Select Committee on Science and Technology

Corrected oral evidence: Science Minister and the Government Chief Scientific Adviser

Tuesday 5 March 2019

3.25 pm

Watch the meeting

Members present: Lord Patel (The Chairman); Lord Borwick; Lord Fox; Lord Griffiths of Fforestfach; Lord Hunt of Chesterton; Lord Kakkar; Lord Mair; Baroness Morgan of Huyton; Baroness Neville-Jones; Lord Oxburgh; Lord Renfrew of Kaimsthorn; Lord Vallance of Tummel.

Evidence Session No. 1 Heard in Public Questions 1 - 16

Witnesses

Chris Skidmore MP, Minister of State for Universities, Science, Research and Innovation, Department for Business, Energy and Industrial Strategy and Minister of State, Department for Education; Gareth Davies, Director-General, Business and Science, BEIS; Sir Patrick Vallance, Government Chief Scientific Adviser, Government Office for Science.

USE OF THE TRANSCRIPT

This is a corrected transcript of evidence taken in public and webcast on www.parliamentlive.tv.
Examination of witnesses

Chris Skidmore MP, Gareth Davies and Sir Patrick Vallance.

Q1  **The Chairman:** Good afternoon, Minister, Sir Patrick and Mr Davies. Thank you very much for coming today, to talk to us, mostly, and for us to listen to your views. I see you are popular, because we have never had such a big gallery before. Obviously the wider world and we are interested in what you have to say. We are also being broadcast on real-time streaming, audio and visual, which is good.

One or more of you may wish to give a few minutes’ presentation, so please feel free to do so. We then have questions, and no doubt there will also be some supplementary questions. I am immensely grateful to you for coming today.

**Chris Skidmore MP:** Thank you, Lord Chairman, and thank you to the Committee for this opportunity to address you as the Minister of State for Universities, Science, Research and Innovation. I am almost three months into the role tomorrow, and as someone with an academic background, having taught at the University of Bristol as a historian, I have been honoured to take part in government and in this particular role.

I am deeply passionate not only about universities but, as the son of a scientist, about the importance of scientific research and innovation. I passionately believe that science and innovation will be key to this country’s future prosperity and growth as we leave the European Union. We are already rated one of the most innovative countries in the world. We are an innovation leader on the 2018 European Innovation Scoreboard.

We only have 0.9% of the world’s population, yet we account for 4.1% of researchers and 15.2% of the world’s most highly rated cited articles, and are home to three of the world’s top 10 universities. You might have seen the QS rankings the other day that demonstrated the number of UK universities in the top three for subjects going from 25 to 36. It is extremely welcome and I want to be able to continue that international success.

I think 2019 is going to be a critical year for science and innovation, not just because of the issues to do with leaving the European Union, which I am sure we will touch upon, but because of the wider context, which I do not want to forget. We have the CSR later this year, which will be critical also for setting out the financial envelope of the public spend which the UK Government are willing to commit, knowing that we have already committed to spending an additional £7 billion between 2016 and 2021 on research and development. Currently we spend roughly 1.8% of our GDP on R&D.

The new figures will be out shortly, later in March. I am keen to ensure as Science Minister that I make the case into the spending review that if we are going to hit 2.4% for 2027, with an ambition of hitting 3% by
2030 and beyond, we need to be able to set out an effective road map that demonstrates where and when that public investment will be made and how we are going to leverage in private investment.

I also feel that this year is going to be critical in our future position with the rest of the world when it comes to mobility and future immigration. With the immigration White Paper, I need to ensure that I make the case for science and the research communities going forward and that we underline the importance of having a highly mobile system that will ensure that international research and collaboration can continue, unaffected by any new immigration regime.

On the first Brexit issue and our relationship with the EU and its member states, I am committed to ensuring that I can retain the best possible collaboration with our European scientific partners. I often say that the world of science does not recognise political boundaries and borders, and I want to ensure that that continues.

We know that our participation in Horizon 2020 has been highly beneficial to the UK. We have put in roughly £4 billion and got £5.7 billion back out, and I want to ensure, even in a no-deal scenario—obviously my priority is for a deal, and I am sure we will talk about that—that, under the no-deal guarantees and the underwrite guarantee extension that protects the existing programmes that are currently under way as a member state, we look at what we do beyond exit day to protect some of those partnerships in research and at our association into the future European science projects of Horizon Europe.

Two weeks ago now I was in Brussels taking part in the European Competitiveness Council. This was key. It is probably the only occasion on which I will speak as a Minister at the European Council now, my last, but it was important that I was there, while we still are an EU member state, to make the case for developing the regulations. The process is going well. A partial general approach was agreed on 30 November, and the consideration at the Competitiveness Council two weeks ago was to progress this.

I have also been struck by the number of bilaterals I have had. I can provide the Committee with a list of engagements I have taken forward. I took the opportunity to go to the Netherlands to visit the European Space Agency in Noordwijk. I also travelled to the Czech Republic, where I was the first Science Minister to visit for 14 years. I wanted to ensure that we underline our commitment not just to exploring association into Horizon Europe going forward—obviously, that will be part of the envelope of the spending review—but that we look at what we can do bilaterally with other countries for the future.

At ESA, it was also very important to underline that, while we are leaving the European Union, when it comes to some of our space programmes we are still committed members of the European Space Agency, and we will be taking forward the November ESA Ministerial Council and looking at government commitments into space spend.
Above all, I wanted to make the commitment that, where possible, we will continue our associations, participation and collaboration in these programmes. I have built up a good relationship with EU Commissioner Carlos Moedas and a number of Ministers, as I have said.

It remains the Government’s priority to secure a deal. A deal would provide us with security of continuity and stability with Horizon 2020 and Euratom research and training, but we also want to ensure that in the event of no deal we have prepared to ensure the maximum possible certainty and stability for the science community.

At the same time—I hope we will touch on this—we want to make sure that we reflect on the international perspectives that we want to develop as the UK Government when it comes to science, research and innovation. If we look back to 1981, just 10% of our R&D spending was in partnership with international collaborators. Now that is over half, and a key part of hitting 2.4% will be our ability to deliver on wider international collaborations. We will shortly publish an international research and innovation strategy—IRIS—which sits hand in hand with my work as Universities Minister on an international education strategy.

By way of introduction I wanted to state that my priorities are on those three issues: ensuring that we have maximum certainty—ideally in the case of a deal, but even in the case of no deal—in leaving the European Union; working towards the clear commitment of 2.4%, which must begin in our approach towards the spending review later on this year; and, thirdly, that when we go forward with mobility we create the best possible environment for scientists and researchers to continue their collaborations, as they have done so successfully in the United Kingdom so far.

The Chairman: Thank you very much. Do either of your colleagues want to say anything?

Sir Patrick Vallance: Nearly a year into my role I thought it might be worth me saying a few things that I have been focusing on. Clearly, my role is to ensure that the Government get the best possible scientific advice. That advice needs to be objective, fearless and useful. That can sometimes be uncomfortable, and it needs to draw the outside in.

With that in mind, the two areas that I have focused on over this period have been, first, the internal mechanisms and capabilities. A lot of work has gone on in trying to make sure that we bolster the chief scientific advisers in departments as a resource and we use them better as a network. A series of changes have been made, including setting up a smaller group of CSAs to act as a steering committee to make sure that things get done.

