House of Commons

Science and Technology Committee

Oral evidence: Work of the Science Minister, HC 34

Tuesday 22 October 2019

Ordered by the House of Commons to be published on 22 October 2019.

Watch the meeting

Members present: Norman Lamb (Chair); Vicky Ford; Bill Grant; Darren Jones; Stephen Metcalfe; Carol Monaghan; Graham Stringer.

Questions 1 - 129

Witnesses

I: Chris Skidmore MP, Minister of State for Universities, Science, Research and Innovation, Department for Business, Energy and Industrial Strategy; and Paul Drabwell, Deputy Director – Place, Impact and Research, Department for Business, Energy and Industrial Strategy.

Written evidence from witnesses:

– Summary note of Brexit and preparations for the Science Minister roundtable

– Correspondence from Science Minister relating to his Oral evidence on 17 July 2019

HOUSE OF COMMONS

Examination of witnesses

Witnesses: Chris Skidmore and Paul Drabwell.

Q1 **Chair:** Welcome, both of you. Shall we do very quick introductions? We know you very well, Chris.

Chris Skidmore: Thank you, Chair. I am Chris Skidmore, the returning Minister of State for Universities, Science, Research and Innovation. I am delighted to be back. I last appeared in front of the Committee in July.

Q2 **Chair:** You were missing it, so you returned.

Chris Skidmore: Yes. There is nothing wrong with being Minister of State for Health. As you know, Chair, it is an excellent job.

Chair: Absolutely.

Chris Skidmore: I am delighted, after my placement in the NHS, to have learned a lot from that experience. I look forward to applying it in my return to this role, and I am delighted to be back.

Q3 **Chair:** How many weeks were you there?

Chris Skidmore: Seven. I may be the shortest-lived Health Minister, but for good reasons, rather than bad ones.

Paul Drabwell: I am Paul Drabwell. I am a deputy director in the science, research and innovation directorate at BEIS.

Q4 **Chair:** I am conscious that, thankfully, it looks like no deal is less likely, but we cannot rule it out, so we still need to focus on some of the key issues there. I will ask one or two questions. About two weeks ago, the Department published updated guidance for institutions on the underwrite. Have you directed UKRI to disseminate that guidance to institutions registered on the underwrite portal?

Chris Skidmore: Yes, that is correct. As you say, even though we are moving closer to a deal, as we approach 31 October no deal remains an absolute reality. I have therefore convened a working group, which meets regularly—at least once a week—with officials from UKRI, Universities UK and the British Council to discuss the implementation of a no-deal scenario. We have had the Horizon 2020 fact pack, which was published alongside my speech to the British Academy. Aside from that, there have been several tranches of technical information issued by UKRI, the first on 10 October and the second on 18 October.

Q5 **Chair:** How well disseminated do you think that has been?

Chris Skidmore: About 6,700 grant recipients still have live applications as part of the Horizon 2020 process.[1]

[1] Note from witness: Should have said "about 6,700 grant recipients have registered on the portal as part of the Horizon 2020 process".

Q6 **Chair:** Those are in flight.

Chris Skidmore: Yes. We have some who registered earlier in the year whose applications are no longer live. They have dropped off the system.[2] Every one of those is notified by email updates, with access through the portal. Through the portal, we are ready to continue to deliver the guarantee. In a no-deal scenario, all of those registered would be notified immediately—

Q7 **Chair:** How close are we to completing the total potential number of people registering on the portal? I think the academic institutions were pretty much there—the institutions, at least, if not every programme—but what about SMEs and so forth?

Chris Skidmore: You are absolutely right. There remain a large number of SMEs that have not necessarily engaged with the process. When we look at the numbers, we think that there are 6,700 registrations of grants out of a potential 10,600. That is roughly the total, but that is the number of grants, rather than the number of organisations or businesses. Businesses and organisations have more than one grant, so it could be that we are reaching capacity. We are determined to ensure that we continue to push. Since UKRI appeared before the Committee last week, there have been an additional 100 registrations. It is moving up slowly, but we may now have reached the long tail of applications.

Q8 **Chair:** What do we do with companies that suddenly contact you in a panic because they have not registered, were not aware of what they should be doing and then find that they have a problem?

Chris Skidmore: I have been very keen to work through any gaps that may currently exist, either in communications or in the process of applying for the guarantee. In UKRI, we currently have about 118 staff who are working primarily on preparations for no deal. They include 57 additional staff who are now being recruited to manage the process of in-flight applications, which was an extension to the guarantee in August. There is a helpdesk operation centre, where we have 22 people working.

Q9 **Chair:** They would deal with people who have not registered and contact you in a panic after the event, as it were.

Chris Skidmore: We are very clear that there is not a hard deadline when it comes to registration. Even in a no-deal scenario, we would look to continue any guarantee up to December 2020.

Q10 **Chair:** Can I return to the in-flight applications? This is the extension of the underwrite. You said that the applications will be considered as they would have been considered under Horizon 2020, but will the same criteria be used? Will the success rate be equivalent to the success rate

[2] Note from witness: Should have said "No. We have some who registered earlier in the year whose projects are no longer live. They have dropped off the system.".

under Horizon 2020?

Chris Skidmore: The same criteria will be used. A concern that was raised with me when I attended a celebration of our latest ERC award winners was that we should continue that process. Going through the accreditation process, we are keen to ensure that UKRI evaluates the projects, but under the expectation that it would match the current rate of successful applications. As you know, when it comes to UK applications we continue to be predominantly successful, particularly for the mono-beneficiary schemes.

Q11 **Chair:** We will come back to that later. What funding has been allocated by the Treasury for future applications to EU grants in circumstances where the UK would be participating as a third country?

Chris Skidmore: This particular question focuses on the underwrite guarantee extension. Even in a no-deal scenario, until the end of December 2020 we will have the opportunity to participate in partner grants as a third country. The EU has been very clear that that participation will be possible, although it will not receive EU funding. The underwrite guarantee extension makes up that shortfall. Therefore, it is obviously dependent on the number of successful participations in the process.

Q12 **Chair:** Has the Treasury allocated any funding to that?

Chris Skidmore: The funding is in addition to the regular departmental spending on science and technology. We have estimates for the figure, but it might change when it comes to looking at those partnerships and the numbers that actually go through. I am keen to make sure that we do not have a chilling effect and that UK partnerships continue, even if we are a third country. That has been the case for other third countries as well.

Q13 **Chair:** The Treasury will flexibly underwrite it, in effect. Under the scheme, it will fund UK participants in whatever successful bids are made under that scheme. Is that right?

Chris Skidmore: I have seen previous figures. I have not seen the latest figures on the in-flight applications. There were a variety of positive numbers. I seem to remember that the figure was just under €4 billion previously. I will probably have to write on the exact numbers. I think that the Treasury is keen. This is a hypothecated amount of money.

Q14 **Chair:** This is about more applications—fresh applications to participate—in circumstances where we are a third country. The Treasury has undertaken to fund those.

Chris Skidmore: That is correct. Obviously, all existing applications before Brexit are funded for the lifetime of their project. That includes all ERC and MSCA projects. Post Brexit, even in a no-deal scenario, ensuring that those projects are able to participate in the partner schemes—not the mono-beneficiary schemes, obviously, where there is still a gap—allows for the UK side of those partnerships to continue to be funded.

Importantly, if we are the lead collaborator, it ensures that there will be additional money to pay for the administration of continuing the lead collaboration. That would continue for any projects that continue to apply up to the end of December 2020. Importantly, for any projects that are netted in that period and are successful, it will be for the lifetime of the project, so you could still see projects—

Q15 **Chair:** Carrying on beyond that.

Chris Skidmore: Yes.

Q16 **Carol Monaghan:** Can I try to dig a wee bit deeper? Last week, we saw a report from the Royal Society that said that the number of applications to Horizon 2020 had dropped by 40%, which is the equivalent of about €400 million less coming to the UK than did before the 2016 referendum. When you talk about the amount of money that the Treasury has available, is that looking at the amount of money that was coming pre-referendum or the now reduced amount of money that is coming from the EU, because that is significantly different and will have a massive impact on UK science?

Chris Skidmore: Turning specifically to the Royal Society report, there is an issue when we look at baselines. The Royal Society began its baseline at 2015. If it had started its baseline at 2014, you would have seen a significant difference, because there is a fluctuation year on year. You do not see—

Q17 **Carol Monaghan:** You do not see a 40% drop, though. That is not a fluctuation.

