



Select Committee on Science and Technology

Corrected oral evidence: Contribution of innovation Catapults to delivering the R&D Roadmap

Tuesday 12 January 2021

10 am

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Members present: Lord Patel (The Chair); Baroness Blackwood of North Oxford; Lord Browne of Ladyton; Baroness Hilton of Eggardon; Lord Hollick; Lord Kakkar; Lord Mair; Baroness Manningham-Buller; Viscount Ridley; Baroness Rock; Baroness Sheehan; Baroness Walmsley; Baroness Young of Old Scone.

Evidence Session No. 7

Virtual Proceeding

Questions 47 - 54

Witnesses

Felicity Burch, Director of Innovation and Digital, Confederation of British Industry (CBI); Roger Marsh OBE DL, Chair, Northern Powerhouse 11 (NP11) and Chair, Leeds City Region Enterprise Partnership.

USE OF THE TRANSCRIPT

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

Examination of witnesses

Felicity Burch and Roger Marsh.

Q47 **The Chair:** Can I welcome our two next witnesses, Ms Burch and Mr Marsh? Good morning and thank you very much for joining us today for our inquiry. As you have probably already gathered, we are not doing any kind of Catapult review. We want to find out how the Catapults are working and how their role could be strengthened. Thank you for joining us today.

My colleagues and I have a few questions for you. If I might kick off, I have a main question with several parts. First, how engaged are you or your business with any of the Catapults? Secondly, what gains do you or the Catapults have from this association? Thirdly, is industry engaged and why do some industries choose one Catapult over the other? Fourthly, is there any private sector involvement with any of the Catapults and what is your view about how that could be improved?

Felicity Burch: Thank you for the questions. There is quite a lot to pick into there. For clarification, CBI is a business representative organisation, so we speak for businesses of a range of sizes and sectors across the UK. While we engage with Catapults, it is typically our members who will be working with them most closely.

Perhaps I can answer the question about industry engagement and awareness of the Catapults first. Unfortunately, I do not have very recent quantitative data on this, but we did survey our members back in 2016. We asked them how important they thought the various institutions were for UK innovation and one of the institutions we asked about was Catapult centres. At the time, 27% of businesses said that they thought they were very important and 41% said that they were somewhat important, but 25% of businesses said that they were not aware of them. There was quite a large number of businesses saying that they were not aware of Catapult centres at all.

It was quite interesting, when we dug into the data a little at the time, that larger and overseas-headquartered companies were slightly more likely to be aware of Catapult centres than smaller or UK-headquartered companies. Things have moved on since then. The previous witness talked about how more companies have become aware of the centres in the interim, but that would be more anecdotal evidence. We find, in general, that it tends to be more innovation-intensive and R&D-intensive businesses that are aware of and engage with Catapult centres.

The benefits that members have told us they have seen from Catapult centres are very broad and diverse, but the most important is about creating linkages in the innovation ecosystem that might not be there if we did not have the centres, particularly between business and the research base. Members also tell us how important the access to expertise, funding and facilities is for them. They cite direct collaboration on research and innovation projects. Interestingly, particularly at the smaller end of businesses, the ability to showcase their technology to

larger businesses is seen as a real benefit for them, as is the ability to input on sector road mapping and get a sense of where innovation is in their sector overall.

Roger Marsh: Good morning, everybody, and thank you very much for inviting me. I will quickly introduce myself as chair of not only Leeds City Region LEP but the 11 LEPs across the north, the widest grouping. I should also declare an interest as a member of the University of Leeds council, so I must be very transparent.

Importantly, as part of this debate about innovation, how we properly embed it and how we get the economic and social improvements that we want from it, we have just completed, as Leeds City Region, a two-year programme with MIT REAP. There are some really important lessons we could learn as a country to implement the UK R&D Roadmap very successfully, but perhaps that is for another day.

Leeds City Region is a microcosm of the whole UK, in that it has strength in financial and professional services but also in manufacturing, although not with OEMs. It is interesting that there is not a Catapult resident in Leeds City Region. We have an office of the Connected Places Catapult. As the chair of a LEP that was created around the same time as the Catapults, I find it interesting that, to date, we have had precious little involvement. I agree with Professor Maier that they are central to the future. Maybe it is about clarity of objectives and success outcomes, particularly with a specific objective about levelling up.