The second area is to bolster more generally the government science and engineering profession, where I think there is large untapped potential. We have set four priorities for that group that are now being taken forward. They relate to the profile of the group, the talent and skills development, reward and recognition across the group, and inclusion and diversity.
The third area—the internal—that we have been working on is how the absorptive capacity for science is developed through the policy profession and making sure that the policy profession itself has the right tools and ability to interact and frame the questions appropriately.

**Lord Fox:** What do you mean by absorptive capacity?

**Sir Patrick Vallance:** Rather than science being pushed that there is some pulling power from the policy profession in science. That is one thing that we are focusing on.

I have spent quite a bit of time building my own connections across Whitehall and making sure that we have good connectivity with industrial science, which will be incredibly important, as well as with the universities and public sector research establishments.

Two pieces of work are under way that really complement that. One is the national security strategy for science and technology, which is now nearly complete and will, I am sure, be reported as part of the national security capability review. The second is a review of science across government which we have undertaken, looking at where we think there are opportunities to get that into a better shape, including looking at things such as the funding arrangements.

I am pleased to say that, already as a result of that last piece of work, an extra £50 million per annum for science across government was announced by Treasury in the last Budget, starting I think in 2020. We have been successful in getting support from UKRI through the Strategic Priorities Fund.

The internal capability has been one big priority area. Another, of course is the external and the outputs. As the Minister has said, we have been involved in lots of work on the industrial strategy, trying to think about ways in which the 2.4% and the route to really bolster the science we have through into commercial and economic benefit could be enhanced. That work has been done in collaboration with BEIS and through the Prime Minister’s Council for Science and Technology.

I have also been involved in many of the Brexit discussions, which I am sure we will come on to, but to echo what the Minister has said, the future-looking international research and innovation strategy is crucial. We have to ensure that we have outward-facing, well-linked collaborative science activity that is global.

A number of reports have come out over the year, including *Computational Modelling* and *Future of Mobility*, which was launched together with the DfT and the Minister from that department. There was a letter from the Council for Science and Technology on the governance of innovative technologies, which led to the ministerial working group on regulation looking at how the regulatory environment for innovation can be such that we can take advantage of the new companies and new areas coming up in the UK. There are a number of reports. I will not list them all, but there have been a series of outputs that have had impact and uptake in various different parts of government.
One area that this role always gets involved with is when there are emergencies. In my time so far there have been the Salisbury events, which gave me an early start to learning about how the emergency system works—an area that in a way I knew more about, because it was a small drug-like molecule that was the problem.

We have had meetings on the Ebola crisis in the Democratic Republic of Congo and several exercises, so the resilience side of things has also been tested.

Finally, when I came to this Committee last time I said that it is important that, throughout a period when science and technology impacts everything that we do on a daily basis, it is crucial that we take a lens to citizens in relation to science. Some work has started on that, and I expect to do far more this year, but we are looking at ways of getting them involved in the projects that we have been doing in GO-Science; we have already got them involved in some of them. I have given a number of talks, including at New Scientist and the Science Museum. We are linking with groups that are expert in this, and a piece of work is under way at the moment in GO-Science looking at how we might link citizens more effectively into some of the science agenda. I will stop there.

Q2 The Chairman: Thank you both for that. Minister, after what you said about the importance of your role and the duties you have been undertaking, I am tempted to say that it is a pity that the Minister of Science is not a Cabinet position, and does not attend Cabinet. I do not expect you to answer that, but if you wish to you can and we will have it on record.

Following on from what you have said, it is of course a major concern among the science community that Brexit will have serious implications. All the achievements that you listed are due, at least recently, to great collaboration with the European countries, whose science of course is also fairly good, and we have benefited from that to come out on top, as you say. There is a concern as to what will happen, including to the funding arrangements that we currently benefit from, such as Horizon 2020 and even the Erasmus programme, because the UK is seen as the first port of call for young scientists and we cream off the best that come from Europe.

The second serious issue is the immigration policy. No doubt we will look at it in the Lords very carefully when the Bill comes, but the suggestions in it hitherto could play against our ability to recruit talent, particularly from Europe. I wonder what your comments might be about that.

Chris Skidmore MP: It is important to break down the issues surrounding our exit from the European Union into the immediate contingency plans that need to be put in place in preparation either for a deal or for no deal. The communication here is very important; I have just come from a meeting with my Norwegian equivalent Minister, who is over in the UK.
One of the first things we did in August 2016 was to guarantee the funding for existing Horizon 2020 projects before Brexit for the lifetime of those projects. The underwrite guarantee extension was in July 2018, again for the lifetime of projects post exit that we can have partner status for—not the mono-beneficiary grants; I will come on to those in a moment. That application process will carry on until December 2020, and even once those projects are begun post December 2020 we will still fund them.

What has struck me, having been to Brussels and having had approximately 12 opportunities to talk with my ministerial equivalents, is the lack of understanding of the UK’s commitment. Do not get me wrong—there has been a significant issue, a Catch-22 moment I call it: because we have neither a deal nor no deal, the Commission is unwilling to engage at the moment on the technical discussions that we need on Horizon 2020 and Erasmus.

Coming away from Brussels I decided to write to every European Research Science Minister. I can announce today that that letter will be going off this afternoon—I will happily provide the Committee with the text of that—because I felt it was really important that I stepped up to explain and communicate more effectively at a ministerial level. At an official level and among some of the academies across Europe there is a very good understanding of the issues and what the guarantee means and does not mean, but I felt that at a political level I needed to communicate this more effectively.

On the contingency plans, you are absolutely right. We think there are roughly 11,000 UK participations in Horizon 2020 to date and the live numbers are currently about 8,200, and in working with UKRI we want to ensure that we can capture those live participations. One of the issues has been that the data is not held at a UK level, it is held at a Commission level. So we established a portal on the GOV.UK website on 27 September last year, which as of 1 March has allowed us to capture about 6,700 of those 8,200 live participations.

I am still keen to press the point that we want to capture all those participations. We think we have pretty much bottomed out the entirety of higher education participations, with around 4,800 registered on the UKRI portal, but some of the small and medium-sized businesses may not even be aware that they are involved in Horizon 2020, perhaps through a consortium, and we need to ensure we work on that.

The underwrite and the portal are two of the short-term contingencies that we have been working on. I am also the no-deal Minister when it comes to the Department for Education, and I am confident, having come into this role in December and seen the preparations that have been taken forward, that we have put in place the best possible protections that we can in the event of a no deal.

The second question on Brexit concerns what happens to our participation in the longer term, not just in the final year and a half of Horizon 2020—obviously the programme is coming to its natural end—and, if we are no longer a member state, what measures we can put in place when it
comes to some of the mono-beneficiary grants; if we participate in Horizon 2020 as a third country, we would not be eligible for the ERC grants, the Marie Skłodowska-Curie actions or the SMEi grants.

I am keen to take work forward. We already have the high-level group, which is a collection of academies, the Russell group, the University Alliance, all the different HE organisations, as well as working with the Devolved Administrations. I have set up monthly if not six weekly devolved ministerial higher education research meetings. I was in Glasgow last Friday, Richard Lochhead hosted the meeting on 18 January and we had one in Cardiff hosted by Kirsty Williams. I am very keen to make sure that we work together as the entire United Kingdom with the DAs.