Chris Skidmore: No, but there is a 13% gap between the amount of funds given out in 2014 and in 2015, in terms of the overall net system.[3] It is debatable exactly where you should begin and where you should end.

There is something else that I thought was interesting about the report, which I looked at again this morning. Yes, we had a significant reduction in MSCA funding, but we still had 336 grants, which was more than the next three countries—Spain, France and Italy—put together. That still demonstrates our world-leading status, even with this decline.

Q18 **Carol Monaghan:** A slipping status.

[3] Note from witness: Should have said "No, but the UK's share of funding in 2014 was 13%, almost 3 percentage points lower than in 2015, in terms of the overall net system".

Chris Skidmore: Equally, the country that had the highest rise—53—was Switzerland. It demonstrates a process, but it is not necessarily so clear cut.

Q19 **Carol Monaghan:** Can I take you back to the question that I asked, Minister? Will the Treasury pot be based on pre-referendum figures or post-referendum figures? Those figures are quite different.

Chris Skidmore: The Treasury guarantee is a guarantee for all the specific applications that come through. Any grantee can go forward and say, "We have the UK Government's backing and that guarantee." Obviously, it is demand led. It will be demand led to the extent of the number of applications that come through.

I am also concerned that we look at the wider picture for Horizon. We have a situation where European research funding has always been separate from industrial strategy challenge funding. We are continuing to increase that. It is very difficult to disaggregate the figures, and I responded to the letter to say that, but hypothecating seems to suggest that we put in €4 billion but got €5.5 billion back.

Q20 **Carol Monaghan:** But that is not what I am asking, with respect.

Chris Skidmore: No, but it is important—

Q21 **Carol Monaghan:** I am asking about the fact that we are down by €400 million already. Is the Treasury matching pre-referendum figures? It is a simple question.

Chris Skidmore: When you look at the overall funding that is coming forward, it has to be done on the basis of grants coming forward. Obviously, I want to encourage as many grants as possible to come forward.

Q22 **Carol Monaghan:** We know that the number has dropped since 2016 because people do not have certainty. I think you are avoiding my question, but by avoiding and evading we are getting an answer.

Chris Skidmore: No, I am not avoiding it. What I am keen to suggest is that we want to increase significantly the overall pot of science and research funding. When it comes to the European element and Horizon alternatives, in a no-deal scenario we will still need to hold up domestic alternatives. In a no-deal scenario, we would look to create those.

Obviously, my ambition is to have the deal, but even in a no-deal situation we would have that gap, before we have association to Horizon Europe, which I am still keen to progress. We have to be able to stand up domestic alternatives. We have the guarantee, but it would be added to by alternatives that we would create domestically. That is part of the work of Adrian Smith, which will be published shortly.

Chair: We will come back to that.

Q23 **Darren Jones:** Last week, I was in a regular meeting with trade unionists working on, among other issues, civil aerospace research. In that meeting they raised the issue that some of the projects they are working on that are funded under these funds have caused concern, because they have been told by their European partners that in a no-deal situation they would no longer be able to collaborate in those projects. Based on your evidence today, that does not sound to be true, but that is what they are being told.

What is your Department doing to ensure that, both on the UK side and on the European side, people understand what is in place and that, if there are situations where they are being told that they can no longer continue to collaborate, they know that actually they can?

Chris Skidmore: That is a very good point. There are a number of issues when it comes to organisations that have EU funds attached to them. I am keen to make sure that we continue to work on the European Centre for Medium-Range Weather Forecasts, for instance, and the EU funds that are attached to Copernicus. There is a question as to whether they want the centre to be physically based in the EU, and I am determined to make sure that we continue to allow the centre to operate here.

When it comes to the communication that we need, previously I wrote to all HE and Research Ministers and all the academies in Europe to articulate the in-flight application extension to the overall guarantee.[4] We are doing that again. A meeting of the European University Association is taking place in Brussels on Thursday. We will send out a communication as part of that. Part of having the working group with Universities UK and the British Council is to use our embassy networks to articulate in every country that the guarantee stands up, and that it is a genuine guarantee and additional money. I am keen to make sure that we press as hard as possible to prevent those concerns from turning into a loss of interest in British participation.

Q24 **Darren Jones:** In that case, on a very practical level, if there are organisations that are concerned about these issues, where do they go? Who should they call? What is the contact? Is there somewhere for them to speak to somebody?

Chris Skidmore: Yes. Obviously, UKRI has its own no-deal preparation. In the Department, we are very keen to ensure that as part of no-deal preparation we can take up any of those concerns.

Q25 **Darren Jones:** You can give us those details and we can publish them, for example.

Chris Skidmore: Yes. Please do. That would be very helpful.

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[4] Note from witness: Should have said "When it comes to the communication that we need, previously I wrote to all HE and Research Ministers and all the academies in Europe to articulate the in-flight application commitment in addition to the overall guarantee".

Q26 **Chair:** Can we do that?

Chris Skidmore: I would be very keen for you to do so. Thank you.

Q27 **Vicky Ford:** My questions are about Horizon Europe. Is associate membership of Horizon Europe still the Government's preferred option?

Chris Skidmore: The Government are keen to ensure that we get the opportunity to associate in Horizon Europe, which has not happened yet. The last time I appeared before the Committee, in July, I was hoping that we would get to the opening of the association articles by November. It now looks like that is slipping and it will be next year—at what point next year, we are not sure. They have to agree the overall financial sign-off of Horizon. The Treasury wants to assess the value-for-money case for Horizon Europe. Having attended several Competitiveness Councils and met the architects of this, I think what I call the hub-and-spoke approach absolutely has to be at the very centre of the future of international collaboration for British science.

Q28 **Chair:** Is that your view?

Chris Skidmore: That is my view.

Q29 **Chair:** Is it different from the Government's view?

Chris Skidmore: The Government's view is that to be able to judge the value-for-money case we must wait until we see what the association regulations look like.

Q30 **Chair:** Can you hear voices in Government that are less enthusiastic about Horizon Europe than you are?

Chris Skidmore: No. Everyone I have spoken to—

Q31 **Chair:** No. 10?

Chris Skidmore: Yes. We have seen from the Prime Minister's recent speeches that he says that he loves being European. My speech to the British Academy was very much around these points. Yes, we have the programme funds. There are a number of programme funds, like CAP, that we will probably not be part of in the future.

Vicky Ford: Like?

Chris Skidmore: The common agricultural policy.

I have met nobody who does not think that Horizon should be the preferred direction of travel. It will be a programme that is more international than ever. We had the letter that was written to Carlos Moedas by nine international countries, ranging from Israel to New Zealand to Australia to Canada, that are looking for an association to Horizon Europe.[5] When we fall out of the EU, we will be a third country in

[5] Note from witness: Should have said "We had the letter that was written to Carlos Moedas by eight international countries ranging from New Zealand to

Horizon 2020 by default, but, depending on what we pay in, association to Horizon Europe could provide us, potentially, with full association. We do not know until we allow for the articles to be opened up and debated.

The question of cost is still to be decided. With Horizon Europe, we know the cost is going up. As a result of the cost of Horizon Europe going up, I hope that the EU27 will recognise that they need UK participation more than ever in order to meet the overall cost of that envelope. I can also understand the Treasury's position, which is that it has to wait to see what the overall cost of association membership is. When it comes to the budget, I am certainly working to make the case for hypothecating what membership of Horizon may be, but as a responsible Government we have to look at alternatives to Horizon, in case that does not happen.

Chair: Let's go back to Vicky.

Q32 **Vicky Ford:** A number of stakeholders appear concerned that they are not certain that it is our preferred strategy. Can you be clear that, if it is value for money, it is our preferred strategy?

Chris Skidmore: Yes, absolutely. I cannot highlight enough the importance of Horizon Europe being at the centre of our strategy. I am sure that you have had Sir Adrian Smith here. I do not want to prejudge his report, but I think they have made public pronouncements that, when looking at how we do research and build on excellence, we should not take away the established models and think that we can create an entirely new system from scratch. We have seen from what happened with the Swiss experience that that is not always as successful as you might hope. We still have to prepare in case we are unable to associate, for whatever cost reasons that lie outside my control, but, as I said, I view Horizon Europe as being at the centre. We will then build our international strategy around the outside. We still want to do more than Horizon Europe, but Horizon Europe is at the centre.