I re-read the Ernst & Young report and reflected on how things have improved more recently locally. For example, the Centre for Process Innovation, part of the High Value Manufacturing Catapult, has had more engagement in the last quarter with businesses in Leeds City Region, which is predominantly SME-based, than hitherto. I will give you the statistic. Over the nine years, there have been 119 meaningful engagements out of a business stock of 130,000, around 0.1%.

Whilst engagement is critical it is about coherence. One of the lessons we have learned, being part of the global programme at MIT working with regions all around the world, is how to ensure that you have one framework where everybody is working to a common agenda. For us, it is about not only creating more of an innovation driven entrepreneurial economy in Leeds City Region, but getting our SME base to think beyond where it is currently operating.

There are some challenges around engagement and involvement with SMEs. Investment is an issue, certainly in the wider north—this is about fairness rather than favouritism—in terms of the amount of public sector money that goes in, as well as getting leverage from the private sector. We have a huge opportunity. Indeed, as part of our economic recovery strategy for Leeds City Region, we have put entrepreneurship as one of our key propositions as to how we build on our strengths. One of the challenges in thinking about the implementation of the UK R&D Roadmap is how to make the topic warp and the place-based weft, or whichever way round works best, much more integrated.

Q48 Baroness Blackwood of North Oxford: On the Committee, we are trying to understand the value that Catapults add to industry projects. As a nation, we have a priority to increase public and private R&D investment to 2.4%. Can either of you give examples from your members of successful industry-Catapult collaborations that have led to private sector investment in R&D, which you do not think would have otherwise materialised? Mr Marsh, you said that you are not aware of that much in your area, but it would be really helpful if we could have a sense of where that value has come from or where it may come from in the future.

Felicity Burch: I believe this has already been raised to the Committee, but it is really important to highlight. The ventilator challenge during Covid is an incredible example, in that we had a convening organisation in the High Value Manufacturing Catapult that could bring universities together with businesses to tackle a really urgent national problem. We would not have had that capability without the institution there. That is a really good example of Catapults acting as a focal point.

As a broader point about the Catapult network, international investors have said to us that it is one of the things that have caught their eye in terms of coming to the UK and investing. It is not necessarily about specific Catapult centres, but more about the scale of investment that the UK is making in the Catapult centres, which helps and encourages them to do so. That is alongside other important initiatives such as the Government's introduction of the R&D target. That also piques people's interest, but making sure that the UK has that strong network of institutions is a huge draw for international inward investment.

Baroness Blackwood of North Oxford: Mr Marsh, can you offer specific examples?

Roger Marsh: I am afraid I cannot, as per my earlier remarks. My point about our approach, which was led by the University of Leeds, in terms of MIT, I hope is an encouraging one. Whatever it is that is working elsewhere has not quite reached us yet in Leeds City Region, but we are keen for it to do so due to the nature of the economy and our desire to become much more innovation driven for societal benefit. That is a long-winded answer to say that I cannot add anything further, but I thought it would be useful to share something about the success of this opportunity, about which I feel particularly passionate.

Baroness Blackwood of North Oxford: We heard Professor Juergen's remarks about the things that he thought needed to happen to stimulate further success, such as engagement and a more strategic approach. Do you think that the Catapults have the skills and expertise in house that they need for industry to partner with them effectively, given the answers that you have just given?

Felicity Burch: It is a pretty short answer, which is yes. We have heard very good feedback from businesses about the capabilities and facilities that the centres have. To elaborate on that a little, the one concern that industry members and the Catapults have raised to us is about the ability to continue to invest at the cutting edge, especially when funding for them is uncertain.

Roger Marsh: I agree with what Felicity said about the availability of investment, both public and private sector, to properly engage. There is a need for a step change, as I have said, in engagement and involvement with businesses. From talking to other business representative organisations in my part of the world, if you are a big business that already does R&D, the engagement is pretty good. If you are a business that should be but has not hitherto been, we need a step change. That is an important part of the solution that we are seeking.

Somewhat uniquely, with nine universities in the city region, we have the intellectual means to make this better. Somehow, we have not quite connected the dots. I believe that Catapults and other things are going to be part of that whole-system connection of the dots.