Our future position comes back to that spending review bid, which will be critical. Our ambition is to have the option to associate to Horizon Europe, but we need to ensure that it is value for money. The opportunity to negotiate on association has been square bracketed at the moment, so we will not be able to begin the negotiations on association status to Horizon Europe until after we are no longer a member state. That may not be possible until after the European Parliament elections and the reconstitution of the Commission, which means that we are looking to the autumn this year before association negotiations can begin. At the same time we have to look responsibly at what we do about the ERC and other grants that may not be available should we not associate to Horizon Europe.

Today I can also announce that I have written to Sir Adrian Smith, director of the Alan Turing Institute and former vice-chancellor of the University of London, to ask him if he would lead a major piece of work, a project with the academic community, to look at whether we can establish a new international research fund, a grant-based project, that would be open not just to UK researchers but to international researchers to make the statement that the United Kingdom may be leaving the European Union but it is not leaving its participation with its European scientific partners.

I am delighted that Adrian Smith has accepted taking on this piece of work, so I am sure from this announcement today we will begin to see work going forward. I am very keen that we involve the scientific community and our research base. UKRI will also play a critical role, as it has done with the portal, in ensuring that we can look at what the landscape needs to be. That will also inform our bid into the spending review.

**The Chairman:** What about the immigration issue?

**Chris Skidmore MP:** On immigration, we have the White Paper that has been published. I sat next to the Home Secretary when he introduced the Second Reading of the Immigration Bill, and he specifically referenced some of the lobbying I have undertaken on behalf of my universities’ community.
Obviously, the White Paper sets out that there will be no cap on student numbers, but there are a number of issues, such as post-study work visas, which we will want to reflect on in our international education strategy, and the £30,000 Migration Advisory Committee cap. The Migration Advisory Committee has proposed a number of measures and changes in the immigration White Paper. A time of engagement is now open and I am keen to ensure that the scientific community is involved in this. I have also been working with Sir Patrick and have asked the Government Office of Science and Technology to take forward analysis work to look at the impacts of the £30,000 cap.

This is not just about the individual researchers; it is about their families and making sure that we get this right, because we have this one chance to get it right for the 2021 immigration system. If Brexit means anything, it is about ensuring that we can understand that we are international in our focus as well as European.

There is work still to be done and I want to help develop that work, but the White Paper provides an approach and I hope we can recognise that there are changes that still need to be made.

The Chairman: I have no doubt that when it comes to the Lords we will have a lot to say about it.

Baroness Morgan of Huyton: I want to pick up on that, Minister. I am intrigued in that long reply about whether or not you have a specific view. We have heard repeatedly over the last several years about the importance of the immigration issue. It is fine having a consultation process, but, frankly, I cannot believe it is necessary, because the overwhelming evidence is so clear from the scientific community and universities as a whole, even if you look at the less glamorous roles, such as technicians. We have a dire shortage of technicians, and the idea that you suddenly pluck out £30,000 as your figure means that that skill shortage will get worse.

Let us take no deal off the agenda for a moment. To what extent do you feel able as a Minister of State and in your department to lead a sensible conversation in government about where immigration needs to go? I think it is fair to say that, certainly within the House of Lords, there is a very wide view that the current proposals in the immigration White Paper are not going to serve the country well. To what extent is there an openness in government to genuinely revisit that?

Chris Skidmore MP: I think my responsibility as Minister is to be a convenor and to ensure that we take forward the collective views of the university sector and the academies. Having the high-level group has been really important. I have come into this mid-flight. I have seen the European Temporary Leave to Remain scheme, which is a government position; it has had a write round process and collective responsibility has been agreed on this.

Within the parameters of collective responsibility, I have been appointed as a government Minister to take work forward, and I am keen to look at
the official channels through which we can help to influence the Home Office, which is the ultimate arbiter in deciding what goes into the White Paper and into a final process. I can communicate that final decisions have not been taken on the £30,000 salary cap and that we are working towards ensuring that those views are reflected in government. Sir Patrick, in his position in the Government Office of Science and Technology, will play an important role in that.

Whether the salary of a laboratory technician is £21,000 or £25,000, which has been mooted, it is clear to me that if you got Universities UK and the Russell Group around the table, they would say that the £25,000 figure is fair. That has certainly been expressed to me.

**Baroness Morgan of Huyton:** And the visa regime as it is? I do not know whether you heard the interview with Sir Paul Nurse yesterday. The current visa regime is at best extremely clunky, so the idea that we are going to have more people going through that fills a lot of people in the university and science sector with horror, frankly, because it does not work now.

**Chris Skidmore MP:** With the visa regime, a number of new opportunities have been developed with UKRI, including the Tier 1 exceptional talent visa, the Tier 5 UKRI Science, Research and Academia scheme, and post-study work visas. The Government have moved in the right direction for universities in having six months for undergraduate study and one year for postgraduate study.

But we need to reflect upon the fact that Canada and Australia have four years. It is not just a national conversation. We have to look internationally if we want to remain internationally competitive for the future. I hope that we can begin with where we have started from and look to understand the evidence base and where that leads us—to a conversation about where we might need to be for the future. I think it is work in progress.

**The Chairman:** Obviously, you have excited my colleagues a lot, because there are a lot of hands up. I will ask them to keep their questions short and maybe we will get through them.

**Q4 Lord Kakkar:** Just coming back to the question of Brexit, if the Article 50 process completes on 29 March as envisaged, you have laid out the next stage, but if there is some kind of extension and the extension trespasses on the period when Horizon science and priorities are going to be developed, do you envisage, as we remain part of the European Union during an extended period of Article 50, that we would contribute to defining those priorities and having influence?

**Chris Skidmore MP:** Again, I may be making the mistake of a politician by taking a hypothetical question and giving a hypothetical answer, but, hypothetically, if there happens to be an extension, the next informal Ministerial Council on the Horizon Europe regulations is in Bucharest on 3 April. If I am able to attend that, I would be very keen to do so. If we leave on 29 March, obviously I will not be able to do so, but any extension would allow us to remain a member state and to continue to
help shape the regulations that are continuing apace. Whether they are formed fully by the end of the EU Parliament on 18 April is an open question and obviously beyond our control.

A delay does not preclude us from continuing our involvement. If the live applications happen to be settled in the process of a delay—particularly on Erasmus where we have seen the applications close mid-February but decisions will probably be made on the successful applications in May—that is not necessarily a problem. Rather, a delay helps to provide more solutions than problems. But I am keen to ensure that, regardless of the date we leave, we have done our best to help shape the regulations.

We can then go into the next phase of looking at the nature of association. We have never done that before, and the key question is: what does a future association look like in a new programme? I am having discussions with my Norwegian counterpart, because Norway has associate status, and I have had conversations with my Swiss counterpart, to understand the landscape so at we can look at those opportunities for the future.

**Lord Kakkar:** If there were an extended period of extension of this process, as Minister you feel confident that the department will be able to continue to participate so that we do not lose ground in that interregnum.

**Chris Skidmore MP:** We have a Venn diagram of two sets of negotiations going on here. On the one hand, there are the negotiations on Horizon Europe, which we can take part in and be part of the trilogues on because we are still an EU member state. There are also the separate negotiations on the technical details of Erasmus and on Horizon 2020—the existing programmes—that we cannot begin until we have certainty over whether it is a deal or no deal.