Q33 **Vicky Ford:** Countries like Canada, New Zealand and Australia have written to the EU saying that they want to be associate members. Have we?

Chris Skidmore: At every Competitiveness Council, I have made the case in front of Ministers that, potentially, we will be looking to associate to Horizon Europe. A list of my engagements with European Ministers has been sent to the Committee. At every single one of those meetings, I have raised Horizon Europe and have asked those countries, when possible, to facilitate the opportunity for us to talk to taskforce 50 so that we can raise the importance of continued British participation. I will continue to do so.

Australia to Canada, that are looking for increased international collaboration through Horizon Europe."

Q34 **Vicky Ford:** Back in July, you told us that you were seeking to negotiate the terms of association with Horizon Europe so that associate members could participate in ERC, Marie Curie and SME grants. Are you still working on those elements as well?

Chris Skidmore: I remain optimistic and hopeful about what will happen when the association articles are opened. The Horizon Europe scheme is going to be the most international ever, so there is a good chance. We will still need to persuade the overall framework organisers as part of the association negotiations. Can we gain full participation? If we can, it makes the value-for-money case even stronger.

Q35 **Vicky Ford:** What discussions have you had with the Treasury about the cost? How can we be assured that, if you participate in Horizon Europe and those programmes, it will not come from other parts of the science budget?

Chris Skidmore: We are consistently clear in making the point that all Horizon funds have sat outside departmental budgets in the past. It is part of budget negotiations. That is definitely something we are including and encouraging. That is why the Adrian Smith work is also important. We need to set out both potential envelopes for Horizon Europe and what we do in addition to Horizon Europe.

If we are unable to associate to Horizon Europe, we will need to match the deficit in research funding, as it were—to take up Ms Monaghan's point—because there would be a deficit. There is no getting away from the fact that if the Treasury says, "Oh well, you put in €4 billion as part of your overall £39 billion pot," we have to make the case strongly that we were getting €5.5 billion back. We need to strongly make the case about what we are in net receipt of, not necessarily what is also going out of the door at the moment.

Q36 **Vicky Ford:** I note that co-operation on science in Europe was mentioned quite high up the political declaration last week. If there is a no-deal Brexit, will that impact on the political good will of the EU27 towards us when it comes to associate membership? If so, what are the Government doing to mitigate the risk that in a no-deal Brexit they might not want us in the club so closely on science?

Chris Skidmore: By virtue of my very appearance at the Committee today, which I know they will be watching in Brussels as well, I hope we will be able to set a tone that says, regardless of the overall politics of no deal, that we still wish to be able to participate in those European partnerships. That is why I made the speech to the British Council as well.

Aside from the EU programmes, there are a number of things that I have managed to do on the sidelines to demonstrate our continued participation. There is that broader umbrella. The European University Institute is disproportionately important in signalling our enthusiasm for maintaining those partnerships for the future. We have now managed to get an interim arrangement, even in a no-deal scenario, to continue in the EUI. We are now in the next stage of negotiating association to that. We have also managed to continue our participation in European research infrastructure consortia, even in a no-deal scenario. That is in the text of the political declaration.

I am keen to say piece by piece, "Look, at every stage we have managed to say that we want to maintain these relationships." That is why, at each of the last two Competitiveness Councils I attended, I announced that home fee status would continue through to 2021, even in a no-deal scenario, first, for undergraduates and, secondly, for postgraduates. When I can signal, it is important to do so.

Obviously, there are higher powers that be when it comes to the final settlements, both financially and politically, of what might come out of no deal, but I hope that we can continue in Horizon 2020. We will still be a third country, even in no deal. Going into Horizon Europe, we have to make the case like Norway, Switzerland and some of the other international countries I have mentioned.

Q37 **Vicky Ford:** We are much bigger than Norway, Switzerland and others.

Chris Skidmore: Absolutely.

Q38 **Vicky Ford:** We are a third country with a capital T.

Chris Skidmore: We had 13% of all Horizon 2020 grants. I want that mutually beneficial relationship to continue. We have seven of the 10 top universities in the framework of the EU28—now 27—so we need each other.

Q39 **Vicky Ford:** Does any other third country get more out of the pot on science funding than it puts in?

Chris Skidmore: It is a good point. On the net beneficiary process, I will probably have to come back to you. We are second behind Germany.

Q40 **Chair:** In the new relationship, that is quite an important question. At the moment, we are net beneficiaries, as we have said. It is about the future. Does the EU ever allow a third country to get more out than it puts in?

Chris Skidmore: I would have to come back to you on the details. On the Royal Society report, I mentioned Switzerland. Swiss participation is now growing stronger, after their experience of being outside the shared programmes.

Chair: If you could come back to us, that would be very helpful.

Q41 **Vicky Ford:** As a full member, we were a net contributor to the entire EU budget. We will now have areas where we are not a net contributor. I hope that you are having serious discussions with the Treasury and saying that it should not still expect one side of the scales to exist when the other side is no longer there.

Chris Skidmore: The importance of these grants is not just the money. It is partly about the infrastructure and partly about the people, with the people perhaps being the most important. Obviously, a question of mobility is attached to that as well. We want to ensure that capacity continues to grow. All of this is set against the backdrop of 2.4%. That is an input, but what are the outputs that we want from 2.4%? If we do not associate to Horizon Europe, many will think that we have failed.

When it comes to looking at international partnerships for the future, we have published our international research and innovation strategy, which demonstrates that we want to be able to maintain and extend our links. I am passionate about how we can do that for the future. The initial scope of the Smith report was to look at that. Now it has the additional facet of no-deal Horizon alternatives, but it becomes problematic for us if we say that we want to extend our relationships across the world and increase our number of partnerships but are unable to continue our partnerships with our strongest and most trusted research partners. In a no-deal scenario, we would look to a number of bilateral relationships as well, but I think it sends a message. The message I want to send today is that association to Horizon Europe, and full association, is absolutely on the table. As Science Minister, I want to be able to make that case as the core priority.

Q42 **Vicky Ford:** Sorry to go into the detail a bit. Your discussions with the Treasury about value for money are not just, "We put €4 billion in and get €5.5 billion back." As you said, it is not just the money that matters; it is the collaboration.

Chris Skidmore: It is the collaborations and the principles involved. With Horizon 2020, Europe is increasingly taking a mission-centred approach. We may come on to our domestic approach for the future. I am also keen to replicate a mission-oriented approach and see how we might be able to weave the two schemes to make sure that they are more complementary for the future.

When it comes to looking at continued negotiations with the Treasury, we have a number of fiscal events. We will have a capital review, which obviously covers science and research funding as well. The Prime Minister has made very strong noises about increasing science and research spend for the future, but it will come down to the overall financial position. Where does the European Parliament settle with the Commission on the overall budget for Horizon Europe?

Q43 **Vicky Ford:** When will the Adrian Smith review be published, and how quickly can its findings be implemented?

Chris Skidmore: I met Sir Adrian Smith and Graeme Reid, who has been working with him, last week or the week before to go through it a final time. When I last appeared before the Committee, I was hopeful that we would have that report published in September.

Q44 **Chair:** Have they submitted it?

Chris Skidmore: Yes.

Q45 **Chair:** When did they submit it?

Chris Skidmore: When I left the Department they were still writing it, and I understand it was submitted in August.

Q46 **Chair:** We are now in mid or late October. Why the delay? Can't we just get it out there?

Chris Skidmore: Significant fiscal spend is potentially hypothecated with some of the recommendations. Having spoken with Sir Adrian about how to land the report, I am keen that we attach it to a potential budgetary process.

Q47 **Chair:** Is it going to be part of a bigger announcement of some sort? We are supposed to be hearing about money towards the 2.4% sometime this autumn. Is this all going to be wrapped up together, and how long will we have to wait?

Chris Skidmore: I am keen that we should see both Smith and the UKRI infrastructure report as pathways towards that overall increase, and we are in active negotiations at the moment with the Treasury around the capital review.

Q48 **Chair:** The next fortnight, the next four weeks? What are you hoping for?

