

Keynote Speech: Making the UK a Scientific Superpower

Speaker: Andrew Griffith, Minister

ANDREW GRIFFITH: Thank you. Good afternoon. It's a delight to be here and to see so many of you here at this incredibly important nexus between government, private capital, our prodigious ability to undertake research and to spawn that research into life-changing problem-solving innovations.

The original idea of the UK as a scientific superpower came from this government, from the Prime Minister who created the department, your department, the Department of Science, Innovation and Technology. And it is exactly our job, our mission statement, the thing that we are measured against and dispense your taxpayers' money against is that vision of creating a UK scientific superpower.

Let me canter through quickly what I think are some of the key ingredients, but let me reiterate that the Oxford and Cambridge Arc supercluster is an absolute perfect example of that and something that I and this government are full square behind. It's a perfect global manifestation of what a UK science and technology superpower looks like.

You need no reminder, the people in this room, of the success, global success, of our scientific research and innovation. Four of the top ten universities in the world per capita, a greater number of science breakthroughs, citations and Nobel prizes than anywhere in the world. And that is a great national asset.

When we think about how this country competes, how we drive the productivity and prosperity of our nation, fairly uniquely in the world, science and research, the life sciences, biology, some of the physical sciences are really large economic industries for this country. So crudely, anybody seeking to try and grow the economy of the United Kingdom has to put science and technology and innovation four square at the front of it. It's one of a relatively small number of sectors that are going to continue to drive our economy. So it is absolutely critical that we get that right.

There's no room for mistakes, for error, for failure. It's absolutely critical to the future of our country, it's critical to many other domains that we would worry about, we as citizens would worry about our future geopolitical security, about how we challenge ourselves to transition very quickly to new forms of clean energy. Our contribution to a world of growing population in terms of extending human lifespan and the quality of life, and how we feed the next 2 billion people on this planet. All of these are very significant contributions made by the United Kingdom as a science and tech superpower.

But it's fundamental to how we grow the economy. And to do that, we need to meld that strength in science and research, nurture that, continue to grow it, provide it with the supportive frameworks in terms of publicly financed research that this government has done.

We now have record levels of support for science and research, something that I think we sometimes gloss over. If you think about it, this government has held fast to its commitment to a significant expansion, in real terms, far ahead of inflation, in what we spend on research and development and innovation through Covid and through the impact and the cost of energy

caused by Russia's invasion of Ukraine. And that's quite material, because that would not be true of most departments and not be true of most commitments.

So at a time when the public purse has understandably been squeezed by these external factors, actually, one of the commitments that we have delivered upon is that significant increase. And I would very much hope that any government that comes in now continues that, because the worst of all worlds is not to follow through and not allow that to scale.

So you take that great historical legacy, strength in science and research, you ensure that, as much as possible, there is clarity and continuity of public funding for that science and innovation, tilted, if I may, more towards the innovation end. That's where the largest expansion we have seen, because that is what is closer to market and closer to realising some of those opportunities.

The second ingredient that we are enormously fortunate to have, the fertiliser, if you like, of that base, is access to capital. And the United Kingdom has the second largest pool of capital on the planet, second only to the US at the moment. And so, as a country, the credibility of our ability to turn your fantastic innovation into scalable ideas, is that access to capital.

Quite a lot has happened along the way to underpin that. You may probably not have heard of the Mansion House reforms to our pension funds. Pension capital is incredibly important. Why? It's important to you, because it's your pensions, and you would seek to have that capital grow and you can deliver the best outcomes in retirement. But it's really important to how you deliver a science and technology superpower, because that is the long-term capital that can follow those ideas, a lot of which will be deep tech, long runway scaling, the life sciences, building biofoundries, taking new technologies like quantum all the way through to market long funding curves.

And therefore, you need to match that with something that we have in abundance, if we can make that flow in the right way, which is long-term capital. So, two basic building blocks. The UK is enormously fortunate to have these, and we as government, and I hope any government, have cherished them. We try to reform those in positive ways that will increase the pace of innovation and deliver better outcomes.