Q49 **Baroness Walmsley:** Ms Burch, have your members faced any barriers to collaborating effectively with the Catapults, for example the funding rules and the 30:70 split? Where that split has occasionally been set aside, do you know what criteria have been used in making this decision? Following on from that, what changes, if any, do you think the Catapults, UKRI or even the Government should make to help your members make better use of the Catapults?

Felicity Burch: I am delighted that you asked me that question, because I want to raise the funding split and particularly match funding as an issue for businesses in accessing Catapult centres. I know quite a few other issues for industry engaging with the centres have already been raised with the Committee. This is one that we have heard from businesses for a relatively long time, probably since the Catapult centres came into existence. Sometimes, businesses are frustrated that, if they are contributing quite a lot of kit or the time of their people, that is not always counted in match-funding decisions.

At the moment, with Covid, we know how badly constrained the cash and capacity of a lot of our members and businesses up and down the country are. We are very concerned about the impact that this might have on research and development. We know that a balance of about 12% of companies will decrease their R&D expenditure. We see about 28% say that they are going to decrease and 16% say that they will increase in response to Covid, so we are expecting a drop off in R&D investment by businesses anyway. Anything that Catapult centres, Innovate UK or UKRI could do to make it easier for businesses to access and not look at match funding as a way of accessing the centres may help. I am afraid I do not have any specifics on why match funding might have been ignored in some circumstances.

A couple of other challenges that we have had raised with us are about questions on job creation. For some engagements, businesses are asked to commit to a certain number of jobs being created. Of course, it is right that businesses are being asked to demonstrate return on investment for their engagement in Catapult centres. Innovation, as I am sure this Committee will be well aware, is a hugely uncertain enterprise. It does not always create jobs, although we would be delighted if it did. Sometimes, it creates better paid jobs, but a lot of businesses that are

keen to engage feel very nervous about putting to the Catapult centre numbers that they do not really believe in. As I am sure you will understand, it is very hard to make guarantees here.

The other area where we have had some concerns is that CBI also represents universities and our university members say that sometimes they feel a bit of an adversarial relationship with the Catapult centres, particularly when it comes to the competitive element of the Catapult network funding. They feel that they are often bidding for the same pots. That is a symptom of their limited innovation funding, which I know that Professor Maier referenced in the last session. It is an unfortunate circumstance, but more could be done to improve the relationships between universities and Catapult centres.

Baroness Walmsley: Thank you. That is very interesting. Governments sometimes think that the tension created by a bit of competition is quite a good thing, but, in this case, you do not appear to think that it is a very positive kind of tension.

Felicity Burch: There can be positives from competition, but it does not feel in this circumstance that having universities and Catapults bidding against each other is particularly effective. If you had a bigger funding pot that people could bid into, it would be fine so long as all the good bids were getting funding. The challenge is that that is not always the case.

Baroness Walmsley: We are back to Mr Maier's scaling again. I can see Mr Marsh nodding his head. What do you think about it, Mr Marsh?

Roger Marsh: I completely agree with Felicity. Healthy competition is one thing; meaningful collaboration is another. A good dose of the two together is what is required, which is about the whole approach of collective impact; common purpose and common agenda. I know very well of the competition between university institutions in my own part of the world, being on the council of one, while being chair of the LEP and more broadly across the North.

We need to recognise where we are strong in certain things and take a leading role, but also to recognise where we are not as strong and take a supporting role. That is part of the coalition of the willing, if I may use that phraseology, that I am keen to foster in our approach to ensure successful implementation of the R&D road map. We need to be clear up front about what we want success to look like, rather than, after the fact, saying, "We have not measured this or that, but we think it will be all right". We need to be very clear what we are trying to deliver economically and societally from the successful implementation.

Baroness Walmsley: Going back to something you said earlier, would you like to say anything more about barriers in the Leeds City Region to collaborating with Catapults? It cannot just be a geographical thing, can it?

Roger Marsh: There may be a cultural thing in relation to the business stock that we have. Previously, people might have thought—not I, I hasten to emphasise—that, somehow, that economic variety was part of a problem rather than a solution. People often say, "You do not have an

OEM in Leeds City Region”, but we make all the other bits that make things happen, such as valves and drive gears. We have strength in health tech et cetera. We have not promoted as strongly as we need to the importance of that, which other parts of the country perhaps have done better historically.