Chris Skidmore: Certainly within the next four weeks, I hope. Sometimes when organising these things they are like Jenga pieces. If we go into a no-deal scenario and the Budget is delayed, trying to—

Q49 **Chair:** All other things being equal, you would expect it to be in the next four weeks.

Chris Skidmore: I am keen that we first set out the overall envelope and the priorities that follow from it, so that is where I would position things.

Q50 **Vicky Ford:** Will its recommendations be taken forward even if the UK does not secure associate membership of Horizon Europe?

Chris Skidmore: We have the Horizon alternatives that need to be looked at, and there are two parts to that. One is the Horizon 2020 alternatives to mono-beneficiary schemes if we are unable to participate in those in a no-deal scenario. It becomes particularly pertinent to resolve that issue ASAP. Then there are obviously Horizon Europe alternatives.

We are now working with a working group of officials to work up all the recommendations in Smith—that is a cross-departmental effort—so we will be ready and able actively to implement some of those recommendations, if they are needed. Even if they are not needed, Adrian Smith and Graeme Reid have been working on future international partnerships and what future funds might look like, and how to design those for the future. The working group will then feed into the high-level group, which is a group with the academies and a wider sector of academia.

There are really two parts to it. We still have the alternatives to the Horizon programmes, but, even if we fully associate with Horizon Europe and have managed to sign a deal and that is ratified, equally we will still want the work of the Smith report, which initially was all about the future of international partnerships, to be taken forward. Yes, there will be implementation of the report; it depends at what scale.

Q51 **Chair:** We keep hearing about delays in the start of negotiations for Horizon Europe, and you said it might well drift into next year. What are you hearing now about the likely timescale? What is the current projected date for the start of the negotiation? As we heard from Carol earlier, our success rate is still good, but the number of applications is down quite significantly. This uncertainty is massively damaging and we need clarification. I appreciate that Parliament is out of your hands, but what do you hear about the target date for this opening up so that we can get some certainty?

Chris Skidmore: You are right. Even if we have a deal, uncertainty still surrounds Horizon Europe, so being able to provide reassurance is critical. I hear a number of conversations about where we might be. It will depend on when we get to the stage of the European Parliament agreeing the overall financial budget. We could now even be looking at quarter 2 of 2020.

Chair: My goodness.

Q52 **Vicky Ford:** Is it because of delays to the MFF?

Chris Skidmore: Yes, and generally.

Q53 **Chair:** You are currently expecting this to start in quarter 2 of 2020.

Chris Skidmore: We have had no confirmation.

Q54 **Chair:** For me, that opens up the worrying scenario that we get to the end of 2020, when potentially the implementation period comes to an end, and, even if there is a Government intention to be part of Horizon Europe, we might not be in at the start of it.

Chris Skidmore: I still hope we would move towards association.

Q55 **Chair:** If there is a deal and the Government decide that the value-for-money case stacks up, you have total expectation that we would be in right at the start of Horizon Europe.

Chris Skidmore: That is my expectation. Events outside our control with the processes involving the Commission would determine any delay. It is not just us. There is the letter of March 2018; a lot of other countries are pushing at the door.

Q56 **Chair:** How concerned are you at the Royal Society figures? Carol mentioned them earlier. The annual share of EU research funding has fallen by a third and there is an almost 40% drop in UK applications to Horizon Europe? That feels quite catastrophic, particularly when we think about how we are going to build R&D in this country and, indeed, the number of top international scientists coming to this country. There are 35% fewer scientists coming to the UK through key schemes. How concerned are you about that, and what can you do to turn it around?

Chris Skidmore: On tone, it is important to ensure that we still set out that we are an outward-facing, friendly country, that we want people to come here and that this is not catastrophic. I do not want the tone itself to become some kind of vicious cycle downwards where people look at the figures and think that a 40% drop means the UK is pulling the plug.

The report still shows us leading the tables. Taking MSCA, as I said, when you look at the figures, in 2018 we were still 336; Spain is the next one at 162. Yes, we have gone down from 2015 quite significantly, but we are still up there leading the table. It is the same for ERC. We still managed to net 27% of all ERC recipients at the latest round, and now we have been able to secure funding and demonstrate to them that the guarantee is in place.

Q57 **Chair:** The bottom line is that British science will suffer, won’t it, if this trend continues?

Chris Skidmore: Yes, but British science is still strong and it is important that we do not send a message that somehow we are on a downward trajectory with the Government.

Q58 **Chair:** Your absolute intention is to encourage people to come here and get applications back up again.

Chris Skidmore: Absolutely. Whether it is Horizon or our domestic programmes, our universities’ latest QS rankings still demonstrate our global position. We will have seven of the top 10 universities in Europe. Given the potential for a significant uplift in the science and research budget, coupled with what we want to do around visas and prioritising global talent that comes to this country, I want to make sure that people see this as a place where investments will be made for the future, and there is no doubt about science taking place in the UK.

Q59 **Chair:** When Jo Johnson was doing your job for a brief period, he attended Cabinet. You are not attending Cabinet, as I understand it. That could be seen as something of a downgrading of the importance of science in Government. Does that concern you? Have you made the argument that you should be there making the case for science?

Chris Skidmore: Obviously, I would love to be able to attend Cabinet. I attended Cabinet as a temporary measure when I covered for Claire Perry as interim Energy Minister, but I feel that I probably have stronger connections to the centre than before. The Prime Minister is incredibly engaged when it comes to these issues, and I have the opportunity to articulate them to him and to his adviser Dominic Cummings. I have known Dominic since I worked with him alongside Michael Gove in opposition. Even though I am not attending Cabinet, I feel I have the opportunity to influence the debate in a way that I did not have before.

Q60 **Vicky Ford:** I remind you that, seven years ago, the seven-year MFF was only agreed in the December before the seven-year programme started, and the previous framework funding had projects that overlapped into the next few years.

Chair: This is nothing unusual.

Vicky Ford: There will be money under Horizon 2020 that goes through into grants for 2021. It may be helpful, Minister, if we could get some analysis of what happened at the end of that cycle and in the next one to give reassurance to people that there is not a cliff edge at the end of 2020, and they should keep applying through this period. Maybe you could write to us with more detail on what happened in that period to help reassure us.

Chris Skidmore: Yes. The lessons of history are always important.

Q61 **Stephen Metcalfe:** On an upbeat, positive point, the Queen's Speech again mentioned science. The Government want to increase science capability and space technology. All of that is good news. They want to do that by introducing an ARPA-style funding mechanism. Why do it that way and not give the money to UKRI?

Chris Skidmore: We are still incredibly keen to have significant uplift to the science research budget, of which obviously UKRI would be overwhelmingly the main beneficiary and would administer any significant uplift and where we go in the future. When we look at the potential Advanced Research and Projects Agency model, not DARPA but ARPA, because it is important—

Q62 **Stephen Metcalfe:** It is not just defence.

Chris Skidmore: Exactly. We have a number of bodies outside UKRI in our funding envelope, whether it is DSTL, which covers defence, or our national academies, where we gave £350 million recently to administer some of their own schemes. It is about having that sort of catalyst and element of disruption as well—a ginger group. Other countries are considering how they can focus on blue-skies discovery-led research for the future. I personally welcome this as a helpful addition to the overall funding landscape.

How we articulate that is going to be important, so that it is not seen as a distraction but as something that sits alongside the work. I often see it as a pyramid. Trying to conceptualise how we can do funding for the future on a more long-term sustainable basis, I see it as having the ARPA sitting at the top of the pyramid, with a larger band of basic and blue-skies research beneath that, of which QR, a uniquely British system, is really important, and continuing to show those real-terms increases for the future. ARPA would necessarily have to sit outside UKRI because of its focus on intensive project-led management and to be able to distinguish itself from the traditional grant-led application processes.[6]

Q63 **Stephen Metcalfe:** Any money that is going into science is great, but from your answer it sounds as if ARPA is going to do something different from what UKRI has been doing. Is that because it will have more ministerial and governmental direction than UKRI does? Rightly so. Maybe that is a rationale in its own right. Is the way you see it working that the Government will pick projects and nudge the new ARPA-style body towards them? How much money will it have, and when will it be established?

Chris Skidmore: On the money point, those are negotiations that we are having with the Treasury as part of the overall envelope of science research spending and the capital review. When you look at what would be priorities for any new ARPA and why we would want to establish it, partly it is a question of specific projects being pulled through the system rather than a push-led initiative.