And then the third thing, I think it's maybe a philosophical point about the role of government, is then to try and remove all of the blockages and frictions. And we know when it comes to something like creating a supercluster, that the physical environment can be one of those. The planning system, the right infrastructure, making sure that we have the right homes in the right places to allow the workforce to expand, and making sure, again, that we remain open to capital, because those bioscience parks and some of that infrastructure can only realistically be delivered by a combination of government and private capital.

That's the superpower, the augmentation of that. And so it's really important that as a government, we remain open to those providers of risk capital where we are competing. I suspect almost everybody in this room - we are competing for your time, your attention and your capital, against many other places in the world, emerging markets that are hungry to emulate the success that we have in exactly the same sectors we have. Everybody has a choice. This government has never forgotten - I've never forgotten that my background is in business and finance - that people have a choice. And it's imperative that we, if we're trying to realise a vision of the UK as a science and technology superpower, that is not a unique vision. And we've

absolutely got to make sure that we remain open and supportive of the private capital that will be needed to do that.

We want to create the right frameworks in terms of access to intellectual property. It's why this government has done quite a lot with Andrew and Irene on the spin-out review. Really important, really important to creating AstraZeneca. Wonderful AstraZeneca here today. But how do we create the next AstraZeneca, or the next ten AstraZenecas? They will today be sitting there as part of looking potentially at a university spin out, exploiting intellectual properties.

So we spent a lot of time on things like that to create that right environment in which to succeed. And then finally, we need to drive the adoption of innovation. So we've got the innovation, we've got the ideas, we've got the capital to potentially scale them. We've knocked down some of the points of friction in creating campuses, biofoundries, the space in which those businesses can scale. We also have to remember that as government, we spend four in every ten pounds of money in the economy. So there is a huge role for government, be it the national health system, be it government procuring, local government as an agent of technology change, to be able to procure, and as it's so doing, support these emerging technologies, defence, it could be across the whole of government.

So government has a role in creating markets, building markets, and allowing entrepreneurs and successful businesses quite quickly to be able to access and scale. Let me just conclude with my final point. We've got a big red, glowing thing in front of me now, but I think the final point, which you can all help with, enlist you all to the course, is to embrace risk and risk-taking. And that is not always fashionable. And it's very hard in government for people to take risk. But without risk, there is no innovation. It was a risk when explorers sailed across what they thought was a flat earth and discovered new continents. And risk is endemic in that process of innovation.

And so if we are to deliver the vision of the UK as a science and technology superpower, I've always advocated for a greater tolerance of risk-taking. Risk-taking involves failure and a greater tolerance of failure, particularly true in the public sector. It is hard to drive risk-taking into the public sector, but we've got a colleague from Innovate UK. Innovate UK is very good at that. They accept that. And across the general system, I would like the culture to tilt more towards taking risks, because that is how we can actually deliver all of these things.

So, some quite mechanistic points, building on really strong strengths in the UK. You at the centre of that, a global manifestation with top brand awareness across the world, an openness to private capital, a determination to knock down the barriers to success. That's what I hope this government has started the journey of doing. That journey is far from complete. So what I hope this next government, if it was from my party, would continue. And regardless of the outcome, I hope that is an agenda, a set of programmes of work that any government coming in can work with all of you to pick up and deliver your vision. Thank you.

MODERATOR: That's fine, yes, thank you. So, the people have spoken. Got a few questions coming through on Slido. We only have time to do a couple of them, given the agenda. One question on Brexit, which I'll leave second while you can sort of mull over your response to that, the first question here, though, is we've heard a lot about the need to attract global talent. How are government policies making the UK a welcoming, attractive place for people to come?

ANDREW GRIFFITH: You've got a couple of things. First of all, you've got the signal the government sends, signal about being open. Clearly rejoining Horizon was part of that. The new global talent visas that we've put in place, the fact that we've formed new agreements with so many countries around the world, the AUKUS alliance, if you like, the fact we've got agreements, I've signed some agreements on quantum with some other top tier countries. So I just think it's very important that you maintain an outward-looking stance so that people are confident that's where the UK is and should be, which I believe is the case.