So on the one hand, when it comes to Horizon Europe, delay is favourable in a way so we can continue to influence the programme, but a delay is unfavourable in that it does not provide me with any particular hand of cards that I can sit around the table with.

**Baroness Neville-Jones:** Minister, I spend a lot of time in the academic world, and the thing that comes across is that the universities are worried about funding and mobility. If you ask them which worries them more, it is mobility and access to talent, particularly in Europe, which after all is our neighbourhood and where a lot of it is going to come from.

The point I would like you to accept is that we do not have for ever for a ponderous consultation, if I might put it that way. People are already leaving. There is plenty of anecdotal evidence now of people not coming, cutting short or not accepting appointments that they otherwise would, or deciding that it is all too difficult, too complicated. They cannot understand what the outcome is likely to be, and the uncertainty involved is beginning to corrode the presence of these other nationalities, of the Europeans, in our universities.

My question to you is: how long are you going to spend on consultation
before you come to a decision? It really matters that this is not an extended affair.

**Chris Skidmore MP:** I do not think I can accept the premise of the question, which is anecdote. We need a strong evidence base.

**Baroness Neville-Jones:** Oh dear, oh dear.

**Baroness Morgan of Huyton:** We have the evidence.

**Chris Skidmore MP:** You are welcome to present me with the evidence base. The evidence I have from the department is that there is no clear evidence of this taking place.

**Baroness Neville-Jones:** You will not get evidence of somebody who has decided not to come, because they have decided not to come. That is the problem. It is the absence of applications that is part of the problem. Then there are the people who are going home earlier than they might otherwise have done. These are negative decisions, so you will not get evidence of the kind that you are saying concretely we need to have. It is very depressing to hear you saying that, because in the nature of the beast people are not going to write in and say, “I was going to stay 10 years, but now I am only going to stay six months”.

**Chris Skidmore MP:** I am presented with evidence by my officials—I think there was a report back in September¹ and Mr Davies may be able to enlighten the Committee on this process—and as a Minister I have to take decisions based on the evidence and advice and facts and figures I am given. I simply cannot—

**Baroness Neville-Jones:** Do you talk to vice-chancellors, might I ask?

**Chris Skidmore MP:** So far, I have visited 16 universities. In every city I visit I arrange to see every vice-chancellor. I will be in Leeds on Thursday visiting the University of Leeds, but I will then have a lunch with all four of the vice-chancellors. That was the same in Manchester.

**Baroness Neville-Jones:** That is good to hear.

**Chris Skidmore MP:** I have had a significant number of opportunities to address the Russell Group and the University Alliance. I am speaking at a Universities UK international conference on 27 March. As somebody who taught at the University of Bristol, I am absolutely committed to ensuring I involve the higher education sector, which is why I think it was important that we had the opportunity for consultation.

The alternative in the White Paper was a £30,000 cap in black and white without any opportunity to consult. The opportunity to consult in advance of what is a post-2021 system anyway—so there is time, because that is what the Government have decided to take forward: a post-implementation period immigration system—provides the parameters to ensure that the universities are able to engage. We have

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¹ HESA data shows total numbers of students/EU university staff have not fallen, though the number of first year students enrolling in 17/18 dropped by 800 (1.2%). It is possible numbers fell further in 18/19 and that applications are falling even if places are still filled.
to ensure that we do it professionally and do it in a way that extends beyond the realm of anecdote and ensures that the analysis is effective.

That is why I have asked Sir Patrick and the Government Office of Science to take forward what I believe will be an important and respected piece of work to look at the £30,000 Migration Advisory Committee cap. It is important that I have taken those decisions quite early on in my ministerial career. One of the first things I did in meeting with Sir Patrick was to commission this piece of work. I could have sat on my hands, but I have taken some quite important individual decisions to reflect the concerns of the sector.

**Baroness Neville-Jones:** Minister, I accept that you do not accept my premise, but my question still stands: how long do you reckon this process of consultation is going to take?

**Chris Skidmore MP:** The process of consultation is a Home Office-led process, but timing-wise it will take until the end of the year.

**Q6 Lord Mair:** Minister, can I follow up a point made by Baroness Neville-Jones? At a previous inquiry on the industrial strategy and life sciences, we were told in very clear terms by Sir Paul Nurse that the UK’s image is suffering terribly at the moment. He made that absolutely clear. You may ask about the evidence base behind that, but it is absolutely consistent with every academic I talk to that outside the UK the image being portrayed is, I am afraid, very damaging.

My question is: can you give an assurance that you will do your level best with the Home Office to ensure that the new visa system is not clunky, expensive and tedious but is in fact streamlined, proportionate and light touch, because unless that happens post Brexit the image that Sir Paul Nurse refers to will continue? Can you comment on that?

**Chris Skidmore MP:** It is unfortunate that certain people believe there is a negative view of the UK’s future participation in science. You are right that, above all, the issue is one of uncertainty about our future relationship with the European Union, and we need to resolve that.

In stepping into this role and looking at what we have managed to achieve through the industrial strategy and our spending on the global challenges research hubs, for instance, I have to say that it is important to appreciate what we have put out the door in investment. In January, for instance, nearly £1 billion of investment was made. Some £275 million was spent on 12 global challenges research hubs, and £445 million of government money, backed by £380 million of private investment, was spent on 75 doctoral training centres, which are going to provide for over 1,000 PhDs over the next few years.

Government investment in scientific research and development has never been higher. If you and others feel that somehow the UK Government are not committed to science and not committed to taking forward future investment—

**Lord Mair:** That is not what I am asking. I am asking about the visa
Chris Skidmore MP: I am addressing the issue of perception, because I am keen to work on that issue. Countering the perception is important as part of the narrative. Part of that narrative will be delivering the 2.4%, but 2.4% will not happen if we cannot bring people here to be able to do the research and investment in the first place. When it comes to the visa system, I am absolutely committed to ensuring flexibility, certainty and working to ensure that it works for the international community for research.

Lord Mair: And proportionate and light touch.

Chris Skidmore MP: And proportionate and light touch, yes.

The Chairman: Thank you for that.

Lord Griffiths of Fforestfach: Minister, I really want to come back to the question that has been asked in a slightly different way, without in any way being offensive. You have not had much time in the department, but I thought you used one very interesting word in your response to Baroness Neville-Jones when you said that you were a “convenor”.

You then talked about the evidence by officials as being almost definitive. I worked for five and a half years for Mrs Thatcher, and her view was that, “Officials advise, Ministers decide”. What we are all longing for, and which I think is there and occasionally comes out, although you do not seem to put it in the strongest notes, is leadership, and leadership that says, “I am not a convenor, I am a champion, and I am a champion of science”.

There is the issue of visas and the issue of funding, and I recognise you have an impossible task as Universities Minister and Science Minister, because it is about schools, higher education, further education, universities, the private sector, fintech, biotech. You have an enormous world, but if I look back at past Ministers, someone like Ken Baker really had a vision of what to do about schools, Keith Joseph had a vision of education, Michael Heseltine had a vision of industrial strategy, and in a way you are showing tremendous humility in what you are doing in relation to the people around you. Clearly the people on your left and right are very talented people, but somehow I think that we all want to encourage you to come out and say, “This is what I really believe”.

Chris Skidmore MP: I would point you to the speeches that I have made so far. I made my first speech as Science Minister purposely at Culham, at the Joint European Torus. Talking about vision, that project was signed off by Tony Benn in 1978, was eventually built in 1985, and started generating electricity in 1995.