The absence of venture capital in our part of the world is a private sector limiter. Again, we are looking, with the successful implementation of MIT among other things, to address that. Recognising that, after London, we are the largest financial and professional services sector in the country, it seems a bit odd that relatively venture capital is so poorly represented in our part of the world.

Q50 Lord Browne of Ladyton: My sense is that, to some degree, the question I am going to ask you will lead us back into the conversation you were already in with Baroness Walmsley. It is designed to identify the barriers to increased private sector investment in R&D in the UK. Then there are a couple of supplementaries to see specifically what recommendations we could make to improve that situation.

Are the Catapults in their current form able to help industry overcome these barriers? I may invite you to identify some of these barriers. Having watched you while Professor Maier was giving evidence and the amount of head nodding that was going on, I will probably discover that you agree with his references to R not being matched by I, lack of scale, absence of long-termism, lack of belief in stated priorities and engagement with SMEs, but I will allow you to speak for yourselves.

Felicity Burch: Yes, I agree with much of what Professor Maier was saying in the previous session. Looking at the barriers to business R&D investment in the UK, it is worth reflecting on the point I have already made that now is a particularly difficult moment for industrial R&D across the board. Unfortunately, many businesses are having to choose to deprioritise it because of cash. That is relevant because, the last time the UK had an R&D target, that also went off track following the 2008 financial crisis.

In some ways, anecdotally, businesses have had a harder time investing in R&D this time. In the 2008 crisis, some businesses that I spoke to, particularly in the manufacturing sector, said that they had kept people on in R&D projects to give them something to do, so that they did not lose talent within their business, learning from previous recessions. This time, businesses needed to get people offsite and had the furlough scheme so were not necessarily diverting people to R&D projects. That is anecdotal, but it may lead to an even bigger crunch in R&D.

This is a much longer-term challenge for the UK. We have had R&D at or around 1.7% of GDP for over 30 years now and that is quite a systemic issue. The key thing that we see is around the long-term investment challenge that Professor Maier raised previously. Particularly, there has been a lot of chop and change in the R&D landscape over the last couple of decades in terms of who is providing support, the availability and the level of support. One thing that has unfortunately been fairly consistent is

the underfunding of development and innovation relative to research. Even if we take the last year or so as an example, we have seen a number of positive developments in this space. I would like to praise the Government for some of those developments, particularly the introduction of the 2.4% target and the R&D Roadmap, which recommitted to that target and committed to some very substantial investment figures.

The recent spending review committed new money, particularly to UKRI in the multiyear settlement. Interestingly, if you look beneath that, Innovate UK had funding for only one year. That makes it quite difficult for Innovate UK to plan to do anything differently and, alongside that, we do not currently have leadership in Innovate UK. This chop and change sends the wrong signals to businesses that are making their decisions to invest. By way of illustration of how important that is, just before the crisis when I could still visit members in person, I went to meet one of my members and they showed me their R&D strategy. It was closely aligned to the Government's R&D strategy and trying to meet the Government's ambitions. We see that across so many businesses, so the Government have an important role to play there in signalling.

Roger Marsh: As an accountant by profession, I am interested in the use of the scarce resource called money. Often, the conversation is about how we get more rather than how we use what we have differently. Recently, we have utilised some of our European Structural and Investment Funds to create access innovation programmes, using existing money to enable SMEs in our part of the world to address those things that Professor Maier talked about and Felicity has just commented on.

I was interested when I read the transcripts of the session that took place on 15 December last year, when nine of the Catapults were present and only one of them referenced LEPs, which have had substantial public funding through the Local Growth Fund. We have been using that more recently, particularly in the health tech space, which is one of our relative strengths as a region, to enable businesses to respond to the Covid crisis.

As an example, Herida Healthcare, which has manufactured just about all the mechanical mattresses in the Nightingale hospitals, had a massive scale-up problem. We became the funder of last resort, using public money on a repayable grant basis to enable it to fulfil those requirements and provide that extra capacity for the NHS. While being involved in that, it has developed a reusable surgical gown that, unlike those that we import at vast cost and then have to put in landfill, can be used at least 50 times.