Obviously, most of our research initiatives are based on place and universities, but in terms of ARPA, at least in the States—I do not want to sound as though I am a total expert on ARPA; maybe the Committee wants to take other evidence on these points—we have looked at the establishment of ARPANET, which is a highly risky, multi-collaborative approach that would not necessarily have been possible using the university model. It has active project management systems in place that can pull this approach through and do it at scale. They established the first GPS system in two years. It is something worth investigating and adapting.

Q64 **Chair:** On Stephen's point, is it more Government directed?

Chris Skidmore: That is why it is important to say that this is an ARPA rather than a DARPA. We had conversations about whether we should set up several ARPAs. In the States they have had HARPA and various others. There is a sort of mission-based approach where you could align an ARPA with net zero priorities for the future, but that is yet to be decided. I am happy to come back—

Q65 **Chair:** Is it more Government directed?

Chris Skidmore: We would still want the blue-skies discovery-led approach to be at the top of the pyramid. You would set a fixed timeframe for individuals who have come up with particular ideas to be

[6] Note from witness: Should have said "ARPA may sit outside UKRI because of its focus on intensive project-led management and to be able to distinguish itself from the traditional grant-led application processes."

able to deliver on them. We would still want to differentiate between the industrial strategy challenge-led approach, which is where we have Government working through quantum hub technologies, and creating national strategies.

There is a tension around innovation and where you are on the innovation curve. Where we want clear Government challenge-led direction on some of the applications is obviously on the discovery-led side of things where potentially having a timeframe and an active project manager lying outside Government could be incredibly healthy to allow for the blossoming of innovation.

Q66 **Stephen Metcalfe:** You said the money is being negotiated. On timescale, when do you imagine we will know how much money and how this new body is going to be structured, and will that be consulted on?

Chris Skidmore: Of course, we want to ensure that we have full consultation with the sectors and with UKRI on this. In terms of any funding uplift, I am very keen that, when it comes to any announcements on science research funding, my core principle on domestic spend is that we see the rise starting in the bottom left-hand corner of the graph and moving to the top right-hand corner. We do not want fits and starts of programmes being pump-primed with money and then dropping off a cliff at the end. With any ARPA, we would want to see a gradient. What I am looking for, if I can achieve it, is a multi-financial framework process that can deliver real change to the science funding architecture.

Q67 **Stephen Metcalfe:** Will that be in the next three months, six months, 12 months? Will we then know how the body is structured and what its funding will be?

Chris Skidmore: The funding envelope would come as part of the Budget capital review, and early next year we would look to having full consultations. At what point it would then be established will be up for further discussion.

Q68 **Stephen Metcalfe:** Presumably, finding a suitable leader for it will be a challenge.

Chris Skidmore: Yes. I am happy to come back to the Committee when I have further details on some of these things, but it is definitely the funding envelope that we are looking at to start with.

Q69 **Chair:** Is UKRI enthusiastic about it?

Chris Skidmore: Having come back into the role, I think UKRI are incredibly enthusiastic about where we are now with science research.

Q70 **Chair:** But are they enthusiastic about the new body rather than them being responsible?

Chris Skidmore: We had a roundtable in No. 10 several weeks ago with over 20 organisations. Obviously UKRI were one, along with Sir Patrick

Vallance, the Government chief scientist, and a wide range of all the royal societies. No one spoke against it. Everyone has a different view of what they think an ARPA should be, and we will need to work towards consensus. First, what does the operating model look like? As Stephen said, what money is attached to it? It is fair to say that we would want that to grow rather than be just offloaded. Secondly, where might its priorities lie? Does it take a mission-led approach, as you said, Chair?

Q71 **Chair:** How does it dispense its money? Is it through grants?

Chris Skidmore: It is through separate grants with fixed time periods, minimal bureaucracy and a core project leader who sees the project through, with the money being turned off if the project fails. One of the key distinguishing things around an ARPA model is acceptance that failure is no bad thing, and that is something that distinguishes itself.

Q72 **Bill Grant:** You touched on collaboration and data sharing. I am sure we all agree that collaboration and sharing research data across boundaries and borders is essential to good research outcomes. The Committee is aware from some stakeholders in the research community that Brexit itself and the withdrawal from the EU GDPR is having a negative impact on their ability to collaborate and share data. How would you respond to that community and those concerns going forward?

Chris Skidmore: We will be a third country under GDPR as a result of leaving the European Union. We have committed to ensure that we will allow personal data to be sent from the UK to the EU without additional requirements. The Information Commissioner's Office has created guidance for organisations to prepare. We published specific data guidance on gov.uk. It is being raised at business roundtables at the moment as well.

We are keen to make sure that the transfer of data is as seamless as possible for the future. It has been addressed in the political declaration on the future relationship as a priority. I am keen that we can resolve some of these issues. Obviously, they sit outside my remit, with DCMS, but my officials and DCMS officials are working closely on this and recognise the challenge that you have presented.

Q73 **Bill Grant:** You used the phrase "resolve issues", so you are clear in your mind that issues exist. Do we have a timeframe for resolving those issues, because it is so important for the exchange of data and the success of these things?

Chris Skidmore: One of the questions is legal. Transfers of data will require additional legal safeguards for the future as a result of our third-country status in GDPR. Even though we have transposed GDPR into law, we are going to have to take additional steps to ensure that future data transfers are lawful.

Q74 **Chair:** That is quite an urgent priority, is it not? When you talk about future steps, do you have a timeframe for getting this resolved so that there are no impediments to the flow of data and the conduct of research?

Chris Skidmore: I do not have that information to hand, so I will have to write to the Committee on the data issues, unless Mr Drabwell is able to assist.

Q75 **Chair:** Could you come back to us on that?

Chris Skidmore: Yes.

Q76 **Bill Grant:** To sum up, you have plans to secure that data and to ensure that collaboration on research continues, but the plans as yet have not been rolled out and are incomplete.

Chris Skidmore: I would not say necessarily that plans are incomplete. I know that DCMS has been doing a lot of work on this. When I have attended meetings, whether no-deal ministerial meetings under the previous Administration or the opportunities I had to attend XO over the summer as Health Minister, they have been raised. Using the XO and XS mitigation process demonstrates that. The Government will move as swiftly as possible when they can. I feel quite nervous about addressing a portfolio that does not sit in my Department, but I am happy to write on the timeframes because it may be that DCMS can provide more accurate information.

Q77 **Bill Grant:** To be clear, the Government are aware of the concerns of the research community and are endeavouring to do their very best to resolve those issues of collaboration and data sharing safely.

Chris Skidmore: Absolutely.

Q78 **Darren Jones:** Minister, could you give us a brief update on the latest announcement on the tier 1 visa fast-tracking scheme changes? Could you tell us when the new changes will come into force and how you envisage improving the scheme compared with what it was before?

Chris Skidmore: I believe the announcement was made on 8 August by the Prime Minister. Since then, my officials in BEIS have been working closely with Home Office officials on how we can look at designing the scheme for the future. In looking at this scheme, which would come in in January 2021—the points-based overall system that the MAC is consulting on at the moment—it is important for me that we reflect on the particular subjects and criteria and that they are drawn in a way that reflects not just physicists and mathematicians but engineers, because if we are to have a research infrastructure we need people to build it. It should also reflect the issues and concerns of the arts and humanities world.

Science research is increasingly multidisciplinary, and I do not think the Government can necessarily pick individual subjects as part of the visa process. We are working with officials. It is overlain by the vast architecture that is the points-based system, so I feel uncomfortable talking about what the overall system will look like, but I will be fighting my hardest, in the same way as I did over the 30k salary cap.

Q79 **Chair:** It is a salary threshold rather than a cap, isn't it?

Chris Skidmore: Yes, a threshold. My core principle is that science and innovation should inform visa policy; visa policy should not inform science and innovation.

Q80 **Darren Jones:** I want to ask about two of the issues you have just raised, Minister. First, on social scientists as well as STEM researchers and the income threshold, given that it is your Department that needs to inform the visa policy, can you tell us what representations you have been making to the relevant Departments and your colleagues to make sure that the fast-tracking system works for social scientists, and that the income threshold is changed so that we are able, as I know you know, to bring in teams of researchers and not just those at the top of the pay scale?