I will be long gone as Science Minister if I succeed on some of the projects that we want to look at taking forward as part of the spending review. We have not had the opportunity to cover issues such as the Step programme for fusion or some of the bigger infrastructure projects such as Quantum—I was up in Glasgow recently.
One of my other speeches was at the Civic University Commission, which Lord Kerslake took forward, and when it comes to vision, another thing I am looking forward to achieving is blending together my two roles as Universities Minister and Science Minister. They sit quite oddly in separate departments, and that is the way it is, but I am keen that when we look at research we try to base this on universities but recognising their role in the localities.

All the 16 different locations that I have visited so far, including Manchester or Glasgow, have shown that by these universities being crucibles, opportunities have been created to develop their roles—there is the graphene institute in Manchester and Quantum in Glasgow, for instance—and we need to try to foster those opportunities.

The 2.4% will be a critical part of the vision. It is a statistic, but it also has to be about what the outcome looks like. The outcome also has to be an international one. That is where it is important to recognise the difficulties we have when it comes to the European issues and the visa issues. They are process issues that, if we can resolve them, will allow us to make that investment and place the UK on a global stage. We have begun to do that with some of the ODA money that we are spending through the Global Challenges Research Fund or the Newton Fund. I want to see more of this, which is why I announced today that Sir Adrian Smith will be taking forward this work.

I see myself as a convenor not necessarily to be led but to allow for those voices to come to the fore and to recognise that there is a community of science that needs to have authorship over some of these decisions. It is what I call the civil society of science. The last thing I want to be is a Tony Benn who says, “This is JET. I have taken a decision, and in the corridors of Whitehall this will happen”. What I need to do, and we need do, both in UKRI and as a UK Government, is identify the opportunities for leverage.

There are huge amounts of leverage in the space sector, for instance, and in robotics or AI. For every pound spent on our space sector, £13 is returned. For robotics, we have put in £380 million from 2013, and we are about to produce a new robotics strategy, but that £380 million led to over £1 billion of private investment.

In terms of a vision, we have to recognise that we have issues around leaving the European Union that are causing concerns and a negative image, but I have to ensure that we counter that with a positive vision for science, which I hope I have set out in my speech and will continue to do so. It is British Science Week next week and I will be making another speech on science, and I am keen to ensure that we push the next generation forward and that they recognise the opportunities into the 2020s.

**The Chairman:** Thank you very much.

**Q8 Lord Kakkar:** Minister, I turn to the question of the 2.4% of GDP funding commitment to R&D. Previous Governments have along the way made similar commitments and those commitments have not materialised, so
there is anxiety that periods of silence might be associated with moving away from the practical delivery of that position.

First, where is the department with regard to the publication of the strategy to raise this total investment and, secondly, are you confident as a Minister that the Treasury remains completely aligned with this commitment?

Chris Skidmore MP: On the 2.4%, I will be shouting this from the rooftops as much as I can. I would encourage Committee members to look at this issue if you want to. I am keen to ensure that this is a public debate that goes beyond the realms of the department for business and that we are working not just with the Government Office of Science and Technology—I am sure you will want to ask Patrick about the work it has been doing on 2.4%—and UKRI. We have a staged process by which there has been significant work with the department, UKRI and other scientific organisations. I think the Royal Society of Engineering has also done a very important report looking at the 2.4%.

The critical thing is making sure that we recognise where our deficiencies are and look at what we do well, what we do not do so well, and where we want to make investments for the future, whether it is in European infrastructure projects or international projects. The UKRI has a staged process whereby it has an infrastructure progress report and then a final report on its 2.4% road map, which will be published in the summer. We will then publish our own road map after the spending review when we have managed to define what the public contribution is, because the road map will be critical for demonstrating what uplift is needed through private sector investment as well.

Lord Kakkar: That is very clear, and thank you very much for that. There is some anxiety that if the final disposition of Brexit is unhelpful there may not be the capacity for the Treasury to make the public sector element of that 2.4% commitment real. That causes very severe anxiety, because it provides the opportunity to undermine very seriously the mid-term future for the science base in our country. Has your department been able to address that, and is the Treasury in a reasonable place in terms of the commitment that has been made and understanding how that might materialise?

Chris Skidmore MP: All I can say—and I will turn to Mr Davies to give an update—is that the department is working very closely with the Treasury on the 2.4% commitment. There are cross-working groups, which I am sure Gareth will be able to point to. Obviously, we have the Spring Statement next week, so we will wait to see what the Chancellor has to say about any other future commitments that are made.

It is absolutely vital that we work closely in ensuring that we loop the Treasury in to this. I am not going to be able to say what I think a public investment figure would be, but my speech at Culham was very clear that we could not do this by private investment alone and that we would need significant additional public investment beyond what has already been committed, which is why I need to go into battle over the CSR this year.
to make the argument that this is not just about investment in science research but about bringing in the additional leverage and that future investment. I will turn to Gareth for a departmental update.

**Gareth Davies:** The first thing to say is that I do not think the Treasury will ever run at spending more public money—there will always be a natural hesitance regarding the overall fiscal position—but I point to the actions that have been taken over the last couple of years rather than just the words about the commitment.

If you look at the last sequence of fiscal events since 2016, every single Budget and spending review has had an increase to the science budget. You have seen, after a period of four or five years of flat cash, significant increases in funding allocation; as the Minister has said, the largest cash increase in history in real terms and as an increased proportion of national income. I think that signals the priority which the Treasury and the Government as a whole are placing on public science spending. Obviously, the 2.4% ambition is a manifesto commitment, so that already has cross-government and not just BEIS support.

You raised the important point about previous targets having been made that, frankly, failed to be delivered. Going back to 2004-14 and the science and innovation plan that was published at the start of this century, we have worked with the Royal Society and the British Academy to understand, and essentially to do an audit and to assess, why that one failed to achieve the increased funding.

There are a number of issues there. Partly, frankly, it was because GDP growth was faster than expected over that period. Secondly, it was hit by the fiscal constraints of the financial crisis. Thirdly—this is a really critical point—there was the shifting structure of the economy over that period. If you look at the underlying structure of who does R&D activity in the economy, it is what I call the 80:20 problem. Some 80% of research and development is done by 20% of companies, and primarily in the manufacturing sector.

The strategic challenge over the next 10 years is to think how we can build off our comparative strengths as a country, namely our financial services sector, and get them to engage more systematically with our world-class university sector. That is going to be at heart of the work.

**Lord Kakkar:** That is very reassuring, but do you believe that you have the structures in place to make that analysis and then to drive that building of the different elements of the economy and of the science base that achieves that 2.4%?

**Gareth Davies:** Yes. I point to the industrial strategy. For the first time, we are seeing under this Government that science investment is seen not just as a good thing for science alone but as a driver of our future prosperity. As we leave the European Union, the Government have asked clearly in the industrial strategy how we are going to make our money and prosper as a country. It is by building off our ideas, our creativity and our intellectual power house and thinking how we connect that more effectively with the rest of the economy. If you boil down the 200-odd
pages of the industrial strategy, that is at the heart of that approach. That is a cross-government approach.