Those businesses in the space of health tech have done quite a lot. Other businesses, to reflect Felicity's point, have said, "We need to conserve as much cash as we can to ensure that we are here beyond all this". While those in health tech have taken the commercial opportunity as well as innovating their product base, others have preserved their cash for life beyond vaccination, which we hope is just around the corner for all of us.

Lord Browne of Ladyton: By your body language when Professor Maier

was speaking, and your earlier answers, you have helpfully given us some indication of what you think the barriers are. It is a very specific question. Can the Catapults in their current form do anything to help industry overcome these barriers or is that not a role for them?

Felicity Burch: Catapult centres can help businesses overcome some of the problems they face with R&D and can help the UK increase investment in R&D as a macro piece. I made the point earlier that international investors see the Catapult centres as quite a compelling proposition. At a business level, you look at what might prevent a business investing in R&D and it normally comes down to two broad categories of problem, one around resource and one around risk. Catapult centres can help businesses address both of those problems. They can play an important role there.

The question is whether the Catapult centres themselves have enough resource and scale to do that. In truth, I talked about chop and change of investment and that has been a real challenge for them. The constant review of Catapult centres can make it quite difficult for them to keep going and to have the confidence to innovate and build their own business models. They have been playing into a relatively difficult environment. It is one of the reasons that we have been looking at ways that you could potentially build on the Catapult model and the things that are good about it, such as the internationally recognised brand. How do you build something that is sustainable for the long term?

With that ambition in mind, we know that universities will be around in 100 years' time. We do not know that about Catapult centres and that is where we would like to get to. The proposal we have put forward at the CBI is to develop Catapult centres and, indeed, other research and technology organisations into things called Catapult quarters. This is essentially an innovation cluster and the Catapults would build out their role. They would still be innovation facilitators but would provide a wider range of services and operate more effectively as a network.

Lord Browne of Ladyton: Mr Marsh, my sense is that you agree with Ms Burch about that. Maybe you could help as to whether you can identify any examples of the Catapults helping industry overcome these barriers.

Roger Marsh: I will seek to do that. One of the barriers for Catapults is each of them understanding its role in the levelling-up agenda and how that will play out. One of my earlier remarks was about aligning the topic specific with the place-based, or the warp and weft. Forgive me; I come from Yorkshire so textiles is in my DNA. That is why I use that as an illustrative point.

Regarding the landscape of Catapults, one should step back and look at whether they are all in the right places currently to be as effective as they need to be, recognising the different paces of progress over the last two decades of the economy of the UK. I printed off a map of where they all currently reside. This is not a north versus south point; it is a north and south point that I am making. There is a high concentration some

way down the road from where I am sitting in Leeds this morning. Maybe it is about that distribution point to enhance engagement and involvement with the indigenous SME bases.

Beyond that, some of the programmes we have implemented since my MIT journey are about giving opportunities for not necessarily young men and women, but all people who have a good idea and suddenly find themselves redundant or furloughed. Where do they go to ask, "Can I see if this works? Can I find out whether we can turn this into what might be tomorrow's global leading businesses?" We have put local growth fund money and other funding in to see if we can incubate this. We would like to see it scaled up so that we can find the Googles and others of tomorrow, which the UK should have, rather than elsewhere in the world. I hope that broadly addresses your question without going into specific A, B and C barriers. If not, I am happy to have another go.

Lord Browne of Ladyton: You will gather from my accent that I am sympathetic to northern opinions. I invite both of our witnesses to express their agreement with Professor Maier about the absence of long-term planning in UK R&D investment from the Government. Does that generate a difficulty that can be overcome?

Roger Marsh: I support what Professor Maier said, but with the proviso that I would like clarity on objectives and what we hope the success of the implementation of the UK R&D Roadmap is, as well as some measurable outcomes. One thing that I learned from MIT is that data and measuring outcomes is key. It is important that we understand what success we want from different places and what parts we can all play in their continued development.

I agree with Felicity that continually being reviewed means you are always worried about what will happen at the next review rather than getting on and delivering what we need to deliver, which is a significant step change in our ability to commercialise successfully at global scale that for which we are internationally recognised. We are great at inventing. We need to make sure that the cost of that is measured by the commercial income we generate in GVA and other terms, which others elsewhere in the world have enjoyed on the back of our incredible ideas.

