As well as a need for staff with complex numerical and statistical skills. It may surprise you to hear that over 60% of roles on the Home Office shortage list are STEM roles – primarily seeking either Engineering or digital expertise.

So, isn't it high time we start to better connect graduates with the evident skills gaps we are experiencing right across our labour market?

Yet, this isn't going to be easy when many of their main role models inside universities know very little about careers in industry. And are themselves either unaware or unconvinced of the strength of research positions outside academia.

There are schemes that aim to address this issue – such as the Royal Academy of Engineering's Visiting Professors scheme. This funds senior industry practitioners to participate in course development, face-to-face teaching and the mentoring of Engineering undergraduates at a host university. It is a great programme, but it is not widespread practice.

The difficulties aren't just on the side of universities. Some employers are unused to recruiting PhDs and don't fully understand the benefits that those with higher academic qualifications can bring to their workforce. I think of this as the 'graduate paradox' – the higher the academic qualifications you have, the less professionally qualified you may seem. This, I feel, is a particular UK problem we need to address.

For too long we have had a culture in this country that doesn't generally recognise, let alone reward, PhDs outside academia. But this is not the case in other European countries. In Germany, for instance, a PhD is often seen as a prerequisite for progression to senior roles in business and industry.

Yet, here in the UK, people with hard-won PhDs sometimes choose to hide their doctoral qualifications when applying for professional roles outside academia. And many can find themselves having to spell out to sceptical employers the skills and experiences they have gained during the course of their studies.

To get people thinking differently we urgently need to change mind-sets. And to boost the appreciation of postgraduate degrees among employers and wider society.

We need a culture change right across the innovation system. Not just among academics to get them to realise the transfer-ability of their research skills. But among employers – so that they, too, can make it easier for researchers to make the transition into industry-based roles.

Academic research and industry research should never be two distinct entities. There should be transferable pathways between the two. So those with industry-experience are welcomed into academia for their 'on the job' knowledge later in their careers. And those with academic experience can venture into industry and back again at any time they choose.

Changes such as this will help keep international researchers in UK R&D long after they have graduated. And also help to boost the numbers of domestic students choosing to stay on for postgraduate degrees and research careers.

As I have argued today, this will be vital to achieving our long-term aim: boosting the numbers of researchers in this country by more than 50%, to cement our R&D success.

Retaining domestic and international talent.

Funding the programmes we need.

Boosting skills.

Improving careers.

And strengthening the links between industry and the academy.

These are the ways we will nurture the talent we need now to meet the challenges ahead. To give the economy the boost it needs. And to help adapt to our changing world.

Thank you.