In terms of the capacity to ensure that we are able to do this, the other lesson from the British Academy seminars that we held was that we will only do this not through a top-down diktat from Whitehall but through a shared sense of purpose and collective endeavour across the country. What is important is using the new institution of UKRI as the strong voice of science, both in government and in the country, in effect to lay out the road map, which is what we have commissioned it to do.

**Q9**

**Lord Fox:** That feeds into my question. First, I make the observation that the denominator-based strategy on getting to 2.4% is not one that we hope we will be adopting as a nation. Let us do it at the numerator level.

Minister, forgive me, it looks as though I have been clock watching, but it took 20 minutes before you made an oblique reference to the UKRI and nearly an hour before we started to talk about its role. As Mr Davies said, it is supposed to be a voice for science. In the old days before it existed, your role, Sir Patrick, was the voice of science. We have a slightly bipolar situation now in the sense that there are a number of voices.

In your language, Minister, you said, “It is going put out its road map and then we are going to put out our road map”, which does not seem a joined-up ethos. In none of the things you have been doing when you have been running around meeting all these people has the UKRI featured in any of your commentary. Where does it fit? What is it for? Is it just there to hand out the money and you are doing the policy? Is it doing the policy, or are there two policies? How does it all work?

**Chris Skidmore MP:** I have a very close relationship with Sir Mark Walport at UKRI. We tend to have a biweekly one to one to go through issues. It is the first year anniversary of the UKRI on 1 April and we will be looking to ensure that we can establish UKRI as a permanent feature of the science landscape.

**Lord Fox:** Is there doubt that it might not be a permanent feature of the landscape?

**Chris Skidmore MP:** No, it is in the legislation. It is important, and I think it is right that we have a unified organisation that provides clarity and can take decisions and collective approaches and provide really important insights in the work it is taking forward, whether on the infrastructure road map or going forward with some of the other funding announcements it has made, such as on the doctoral centres and the future leaders fellowship.

All these things are UKRI led, and it is right, in terms of Haldane and the principle of autonomy, that UKRI sits distinct from the UK Government, providing the voice for science outside the UK Government; Sir Patrick Vallance provides the voice for science inside the UK Government. This gets back to the point I was making about our not wanting science to be
dictated by the latest ministerial invention that we should be putting our money in X, Y and Z.

UKRI provides certainty about the independence of the scientific community, led by the scientific community, for the scientific community, and it has that outreach across the country as well. I do not recognise that there is a lack of communication with UKRI. I have mentioned UKRI, but if anything I simply see it now as a key part of the scientific debate. The work it is doing is absolutely welcome and continues to be so. I do not see any problems with it at all.

Sir Patrick Vallance: First, you can be reassured that my job description is not different from that of previous Government Chief Scientific Advisers. It is to be the voice of science in government.

Lord Fox: I was not trying to drive a wedge between you and Sir Mark.

Sir Patrick Vallance: And you will not do so either. The advent of UKRI is a fundamentally important part of the scientific landscape. It brings together the research councils and Innovate and provides the transversal look at science that is so crucial, because most of the problems that we face do not sit neatly in one bucket or another. That ability to look across is important. That ability to link in to Innovate, to get the input into small and medium-sized enterprises, to get companies off the ground, and to link the big companies, is crucial, and I think UKRI is doing a really outstanding job of bringing that together.

I meet with Mark Walport every couple of weeks and we talk about the areas of common interest. I sit on various UKRI panels to try to help with funding. We also have discussions about things relating to government science. UKRI has added a very important part to the scientific landscape in its ability to bring funding decisions together in a way that allows us to tackle big problems in a coherent way.

In terms of the 2.4%, there is a very clear need, which we need to face up to as we get the road map together; no country that has increased its spend in the way we aim to do has done it all with public money. Every one has had private sector leverage. Being absolutely explicit as to what that ratio needs to be and how we need to get there is an important part of it, and I am working closely with Mark Walport and UKRI and the Council for Science and Technology to try to understand how you do that—specifically, and this is where understanding in the UK of the industrial science base is so important, listening to what industry and small companies actually want and not assuming that an academic funding scheme is going to deliver the leverage that is.

With the new money coming in, one of the big challenges is to ensure that we get that input into industry right to get the leverage back in investment in R&D. What has happened with UKRI is a massive strengthening of the UK science landscape that we should take full advantage of.

The Chairman: I am going to ask that we speed this up a bit, otherwise we are going to hold you here for a very long time, because we still have a few issues to explore.
Lord Mair: Minister, you referred earlier to the balance you have to maintain between your two roles as Science Minister in the Department for Business, Energy and Industrial Strategy and the Universities Minister in the Department for Education and Science. Are there times when those two roles are conflicted or there are tensions? I am thinking in particular about the forthcoming Augar review, which is likely, we believe, to recommend a reduction in university fees. In the way universities run themselves, there is a complicated interaction between teaching and research, and there may well be a tension there between your two ministerial roles.

Chris Skidmore MP: You are correct in that when you look at where my ministerial portfolio lies, universities sit quite clearly in both departments. On the one hand is the DfE, which is looking primarily from the focus of the student and the teaching experience. A lot of work that we are doing is on taking forward and strengthening the Office for Students and some of the spin-out legislation that is still required through HERA.

That is important, because when it comes to universities, access and participation is my key priority in DfE. I made a speech in Nottingham Trent last week, with the OFS publishing its new guidance and the Secretary of State publishing his letter towards the OFS. That is certainly not in tension with what we need to do with the science community, because there are also clear issues to do with access and participation in future research.

I am keen to develop across both departments a narrative that on the one hand has the universities as the crucibles of research, as civic universities, and as a pipeline of talent that recognises that if we want more black women in science we have to ensure we are attracting them into the physics undergraduate degrees and that we go forward with more masters and postgraduate degrees.

When we look at the numbers, if you asked me, “Are there too many people going to university?” I would say no. Internationally, we are still relatively average on the undergraduate level, but on the postgraduate level we are lower than the OECD average. We are not going to be able to deliver on 2.4%, first, if we do not have the visa regime that you mentioned earlier and, secondly, if we cannot ensure that we are bringing up the latest scientists for the future from this country.

There is an important role there, which brings me on to the issues of tension. I would be denying the truth if I was to say that I have not had a significant number of vice-chancellors write to me on the specifics of the Augar review. Without pre-empting the report, I have pointed to—

Lord Fox: Did you say that you have had a significant number of vice-chancellors write to you? There were too many negatives in there and I was confused.

Chris Skidmore MP: I have had a significant number of vice-chancellors write to me. There was no single negative in that sentence.

We will need to look at the Augar review. I made my first speech at RADA to demonstrate as part of that speech that I do not want there to be a
false divide between arts and humanities. In the industrial strategy, the creative sector is a critical selling point and we need to foster creative talent. When we look at funding, there are significant issues. That is why I am keen, whenever the Augar review is published, that if measures have to be introduced as part of a government response there is a consultative process and universities have the opportunity to feed into that process. That is important if there is to be any reduction in fees; we are looking at the nature of the top-up to the teaching grants, but I await the review. I have not seen it, and obviously I will take forward measures by which we can ensure that universities can express their views quite clearly.

You are right that universities are like a curate’s egg: once you break it, is difficult to put back together again. They have had decades of cross-subsidies, whether in the teaching funding or research funding. It is very difficult to unpick. I am a new Minister, but I am becoming increasingly aware of this. I would like to take forward measures that are across both departments and which can demonstrate the value of universities.