That sounds a bit like motherhood and apple pie, but I genuinely believe that innovation is invention with commercialisation. Let us not forget that. I say that to many university colleagues. Sometimes, there is an odd grimace or two, in that it is not just about academic interest. It is about how we turn it into GVA for societal benefit.

Q51 **Baroness Hilton of Eggardon:** You have made a reference to the 2.4% target for investment in R&D. This requires two-thirds of investment from industry. In view of our past performance in terms of investment in research and development, is this a feasible target and, if so, under what sort of timescale? Ms Burch, you referred to the target.

Felicity Burch: I would be very happy to attempt to answer this question. It is quite a challenging target that we have set for the UK,

especially in the context that I mentioned, in that R&D, as a percentage of GDP, has been flat since the late 1980s and, of course, we had the difficult conditions of the Covid crisis. It is fair to say that trying to hit this target is a once-in-a-generation challenge.

That said, there is some international evidence that it is doable. UKRI has done some research on this and has found examples of about 14 countries that have managed to achieve a similar uplift in R&D. We have to remember that the UK has unfortunately been here before. We had the science and innovation investment framework back in 2004, which had a 10-year timescale to increase UK R&D as a percentage of GDP as well. That was unsuccessful.

One of the reasons I cited that it was unsuccessful was the great financial crisis. If we are honest, the UK was off track before the financial crisis hit. That research has highlighted two key problems; first, the Government failing to increase public investment in R&D and, secondly, the lack of long-term policy focus. What we learn from other countries that have been successful here—and, as you highlighted, the maths points to it as well—is that we need a business uplift. Any policy interventions that are brought in need to encourage business to increase their own R&D investment at what is quite a difficult time.

I would take away some lessons from the international experience. You can tell that I have done a fair bit of thinking about this, because I have five Fs. There are five things that we thought were really important from the international experience. The first, and the key point, is the focus of the long-term strategic approach to R&D investment, making sure that it reflects national characteristics and abilities, focusing on the industries or long-term markets where the country already has some potential advantage.

The second is about funding, so having the right public funding and incentives to create a dynamic ecosystem. That means funding for business R&D to reduce risk and help with access to resources.

My favourite, and one of the most important and often overlooked aspects of what has been really successful, is flaunting it. What I mean by this is a well-marketed campaign of support that is designed to meet industry needs. As an example, there is a brilliant photo of Angela Merkel holding up the German industrial strategy and putting it into Putin's hands when she met him, because she wanted to show the leader of another country just how important her industrial strategy was and how much it framed the German approach to policy.

You could take other countries such as Estonia, which many people in the policy environment talk about as e-stonia. It has almost had a national rebrand around the importance of digitisation. It is a big question: who does the UK want to be? How do we want to sell investment into this country?

There are two other important points that we have learned from international experience. One is about failing fast, so thinking about how we learn from failures and international best practice. Key to this is

making sure that we are measuring initiatives against the success that we want them to deliver. Finally, we need to get the foundations right, so investing in other things that are important and adjacent to research and development by looking at skills, infrastructure and innovation adoption.

Roger Marsh: Against that 2.4% target, most places have reached somewhere between 1% and 1.5% of GDP. That is true of Leeds City Region at 1.4%. That has been the case for a number of years, so we have some way to go. Building on Felicity's points, increasing the scale and number of place-based funding competitions, and improving the decision-making and local influence, particularly where there are mayoral combined authorities, would be helpful. How do we align the priorities with those areas and other places? We need specific and properly governed pots for those priorities, whether they be innovation deals or mission-based innovation.

This comes back to one of my points earlier. Professor Maier spoke in his evidence about coherence and making sure that we are joining up all the bits with public money as well as leveraging the private sector, so that we advantage the different places with their relatively different strengths. Part of our hope for the mayoral election, which may or may not happen this May, is that we have developed the West Yorkshire Innovation Network, which brings in some of the Catapults and others to make sure that we have a coherent view of what we are trying to achieve towards that 2.4% target. The danger is that, if we have always done what we have always done, we will always get what we have always had.

The Chair: Sorry, but I am going to request crisper questions and answers, please, because I am running a little behind time.