Chris Skidmore: In the past, with the tier 2 visas, we have had some exceptions carved out—for example, for laboratory technicians. A threshold has been applied to some of those exceptions; I think it is about £20,800. I am keen that, in this new world that wants to reflect a global Britain, we deliver on those warm words.

Q81 **Chair:** The question was about more representations. What have you been saying to colleagues in Government, and how have they been responding to you on the key issues that Darren raised?

Chris Skidmore: Partly, it is increased collaborative effort on the part of both BEIS and the Home Office to work together, and now we have the national academies actively included, including the British Academy, at the roundtable. I am meeting Sir David Cannadine, who the other week raised with me issues on the arts and humanities relating to the visa process.

Q82 **Darren Jones:** Presumably, you agree that it should not apply just to STEM.

Chris Skidmore: Yes.

Q83 **Darren Jones:** And you continue to say that publicly and to Ministers.

Chris Skidmore: Yes. I am keen to make sure that I am seen as part of a process that welcomes these changes and can work with the Home Office on the wider landscape, because it will be looking at how the whole points-based system architecture works.

Q84 **Chair:** On Darren's point, a view expressed by many is that the Government intend to make it more STEM focused. Do you reject that?

Chris Skidmore: Certainly no final proposals have been developed.

Q85 **Chair:** That is not the point. Are there people in Government making the case for a more STEM-focused system? Darren's point is that it is so important to recognise the multidisciplinary research that is undertaken, and the importance of social sciences and so on. Can you reassure us that there is no move within Government to limit it more towards STEM?

Chris Skidmore: That wider cross-Government piece of work is something BEIS is going to feed into. It is at official level at the moment. When it comes to looking at the issue of subject base, I have said openly that I think the process should be subject blind, but there is also an important interface with the organisations that might be sponsors for the early exceptional talent visa process. In the past, we have had British Academy alongside the Royal Society. I am keen to make sure that we continue that and that all the academies, including arts and humanities, are reflected. It is important for the conservatoire movement that we have in the UK. These are international concert pianists.

Q86 **Chair:** You do not think there is any move within Government to make it more restrictive towards STEM.

Chris Skidmore: I am not aware. All I would say is that, certainly from my perspective and from looking at how we can draw international talent to this country, the creative sector is part of the industrial strategy and is drawing in a huge amount of GVA, and I am keen that we reflect on that.

Q87 **Darren Jones:** One of the other criticisms of the previous scheme was that it only really worked for those deemed to be the most elite kind of researchers, so much so that there was under-utilisation of the number of visas in the tier 1 scheme. When the Committee took evidence on it before, someone said there were not enough Nobel laureates to give them all a fast-track tier 1 visa to come to the UK. How will the new scheme change to ensure that the definition of tier 1 is slightly broader so that we are attracting the broader base of talent you said we need?

Chris Skidmore: That is probably a level of detail on which we are still engaging with the Home Office.

Q88 **Darren Jones:** Can you give us the timeframe for that? I am conscious that most of your answers are subject to detail, but it has been announced publicly. Are there going to be consultations? What are the timescales for being able to make representations perhaps from this Committee but also presumably from your own Department to whoever is making these decisions in Government?

Chris Skidmore: On the timescales, we will continue to work towards the new visa system that will be going live in January 2021.

Q89 **Darren Jones:** That is the end date. When will we be consulting on the new scheme on fast-track tier 1 visas?

Chris Skidmore: That is a date yet to be announced.

Q90 **Darren Jones:** That has not been decided. Presumably, one of the issues that will be fed back is that many people were not even aware of the tier 1 visa scheme beforehand. It is probably unhelpful to announce these things when we don't actually know what we are doing; it makes things slightly more confusing.

My last question is about non-fast-track applications. Are there any proposals beyond the tier 1 scheme, recognising that we want to attract the best possible talent to the research community, that will make it perhaps easier if freedom of movement ends in a European context?

Chris Skidmore: There is the tier 4 graduate route and the two-year post-study work visa scheme that would also seek to go live at the same time. It is about recognising that there is a pipeline.

You are absolutely right, Mr Jones. Perhaps in the past, the exceptional talent visa was drawn too tightly and few people knew about it. There are issues around sponsorship bodies. It was quite tight around the academies, and potentially the numbers were not as significant as we thought they might be. Looking at that process, in a speech on 2.4% I talked about the pipeline of talent. Allowing a two-year post-study work visa encourages international students to come here. Some of those students will then potentially seek to come here as undergraduates, maybe never thinking about doing postgraduate research, and then take up postgraduate positions. Therefore, you begin to look at how we can draw more international students, or the international community, into research in the longer term as well.

Q91 **Darren Jones:** Our focus today has been on science and academic research. Forgive me if I have forgotten the answer to this, but perhaps you could remind me. Are the technology tier 1 fast-track visas under your responsibility, or is that for another Minister? If you are a technology entrepreneur, for example, I think you can apply to Tech City, or one of the organisations under fast-track visas. Is that you or someone else?

Chris Skidmore: I will have to come back to you on that. There may be an overlap with DCMS.

Q92 **Darren Jones:** It would be interesting to know whether that is being reviewed alongside the tier 1 scheme for scientists.

Chris Skidmore: It is not something on which as a Minister I have ever had subs presented to me. It may be DCMS, but I will come back to you to double-confirm it.

Chair: Paul, I am conscious that you have not been relied upon at all by the Minister. If you feel a desire at some point to speak, feel free to do so. We would love to hear from you at any stage.

Q93 **Carol Monaghan:** Minister, a European temporary leave to remain visa, which can be used potentially by European students post Brexit, is going to be valid for only three years. In Scotland, most of our courses are four years, and in the rest of the UK there are masters courses, medical courses and architecture courses that are longer. Are there any plans to look at this more carefully to ensure that the length of the visa matches the length of the course?

Chris Skidmore: This is an issue as we move across the transition. There is a gap as we move to a new system and European leave to remain is eventually phased out. There is a point at which those applying are potentially put off applying if they think they have to move to a tier 4 visa midway through.

I am making representations. Yesterday, I had a regular meeting with my DA ministerial colleagues, and Richard Lochhead, the Scottish Minister for HE and Research, raised this with me. I wrote to the Home Secretary two weeks ago specifically on the issue of leave to remain and have yet to receive a reply. This is settled Government policy that was introduced in November or December 2018. It was a three-year process. Initially, there were discussions around it being a two-year process and there was an extension to three years.

Q94 **Chair:** In your letter, did you make the case for an extension so that the visa matched the length of the course?

Chris Skidmore: Because I am not in the Home Office, I do not see how this overlays with all the other processes.

Q95 **Chair:** You said you had written.

Chris Skidmore: Yes.

Q96 **Chair:** In your representation to them, you made that case.

Chris Skidmore: Yes. If we are unable to reopen the issue of European temporary leave to remain, given that it is a transition process, we will then be into the new future immigration process. I am keen that the point at which a student may need to transition from three years to a tier 4 visa is made as seamless and cost-free as possible, but these are things I continue to work on.

Q97 **Carol Monaghan:** The problem is that you may be a student potentially looking at a course in Scotland and you know you will only get three years. If we leave without a deal, European students will probably be treated as international students in terms of their fee status, so we are expecting them to look at studying in Scotland on a four-year course and paying an awful lot of money with the potential that they could be kicked out after three years. Can't you see that there is a serious issue?

Chris Skidmore: On the issue of student finance, anyone applying now for 2021 would still have home fee status for the duration of the course, so, even if we reached that December 2020 point, they would not move to an international student fee process. I am keen to make the point that they have home fee status for the duration of their study. As to being kicked out, I am keen that we can demonstrate that there is this process.

Q98 **Carol Monaghan:** You can demonstrate it by making the visa match the length of the course. Maybe "kicked out" is too harsh a phrase, but, regardless, there is a real worry that students will look elsewhere if they know that potentially they cannot finish a course.

Chris Skidmore: I am keen that we demonstrate that there is the opportunity to get to tier 4. I know that is not necessarily ideal. Students starting next year would also be eligible for the two-year post-study work visa as part of their course.

Q99 **Carol Monaghan:** That does not work if you have not finished your degree.

Chris Skidmore: That is very true.

Q100 **Chair:** The point is that we need to get this sorted, Chris. You could make the case to the Home Office, recognising what Carol is saying, that it needs to match the length of the course.