I am very keen to explore what we can do to make the knowledge exchange framework—the KEF—that is being developed by Research England and the DfE a really positive measure of the benefits of universities to their local communities. We also have the review of the TEF; there are issues around bureaucracy and the burden that is placed on teachers, because there is a fine balance between teaching and research, and it is about ensuring that balance is effectively maintained.

Q11 Baroness Neville-Jones: Universities have a lot on their plates, Minister, with KEF, TEF, REF reviews as well as the immigration issue. There are a number of uncertainties and the risk register is extremely complicated. However, that was not my question.

Sir Patrick, you have had a bit of time to settle into your role and you have already given us some clue, I think, as to how you see your role as the voice for science in government. Would you like to enlarge a little on what you see as the main challenges and how you are going to go about meeting them and advancing the interests of science in government?

Sir Patrick Vallance: One of the big challenges of course is that there is an enormous amount of primary scientific discovery going on the whole time, to the extent that it is almost impossible to have the bandwidth to absorb it. That is a challenge which I think needs to be addressed at the level of universities and at the level of government.

That is one reason why I and others wrote an article on evidence synthesis and the importance of trying to bring primary research into a form that is useful for policymakers. We must recognise that as an academic endeavour so that we stimulate it among academia—it is happening and you can see it—and there is a bit more of an attempt to try to bring science together in a way that is useful for policymakers.

Baroness Neville-Jones: You personally would have more of a direct
relationship with the university community.

**Sir Patrick Vallance:** I have a very direct relationship with it anyway and would want to enhance that. I have already alluded to the fact that the other area we need to take advantage of more in getting that sort of information into government is the industrial sector, where many people, by dint of what they are trying to do, will have synthesised science in a certain way. I am certainly having more meetings not with CEOs necessarily and not with academics who know a bit about industry but with the leaders of R&D activities in industry to hear from them about the things coming through which they think are important. There is a point about how we get the evidence in the right place.

There are issues inside government on both the demand side of science and the supply side of science, which I alluded to in my opening remarks. That is an important area. On the demand side, we are working with a number of agencies, including the Royal Academy of Engineering and the Royal Society, on how we might get better ways of helping the policy profession and others to get up to speed on science.

I have a particular area that I want to push on. The latest figures that I saw for the Civil Service fast stream, which of course is one of the ways in which the Civil Service gets populated at senior levels, were that of the 400 people in the general fast stream, 40 have science and engineering degrees. We can and should try to correct that, and I think it would make a big difference throughout the Civil Service. So there are various measures that I am taking on both the demand and supply side of science.

The third challenge in a sense is that government inevitably works in vertical pillars and science does not; it goes across. It sometimes works in vertical pillars but it should not, and the ability to work across government is challenging. That is where GO-Science has always performed a particularly important role and I want to enhance that. GO-Science and I will take on things that go across departments as a primary objective.

I am pleased that there are a couple of other things occurring that may help with that. The new Cabinet Secretary’s approach to fusion is that the answer to the problems does not lie in individual departments but in bringing across. I think that will become more of a theme across the Civil Service, and we will certainly play into that and take full advantage of it for science.

For the grand challenges and the missions within them, which we have been instrumental in trying to shape, we produced a paper with the Council for Science and Technology on how missions could be run that was fundamentally about being cross-cutting and bringing people together from different departments under single unified leadership to try to get some of these science problems addressed.

So there are some mechanisms that we can leverage for cross-government working. I do not for a minute naively underestimate the challenge of that, but I think it is an important one to go for.
My final point on that side of the challenges is that, like many big organisations, there is an informatics challenge across government, and I do not think that we have got the informatics systems right for understanding what science is going on and what could be done, such as which experts we use in different parts of government. There is an informatics challenge that we will definitely look at in the spending review and in thinking about how we might tackle a bit that across government.

Those are some of the logistic challenges that we face in trying to get this right.

Q12 Baroness Neville-Jones: That is very coherent, and thank you for that. Could I ask a supplementary question about government laboratories? I have had some experience in government and I think government laboratories are really quite important and do some valuable work directly related to governmental priorities. Over time, on the whole, their budgets have gone down, not up. I detect—I hope I am not wrong in thinking this—that some of the work that government laboratories ought to be doing is now being dumped in the lap of UKRI. I do not ask you to comment on that, but that is an observation that I think is right.

My question to you is this. Do you foresee, as part of the general uplift of R&D activity in the country, that the government laboratories that still exist will have their funding at least maintained but preferably increased?

Sir Patrick Vallance: In my opening comments I alluded to the fact that we are undertaking a review of science capability across government. That is nearly in its final stages, and a very clear component of that is looking at public sector research establishments, which, I agree with you, are critically important for the country, have a particular role and often fit at a place that is somewhat nearer to the ability of industry to interact than some of the purely academic university sector.

Therefore, we will be looking at how we ensure we get the funding right across those establishments. As part of that, of course, we will be asking which ones are the most important and which ones perhaps are no longer relevant. There is an activity that needs to be looked at. I do not think it can all be incremental. We need to look and ask where the biggest opportunities are for public sector research establishments in this modern environment. That is definitely part of the review that we are undertaking at the moment.

Q13 Lord Hunt of Chesterton: I partly want to follow this up. I used to run the Met Office and I have had a small company, so I have known about being in a big government laboratory and making use of the data. The position is that, unlike the UK, most other advanced countries—France, Germany, the United States—have maintained their very big public sectors. Airbus, for example, makes tremendous use of all these universities and public sector establishments that do not exist here. We no longer have a Royal Air Force establishment or a radar establishment. These are very serious matters. Universities—I speak from both sides—are not as good at the storage and maintenance of data.
The other point that did not come across here is that when you are running a public sector laboratory it is very important that you should be able to exchange data with all the others, and currently that is not brilliant. I welcome the fact that you want to push that forward.

Public sector laboratories are also extremely important in the UK’s representation. You would think, listening to the news, that it was only the Foreign Office, but the most important factor is all these public sector establishments. In Parliament, for example, I have managed to get two debates in 20 years in the House of Lords to do with the representation of the UK and what it does in international bodies. It is ridiculous. Scientists in government are not consulted about how government works. Sir David McKay, a very distinguished chief scientist who died recently, said that the idea of learning what was in *Hansard* or talking to Parliament was very weak.

My question is this. One way in which government laboratories can be more useful and used is this business of telling us what they are doing. You talked about the 40 out of 400 scientists finding it interesting to be in government if their science is considered more seriously. That is a bit of a rant on my part, but it sounds as if this would be quite in line with what you are saying.

**The Chairman**: The point is well made.

**Sir Patrick Vallance**: Thank you, and it is nice to see you. We overlapped at UCL when I was a professor of medicine. I completely agree that this is a really important part of the system that we need to get right and that is one of the reasons for doing the review.

**Q14 Lord Fox**: In your preamble you talked about a steering committee of the CSAs. I thought you put together a cogent strategy or road map, to use a phrase that has already been used. How are the CSAs and that steering committee being used in delivering that? Do you have the support from all the departments for the CSAs that you need, or is that still a battle that you are fighting?

**Sir Patrick Vallance**: The CSAs are involved in every part of what I have been talking about. We meet once a week, or once every other week sometimes, for an hour as a group all together. I put the smaller steering group together, because when all the CSAs got together—I took them all away for two days for a discussion about what we were really trying achieve, which interestingly is the first time all the CSAs have ever done that—we decided that it would be better to have a smaller group to be more operational.