Q52 **Lord Hollick:** I will be crisp. Can you please tell us what you think the role of Catapults is in increasing R&D investment across the UK? Ms Burch, tell us a little more about Catapult quarters.

Felicity Burch: Trying to also keep my answer crisp and focused, the Catapult quarter proposal was built upon the need to ensure an uplift of R&D across the UK, reduce what we see as a lot of chop and change in innovation support, back some important institutions in the Catapult centres and have a clear path for their growth.

We saw this being done by building on the Catapult model in two key ways: having a more specific role for increasing innovation activity in the broadest sense in their locality, including an increased offer to encourage co-location; and making the most of the network and brand. One of the biggest challenges that companies face, building on Roger's point, in accessing innovation support is awareness. Catapults can grow their awareness, but it is there. We did not want to create something new. We wanted to build on that, with a bigger, better local offer delivered through the Catapult centres.

Lord Hollick: Mr Marsh, you have made a very good case, in response to a lot of the questions, as to why Leeds should be considered as a centre for significant increase in R&D. Why have you been left out in the cold?

Roger Marsh: That is a good question. It is not for me to cite where Catapults are, but, to crisply answer your question, greater engagement and outreach are needed to penetrate businesses in parts of the country such as my own that are outside the immediate vicinity of Catapults. This is my point earlier about the levelling-up agenda, whether or not it be topic specific, that says we need to do more.

I made a point earlier about the Centre for Process Innovation. Over a nine-year period, we have had 119 meaningful engagements with businesses, 20 of which have been in the first half of 2020. We can do it if we have the mindset to do it. Embedding local and regional business and civic leadership as well as being outcome based is key to it, in my own mind. I could go on a little further, but the Lord Chair has asked me to be crisp and I will pause there.

Q53 **Lord Kakkar:** I would like to turn to the proportion of investment coming into R&D and the industries you represent from overseas. In particular, looking at that question with regard to innovation funding, what might we learn from countries that are more successful in this regard?

Roger Marsh: I mentioned the concentration of universities in my part of the world relative to London and the south-east. I think they have a much bigger role to play in the onshoring of FDI R&D. It is in their interests to do so. It comes back to my point earlier about having healthy competition between institutions and—not “or”—meaningful collaboration, and them being bedfellows in a whole variety of ways. Our work more broadly across the north, engaging with the Department for International Trade on how we do things where the whole is greater than the sum of the parts, is part of the solution to improving the level of investment.

Attractiveness is not only about telling a story sat here in Leeds or otherwise. It is getting off one’s proverbial and explaining to the developed and developing world what we have on offer. More often than not, I tell people things and they say, “I did not know that”. They are often people in my own part of the world, let alone more broadly in the UK and beyond. When we do tell them, they go, “Gosh, why would we not want to be there?” That is not storytelling for its own sake, but is part of that important promotional narrative.

Lord Kakkar: Is there a lack of ambition in trying to attract overseas investment in R&D and innovation funding, particularly from the private sector?

Roger Marsh: I would not say there is a lack of ambition. It is often not front and centre of their strategic thinking as to how they take their businesses forward. It is why I reference—I hope not boringly so—the importance of programmes such as MIT that create common purpose and common agenda in saying, “We need to do something different because what we have always done is not getting us where we want to be”.

Our gaps, in terms of those left behind that need to be genuinely levelled up, are increasing, so we need to do something different. SME done a bit better is not enough for me. We need that mindset shift and cultural change. To one of Felicity’s points, we might get a few wrong. That is

okay. Without being disrespectful to the use of public money and taxpayers, we may risk some taxpayers' money and get a few wrong, but we should be measured by how many more we get right. Getting it wrong is not a reason for not having a go.

Felicity Burch: To answer your first question about the proportion of R&D that is funded internationally, it is worth reflecting that the UK is quite good at pulling in international R&D investment. The latest figures show that the share of R&D performed by UK-owned businesses was 52%, so 48% of business R&D was by non-UK owned businesses. There is a lot of international money currently in UK R&D, although, of course, we want to raise the level of both.

When I talk to companies with big international investment arms about what has made investing in the UK easier and what has encouraged them to come here, first, when it comes to R&D, they cite the quality of the UK's research base. This is a reminder of the importance of long-term investment in universities and research in general. It matters hugely.