Chris Skidmore: For those who would say this is the process as it stands, I am saying that I have written to make the case to change the system.

Q101 **Carol Monaghan:** Are you able to share your letter with the Committee and the response from the Home Office?

Chris Skidmore: I am sure that would be possible. I have not received the response from the Home Office yet.

Q102 **Chair:** If you could send your letter to us, that would be great.

Chris Skidmore: I will happily send my letter to you.

Q103 **Carol Monaghan:** That would be very useful. Moving to Erasmus, will the UK participate in it whether we leave with or without a deal?

Chris Skidmore: I am especially concerned about Erasmus. Everything is a priority, but when it comes to timing in a no-deal scenario we now need to stand up an alternative. We have the guarantee, which is successful; participation is approved by the EU Commission. When you look at the deadlines, we have applications for the Erasmus schemes, and they occur across the year; there are several points of entry, but say, for instance, you start in 2020-21, the deadline for applications is roughly 15 January 2020. If we fall out with no deal this side of the year, we are not then participating in Erasmus, so we need a domestic alternative.

Q104 **Carol Monaghan:** Why would we not be participating in Erasmus? There are many countries outwith the European Union that participate in Erasmus?

Chris Skidmore: It is similar to the situation with Horizon 2020 and Horizon Europe. They participate, but we would fall out of the Erasmus+ scheme. We would obviously seek what I think is called partner status, but again that will not open until potentially quarter two of next year, to discuss future participation in Erasmus. The existing participation in Erasmus is resolved by the deal. In a no-deal scenario, we have to—

Q105 **Chair:** With a deal, Erasmus continues; applications can be made in time by January.

Chris Skidmore: Yes. The guarantee for us is that these are all schemes that have been applied for and successfully approved by the Commission. The Commission does not successfully approve schemes until about mid to late May, so even if there is a delay to Brexit until 31 January, we will have a scenario where people have applied for Erasmus but potentially are still unable to have their scheme successfully approved.

The Commission has moved on this. Taskforce 50 has probably provided more information on Erasmus than ever before. It said very clearly that we are still a member of the EU and no organisation should discriminate against us. It has been very strict on that. European countries in taskforce 50 are very keen that we continue potentially because of the net benefit. It works the other way. We send out 16,000 students; they are sending 32,000 to the UK. It might be that this is suddenly resolved, but the current scenario, if we fall out with no deal, is that the existing Erasmus scheme, as opposed to any—

Q106 **Carol Monaghan:** Do we have a safety net in place for no deal?

Chris Skidmore: Yes, that is what we have been working on. We have been working on the establishment of a UK-wide scheme. I have been ensuring that my DA colleagues have been closely involved, and we have shared how the model will work with DA officials.

Q107 **Chair:** To enable both UK students to go to European universities and European students to come to the UK.

Chris Skidmore: It would focus on outbound mobility.

Q108 **Chair:** So we would lose students coming in.

Chris Skidmore: Not necessarily. We still need to work on the financial modelling. All of this is with the Treasury at the moment and is probably wrapped up in the significant fiscal event because of the amount of money involved. With Erasmus, we pay in roughly £280 million a year. That is what organisations receive in terms of the overall net money they get from Erasmus going to institutions. You would have to try to create a system where you covered the outbound mobilities, but coverage of the money going out to other organisations might allow for bilateral relationships to be established.

First and foremost, it is focusing on every British student continuing and on where demand has been in the past. We have been working on this, and we are keen that, if we go into no deal, this needs to happen very soon, so in the next week or two weeks we will need to say that this is a contingency measure. We still want to look at associating under Erasmus and continuing those negotiations, but that is the future.

Q109 **Carol Monaghan:** Minister, there have been fairly alarming reports, particularly for Scottish universities, that the Department for Education is looking at a scheme for England only. Can you give some details and clarify that?

Chris Skidmore: I can absolutely publicly dissuade anyone of that opinion. I reaffirmed to my DA counterparts that any consideration of an England-only scheme is not happening. Whether or not it happened in the past, it certainly did not happen when I was HE Minister. Now it is going to be a UK-wide scheme, and that has been welcomed by the DA Ministers we are working with.

Q110 **Stephen Metcalfe:** In 2017, the Government committed to increasing the overall GDP spend on R&D from about 1.7% in total up to 2.4% by 2027. While it has drifted up a little bit over the last two years and there have been warm words and various announcements, I do not think we have yet seen a significant uplift. Do you know when the Government will start to publish the plan for how they are going to get to 2.4%?

Chris Skidmore: I now see the opportunity, if we can get a longer-term funding settlement for science and research, to be able to highlight what public investment is needed for the future to demonstrate where we will go for 2.4%. You are absolutely right. It is about demonstrating the private scale that is needed. We can use public funds not to match-fund but to—

Stephen Metcalfe: Leverage.

Chris Skidmore: We see leverage being more impressive in new technologies in particular. We are setting out that work. The UKRI infrastructure report will inform what we are doing well and where we need future gaps to be plugged.

I see this as an opportunity to use Smith and the UKRI report, with whatever budget uplift we are able to get over a longer period of time, to map out the route to 2.4%. I am also keen that 2.4% is the input and that by 2027 we should also probably be setting ourselves an understanding of what we want the outputs to be. Some of that will be about what international partnership funds, which is where Smith comes in, might bring in greater leverage for the future. There is a question around how we can design things that create that triple helix model and how we fundamentally change how research is done in this country so that we all know that 2.4% is going to be realised by SMEs adopting their business models more effectively.

Q111 **Chair:** I am conscious that you need to leave on time, so bear that in mind as you give your answers. Keep them as tight as possible.

Chris Skidmore: There are oral questions later; otherwise, I would stay for the whole morning.

Chair: I am sure you would love to.

Q112 **Stephen Metcalfe:** In understanding how the Government are going to do this, when should we expect to see firm plans about how much money will be spent, where it will be spent and how we are going to encourage those SMEs and businesses, so that we can have confidence that we are going to get to 2.4% by 2027?

Chris Skidmore: In the spending round, we said that we would set out plans to boost R&D funding significantly, and I think 2.4% was even mentioned in the Queen's Speech; it was certainly in the notes. This is a live topic, and we are working with the Treasury at pace on the overall funding envelope we want to work towards with the capital review, and the overall 2.4% will be this autumn.

Q113 **Chair:** How elastic is this autumn? Mid-November?

Chris Skidmore: I have been burned, haven't I, by saying that Smith would come out in September? I got moved for seven weeks, and I was not expecting that either. I am very cautious about this. The point is that we need to provide certainty. We have talked about uncertainty from the European perspective.

Q114 **Stephen Metcalfe:** Are the whole of Government signed up to 2.4%? Do they get it? Do they understand why it is important, and are they making it happen? What is the risk of a no-deal Brexit in reaching that 2.4%?

Chris Skidmore: All Departments can and will be doing more as we look to the grand challenge approach, which is a multi-departmental spend and obviously a net zero as well. There are rather huge opportunities to use net zero to leverage the R&D spend across several Departments as well. The question of SPF has not gone away in being able to use departmental influence to transform that for the future. What was your second question?

Q115 **Stephen Metcalfe:** The second question was about the impact of a no-deal Brexit.

Chris Skidmore: That is where we will want to ensure that the money we put forward as part of Smith covers the European funds. There is a separate issue around the European structural funds that I am alive to. The shared prosperity fund will be critical, aside from what we are doing in BEIS to deliver across the UK, because the no-deal Brexit scenario is something I am concerned about in terms of its regional as well as its national impacts.

Q116 **Stephen Metcalfe:** The final point is that the best way to avoid a no-deal Brexit is to get a deal over the line, isn't it?

Chris Skidmore: I have come here before. I am a strong advocate of the deal, which is relatively unchanged for science research.

Q117 **Darren Jones:** As a brief extension to the last question and answer, a no-deal Brexit, or, subject to economic analysis being done on the current proposals, a Brexit, will reduce the size of GDP, so a percentage of it means that there will be fewer pounds being spent. Is any work being done on additional fiscal stimulus in a situation in which GDP shrinks and, therefore, the real-terms money for science spending is cut?

Chris Skidmore: The Treasury is working on the fiscal stimulus proposals. If there is a no-deal Brexit, the Budget probably will not be happening on 6 November; we will be looking at an emergency Budget that will set out any fiscal measures. That is probably above my pay grade, but I will be arguing the case that we have the commitment of 2.4%, and the commitments the Prime Minister has made have been so strong on a significant increase in the science and research budget that we should do this to be able to reposition our place in the world and to sustain it.