**Lord Fox**: Did you elect them or select them?

**Sir Patrick Vallance**: They were selected the first time. They self-nominated, but more nominated themselves than we could accommodate, and we are going to rotate through so everyone will be on the group.

It is already much more operational in terms of getting things done and making sure that the actions we want to follow up are pursued. I think
that will be an important part of getting this working properly. Currently, we are getting good pull from the departments to get the CSAs in place. Again, part of the review is to try to get the mechanisms right to ensure not only that we get the right people in place but that they have the right levers which they can pull in departments to make things happen.

**Lord Fox:** How many departments are wanting for a CSA now?

**Sir Patrick Vallance:** Some departments have people doubling up as chief analysts and CSAs. I think there are three or four at the moment. Other than HMRC, I do not think there is a department without a CSA. We are currently appointing in MoD and in MHCLG, and I am pleased to say that in both those cases we had a significant number of high-quality applicants, so fingers crossed we will get to appointment. I am not going to do anything to drop standards on that. We are going to ensure that we get the right people in these posts.

**Q15 Lord Renfrew of Kaimsthorn:** In relation to what we have been talking about, I would like to ask you about your relationship with Ministers in departments other than that of the Minister for Science. Do you get together to work with them on pan-government issues? Could you talk a little about those other directions, please, than education and BEIS?

**Sir Patrick Vallance:** I work with Ministers from across government. Of course, I have an accountability primarily to the Prime Minister, and I have met her on a couple of occasions to discuss science.

I have worked a lot with Ministers in the Department for Transport and with Jesse Norman over the *Future Mobility* report that I referred to earlier on. I have regular meetings with Ministers in the Department of Health and Social Care and the Secretary of State on a number of issues, health and genomics among others.

I have worked with MHCLG Ministers particularly on the Grenfell issues, which continue. I am a member of the ministerial working group on innovation and regulation, which has Ministers from a number of different departments, and I work with them across there. Through the CST we have had interactions with Treasury Ministers and others, including the Chancellor of the Exchequer.

So I have a rather regular interaction with Ministers from across government. The closest relationship is with the Science Minister, for obvious reasons, but by definition of his role and GO-Science working across it is crucial to ensure that those interactions with other Ministers are as strong and regular as they need to be for the task in hand.

**The Chairman:** Do you have a science adviser in the Home Office and the Justice Department?

**Sir Patrick Vallance:** We have a science adviser in the Home Office. The science adviser in the Ministry of Justice is one of the people who is doubling up with another role. That is a discussion that is ongoing.

**The Chairman:** I ask, because we have heard that at one time we as a country were extremely highly regarded—in fact, we were regarded as
top of the pile in forensic science—but now we are regarded as the bottom of the pile, because we have no infrastructure to develop forensic science. Would you agree with that, or do you think it is rubbish?

Sir Patrick Vallance: I am not sure that we are bottom of the pile. I think we still have some good academic activities going on.

The Chairman: We will try to get you some quotes in the report soon.

Sir Patrick Vallance: First, I think it is an incredibly important area. I have interacted a lot with Julie Maxton at the Royal Society on this. I am completely aligned with the view, and GO-Science produced a report a couple of years ago on forensic science, that the need for science in the justice system is huge, the opportunity is huge, and that the UK has expertise dotted around that can be applied to forensic science.

One of the challenges is the difference between dedicated forensic science and the ability to utilise science. Genome sequencing, for example, which we are absolutely world leading at, applied to forensic science. I met yesterday with Niamh Nic Daeid from the Leverhulme Centre in Dundee, and the rather impressive work they are trying to—

The Chairman: You did not have to mention that because I am here, but never mind.

Sir Patrick Vallance: There is a lot we can do in forensic science. There is a big opportunity there and it is one that we absolutely need to grasp. I am looking forward to the report from the Royal Society and hope that we can start to regain the appropriate application of science in the justice system.

The Chairman: We will try to help you through our report.

Lord Hunt of Chesterton: There are 43 police authorities doing this work separately. It was commented on that formerly we had a world-class government laboratory. You cannot turn one world-class laboratory into 43 small sectors. It is just not possible.

Sir Patrick Vallance: I cannot say any more than that I agree there is an issue.

The Chairman: Lord Hunt, it is your chance to ask a question now.

Q16 Lord Hunt of Chesterton: My question relates to our previous comments. As more responsibilities are devolved from central government to the city regions and mayors, do you think there is a need for an extra layer to the CSA structure, working at city level? As the Minister referred to, we had very strong regional development agencies. They went during the coalition Government, and we still do not have that kind of structure. Without a change of structure, how will we get the input of science at the regional level across the UK? All other European countries have this.

Sir Patrick Vallance: It is a very interesting question, and one I have been asking myself over the past seven months, as to the relationship between the structure in central government and city science advice. I think the question is about science advice in cities rather than necessarily
specifically CSAs in cities. I say that, because as far as I can tell—we looked, but we need to continue looking—we found one person, Professor Bahaj, who is named as a CSA in a city in Southampton. We are speaking to him, but that is clearly not an answer. There must be other ways of getting science advice.

All the cities have universities, often more than one, which provide a local source of science advice. The question of how we get science advice into local government is a very interesting one. When we get a CSA in MHCLG, I will ask that CSA to look at that specific question and see whether something should be done or not. I just do not know at the moment. I am sorry.

**Gareth Davies:** That is about local advice, and the point Sir Patrick made about universities is critical. The Minister talked about the role of universities. We have ensured now that there is university representation on each of the local economic partnership boards as a way of ensuring there are proper links between the business side and the university side to provide that advice.

It is not as structured as a formal scientific advice mechanism, but it ensures the university’s role as a local economic anchor and that access to the broader scientific community can be made when areas are developing their local economic plans.

**Lord Hunt of Chesterton:** I saw a very strong example of that in Exeter last week.

**Gareth Davies:** Exeter is excellent. The work with the Met Office in Exeter is incredible.

**Lord Fox:** Coming back on that point, it rather depends what university position is on the LEP. My guess is that if I was the chancellor I would be putting the business development person from the university on that LEP and not the science person. You might need to revisit that, because I do not think that is a solution to the issue. I suspect that Sir Patrick’s route, with all due respect, is probably going to generate more.

**Gareth Davies:** They are two separate issues.

**The Chairman:** Looking around I do not see any more hands up. May I thank you very much, Minister, Sir Patrick and Mr Davies for coming today. I was told by one of your colleagues over the weekend, Minister, that you were concerned about meeting us today. I hope it was not that traumatic. I will not name who told me.

**Chris Skidmore MP:** I think you have probably been misinformed in that case. I enjoy this occasion. I came to the House of Lords Home Affairs Committee on EU exit and enjoyed it tremendously. I have enjoyed this tremendously and I look forward to being called back on any occasion.

**The Chairman:** We would appreciate it very much, all three of you, if we could make this a regular once a year exchange of views.

**Chris Skidmore MP:** Absolutely.

**The Chairman:** Sometimes not on record.
Chris Skidmore MP: I would be very keen to ensure that I come back and report on what successes I have managed to achieve in the role. I have been very grateful for the opportunity to set out my priorities for 2019.

The Chairman: Thank you very much indeed.