But second, you also got the mechanistic points about, if someone's locating here, they're going to look at the country's attitude to wealth creation. What would happen on people's taxes? What if you want to build a business here? Is the government on your side or not? And there's some jeopardy. There is some jeopardy. People talk about taxing non-doms. The more some people think, well, if I'm going to go and build a successful business and I'm going to create prosperity and wealth, then there's other places I can do that as well. We are in a global competition for talent, so there's mechanistics, can people get the right visas? But there's also societal attitude to being very open. Thank you.

MATT ALLEN, EXEC DIRECTOR OR OXFORD-CAMBRIDGE SUPERCLSUETR BOARD: I think you've partly answered the Brexit question, but do you think Brexit has been a good thing for UK's journey to becoming a science superpower?

ANDREW GRIFFITH: Yeah, I do, for sure, actually. Partly it gives us the ability to set our own rules. Right. That's not controversial. I mean, Canada, you know, global, top tier country, sits next to a really big global market in the US, but it doesn't feel that the US Congress needs to go in and make its own rules for it. It's a rulemaking country. We've taken advantage of divergence in some limited ways to mobilise capital.

So I was talking quite a lot about patient capital. One of the big sources of patient capital is how you regulate long-term insurance contracts. And we have taken advantage of that. And the ABI have committed that our big insurance companies, Legal & Generals and things of the world, the sort of people who will absolutely be funding life sciences and housing developments are going to put £100 billion incrementally to work over the lifetime of the next government. Right, between now and 2031, £100 billion of mobilised private capital. That simply would not be the case if we continue to follow an existing set of European rules. That's one example.

There's other examples in terms of how you think about artificial intelligence, what we can do on gene editing, what we can do on raising the standards of animal welfare. So I don't think anyone should go on a sort of tear to diverge for divergence sake. But there will, over time, be meaningful ways in which you can compete with some of the most agile states in the world, right? The pace car, when you look at, you know, trying to be a science and technology superpower is rarely the European Union, right? Fantastic science, research, innovation that goes on. But the pace car tends to be countries outside of that. You know, it could be the US in Boston, it could be Singapore, there's a whole bunch of places could be Riyadh. I mean, there's a lot of people out there who would love, understandably, for the aspirations of their citizens to eat our lunch.

And we can compete in lots of different ways, right? We can compete from our legacy, our strengths in the past. We can compete from our size, although we're not the largest market in the world, or you can compete by being regulatory agile compared with some of those countries as

well. So I think there's a package there. It's not a point of dogma, but that's a settled position. We as leaders need to move on with that and turn that into tangible advantages for people.

MATT ALLEN: And one final question, if you don't mind, which has been upvoted on Slido, which goes back to what Irene Tracy Davis at Oxford said this morning, in terms of they're having trouble spinning out businesses, they're spinning out way less than they can because of the access to space. There's nowhere these businesses to go. And she cited the planning system as being a barrier. How do you think that can improve to enable those businesses to come forward?

ANDREW GRIFFITH: It's a big barrier, but it's not - I mean, to unpick our planning system, you've got to look at lots of different layers. So from a national level, we have significantly loosened the planning system, right. Particularly for the sort of national infrastructure that we want, where that often hits the road. And I've spoken to Irene and others about it is actually a local council, right, which is not controlled by central government. Actually, most of them are controlled by opposition politicians. So the issue is not generally, you know, what someone in Whitehall says, because we're all going to say, you could have my shadow here. We'd all say, look, we need to get on and deliver lab space, science parks. We need to convert new space to make sure that can be turned into the labs or whatever the constraining factor is.

The issue is often, you know, where the rubber hits the road a little bit in terms of the local planners. And there I would just ask people to look at what we are trying to achieve, look at what you are trying to achieve. And of course, there will be trade-offs individual local areas, but by and large, planners need to understand where we are trying to get to as a country.

MATT ALLEN: That's all we've got time for. Thanks very much for joining us today, and please thank Andrew again