The second thing is the local offer of the place they want to invest in and their ability to find out about things such as access to skills. How many graduates are going to be coming out of a university. Is there access to land? Will I have the planning facilities? If I need to test the development of a new product, can I do that within local regulations? Will the local government work with me effectively to do that and deliver those things?

Part of the offer that an enhanced Catapult centre model, as a Catapult quarter, could deliver is helping business to understand the local offer. Of course, I am sure Roger would chime in and say that there are roles for local government in doing that too. It is more about being a focal point and making everything easier.

Lord Kakkar: Do you think the holistic concept you have just described is properly well understood? Who is engaging in developing that shopfront at this time to drive that private sector R&D investment in the UK?

Felicity Burch: It is well understood by the Catapult centres and, really excitingly, we have already talked to a number of them and the senior leadership within the Catapult centres. They are exploring what they could do as institutions to deliver this model. It is likely that they would need some additional funding for that, but there is the potential to take it forward. There are probably some other questions we could ask about levers you can pull to encourage international investment. Businesses have cited that, in previous Governments, for example, we have seen Ministers acting as almost account managers for big inward investors. There are some other initiatives that might want to be considered alongside this.

Q54 **Lord Mair:** We have already touched, quite a lot, in fact, on the relationship between Catapults and universities. Mr Marsh, you talked about your interesting connection with MIT and you also said that there are nine universities in your region, yet Catapults are not featuring very strongly. Notwithstanding that, what do you think Catapults can do to

improve the link between industry and universities? What is your experience with MIT?

Roger Marsh: Perhaps I could answer the question in part by an offer, as chair not only of Leeds City Region LEP but of the board of 11 LEPs across the north, the largest grouping out of the 38 across England, to be available and to help with the joining up. That is part of the challenge. Particularly in Leeds City Region, where, other than an office of the Connected Places Catapult, we do not have a Catapult locally, how do we help with that promotional activity?

This comes back to my earlier point about the levelling-up agenda. What needs to be the step change? What do we need to do differently so that there is an offer and an ask that we match together and, somehow or other, we help businesses that know they need to innovate to sustain themselves, but, at the moment, feel that you have to hunker down to survive unless you are in a particular sector? There is an opportunity there to provide both an offer and an ask to be more engaged.

Personally, I was asked to consider being engaged in one of the Catapults as a board member. When I put my CV forward, the recruitment agent came back and said, "We are not sure you are the right sort of talent we are looking for", which rather bemused me, recognising that I have spent the last eight years promoting and delivering a strategic economic plan for Leeds City Region. It seemed a bit of a disconnect. I do not make that point in a critical or condemning way, but there is this question of how we join the dots up. It is about people like me saying we are ready to play our part however we can, so that we get that warp and weft of topic and place properly aligned within the broader capsule of levelling up and the successful implementation of this government target.

Lord Mair: You seem to be implying that, unless a Catapult has an office locally, there would be no engagement. Surely that is not right. Catapults all over the country engage with regions and universities all over the country.

Roger Marsh: That is not what I was seeking to imply. It is about enhancing the quality and frequency of engagement with the indigenous SME bases. Professor Maier made a similar point perhaps more crisply than I have just done.

Lord Mair: Ms Burch, can we return to your point about the adversarial relationship? We are very interested in what barriers there are preventing Catapults engaging effectively with universities. Do you want to say a bit more about that adversarial relationship?

Felicity Burch: If you look at topics, which I am sure this Committee has also covered, such as business and university collaboration, there are always specific challenges that come up around that collaboration because businesses and universities are slightly different organisations. The same is true between Catapults and universities.

It sounds like Roger and I need to have a conversation after this about what we can do to help link up Catapults and universities a bit more and facilitate conversations between them. Relationships can improve, but the

organisations have different styles of working and different overall goals, and need to understand how they can work together better.

Lord Mair: Do you think your proposal for Catapult quarters would break down the barriers to Catapults and universities effectively engaging with each other?

Felicity Burch: The proposal is not a one-size-fits-all solution that will solve all the problems that we face in the innovation landscape. Done well, the proposal would reduce those barriers, but you would actively need to build that into how you developed it.

The Chair: We are bang on time. Thank you very much indeed, Ms Burch and Mr Marsh, for helping us today with the inquiry. It has been very useful for us.