It is not just about blue-skies research; it is about the application of research and the economic benefit of that. Examples are legion. For every pound spent on R&D we are getting back £1.40 at the moment, and for every pound spent on space it is £10. There are new technologies whose impact on the wider economy is powering ahead.

Q118 **Darren Jones:** For me, there is real cost on a day-to-day basis to continuing the delivery of this work, and if the Government choose to shrink the size of the pie there will be direct cuts to the frontline that we need to keep in mind.

I want to move on to the Ayrton fund. I know it is an international development fund, but it has some overlap with research and development. I understand that £1 billion has been put aside for research into meeting net zero carbon emissions around the world. Can you give us a bit more detail about that fund from your perspective? How long will it continue, and what type of project will be able to receive funding under it?

Chris Skidmore: The £1 billion Ayrton fund is part of the overall uplift in international climate finance to £11.6 billion. In terms of the timescales, the fund falls within an envelope, so it will last from April 2021 to the 2025-26 financial year as part of the next spending review. Out of that £1 billion, £500 million will be delivered by BEIS and £500 million through DFID.

The fund will cover research development and demonstration of clean technologies and business models to unlock the potential in developing countries for cleaner growth and climate mitigation. It sits under Lord Duncan's ministerial portfolio in BEIS, but the individual funding decisions will come to both myself and Kwasi Kwarteng when it is established effectively, and it will come from the ODA allocation of funds as well.

Q119 **Darren Jones:** How will decisions be made on how the funds are spent? Is it going to be based on scientific merit and a UKRI-type assessment, or will it be more about the potential for emissions reduction?

Chris Skidmore: It is expected that some portion of the £500 million will consist of research undertaken probably through the global challenges research fund. Whether all of that money will come through there, I am not sure.

Q120 **Darren Jones:** Your money will come through global challenges, but we do not know how DFID will use their bit.

Chris Skidmore: Business case decisions under DFID's £500 million will be approved by DFID Ministers. In that process, probably the balance of funding when it comes to the global challenges research fund will be a mix. The Ayrton fund will co-ordinate different programmes and platforms. Individual programme business cases will be produced by each Department following their usual departmental processes for business cases, and the cross-Government Energy Innovation Board will be updated annually with progress and for input, but it will not have formal approval functions.

Q121 **Darren Jones:** I am not sure I understand all of that. Would you mind writing to us about it so that we can understand it properly?

Chris Skidmore: The fund has been announced; the allocations financially have been divided between BEIS and DFID, and in terms of the processes there will be a delivery plan sent to Ministers before Christmas to sign off. What I am providing now are rough details of the direction, but I will be able to provide the Committee with more details come Christmas.

Q122 **Darren Jones:** I look forward to it. I think you have already answered this question, but, to double-check, the funding for the Ayrton fund is on top of the additional percentage of GNI that we commit to spend on overseas development. Is that right? It is an addition, not a re-use of current development funding.

Chris Skidmore: As far as I am aware, the uplift in international climate finance is in addition to the spending, so this is part of that new money.

Q123 **Darren Jones:** My last point is to plug our previous report on clean growth technologies, which I am sure will be very useful in helping you spend the money.

Chris Skidmore: Yes, we will look at that very closely. I am very keen that we now have a real synergy to be able to demonstrate a mission-based approach on net zero, and to place innovation and technology at the heart of that.

Q124 **Chair:** On the point about whether it is new money on top of the development budget, I thought there was some doubt about that. If you could write to confirm that that is the case, I would be very grateful.

Finally, before we release you, you will be aware that there is quite a lot of concern in universities about the possibility of a cut in tuition fees because of the impact that has on the money available for teaching. Is there a plan to cut tuition fees?

Chris Skidmore: The Government are still considering the Augar review. It is one of those things where the change in Administration has seen a delay in the Government's response. Initially, I think I came to this Committee and said we would respond at the time of the spending review. We had a spending settlement. Government's decisions on the Augar report will come when the next spending review takes place, but we will update Parliament before the end of the year on the process.

Q125 **Chair:** I appreciate that sometimes you have necessarily made a distinction between your view and the Government's view. Would you want to ensure that there was a cast-iron guarantee that, if there was a cut, teaching grants would make up for the shortfall? There is also concern that teaching grants might be cut in real terms, and there is then a knock-on effect on research, and I think universities are very anxious about the uncertainty.

Chris Skidmore: Philip Augar himself has made the case that he wants his report to be adopted in its entirety, and it will not work if you cherry-pick some of the measures. In particular, he is very explicit that you cannot reduce the fee level to £7,500 without having a full top-up of the T-grant. There is a separate debate to be had about the use of the top-up of the T-grant to distinguish how certain courses are funded. I have certainly inserted myself into the debate about value versus quality and how we should not distinguish STEM and arts and humanities and quality, which is by institution and by course.

Q126 **Chair:** You could end up with Government ultimately seeking to influence what is taught.

Chris Skidmore: Yes, but I mirror Philip Augar's recommendation. If you were to follow the model of reducing fees to £7,500, you would need the top-up. The track data show that that cross-subsidy is alive, partly with international students increasingly being persuaded and 137% of their costs moving across. Teaching is cost-neutral; if you cut the T-grant, that money would have to be found from elsewhere and potentially it would hinder research activity.

We know very clearly from looking at the data that, while universities are in receipt of between £8.3 billion and £8.5 billion of Government spend on research, they are spending about £11 billion. There is a £2 billion gap. If that was destabilised in any way, we would be damaging one of our greatest national assets in being able to provide research for the future. I would strongly make the case that, if there was to be any fee reduction, you would need to compensate for that, but the Government have not taken a position yet on whether or not there should be a fee reduction.

The key points are the wider issues around maintenance costs. We have seen from the HEPI report that came out this week that students feel £9,250 is potentially good value for money. It is not the No. 1 concern about reducing the fee level. Their main concern is dealing with the up-front cost of maintenance and the wider political issues that were certainly raised in the Conservative leadership campaign about interest rate repayments and the cost of that in comparison with the wider costs of low-value mortgages. There are wider issues that we need to be able to discuss, but the fee level itself would need to be topped up.

Q127 **Chair:** Along with the considerable uncertainty that universities have felt and the anxiety over the whole impact of Brexit, in whatever form it takes, it could also be said that it has raised science and research up the political agenda. There has been a lot of discussion about it. How do we maintain that in whatever circumstances we find ourselves, because the importance of having science high on the political agenda is incredibly clear?

Chris Skidmore: Reflecting on my previous tenure and now coming back into the role, I had the opportunity to think what I would do differently if I had the chance to do it again. This is where I am passionate about securing a sustainable approach. Yes, the science budget in the past has been ring-fenced, but over the past year I have probably announced nearly £2 billion-worth of public investment in science, research and innovation, and other things have been going on in the public sphere.

There have been lots of pots of money: the industrial strategy challenge fund, the strengthening places fund, the strategic priorities fund, the expanding excellence in England fund and the connecting capabilities fund. There are lots of different individual pots, and that does not help the cause of science in demonstrating that this is taxpayers' money being spent on fantastic opportunities to shape our society, whether in healthcare, the future of cities or future mobility. We have to be better at being able to communicate that.

The last thing I want to say is that my desire is to get a long-term sustainable funding settlement for science, very similar to the way the EU has done it with Horizon. I am keen that we associate with Horizon but look at how every scheme comes out of Horizon and they are able to demonstrate to the public that the money is being spent on those fixed causes. If we are to sustain the importance of science in future, let's look at moving beyond a traditional spending cycle and the annual BEIS budgetary process, and see how we can create, in the same way as Germany did, a real-terms approach across a longer period of time. That is going to provide the stability for individuals who might then look to the UK for the future. I recognise the instabilities caused by Brexit. Once we get over that process, we need a wider international approach, and having the stability of a longer-term budget will help.

Q128 **Chair:** Paul, do you want to say anything?

Paul Drabwell: No, that is fine.

Q129 **Chair:** You have got away with it completely.

Paul Drabwell: It was an easy ride. Thank you, Minister.

Chair: Thank you both very much indeed. We appreciate your time.