

The Contribution of Innovation Catapults to delivering the R&D Roadmap - Summary

Witnesses

Session I

- Professor Juergen Maier CBE, Chairman, Digital Catapult, Co-Chair, Made Smarter

Session II

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

Session III

- Amanda Solloway MP, Parliamentary Under Secretary of State (Minister for Science, Research and Innovation), Department for Business, Energy and Industrial Strategy (BEIS)
- Louise Dunsby, Deputy Director for Innovation Policy, Department for Business, Energy and Industrial Strategy

Overview

The Science and Technology Committee heard evidence on the state of the Catapult network in the UK and scrutinised their role in meeting the Government's two-point-four percent R&D target.

Summary provided by [Dods](#).

Session I

Catapults

The session was opened by Lord Mair CBE (Crossbench) who asked how Catapults might increase private sector investment into R&D.

Professor Juergen Maier CBE, Chairman, Digital Catapult, Co-Chair, Made Smarter, responded that awareness of the Catapults within the private sector had increased significantly over the past few years. However, awareness was lower with SMEs, he noted.

Maier then advised the committee that when investing in R&D in particular countries, companies considered whether the R&D already being undertaken was world beating and whether the necessary skills were available in that country. In that regard, he continued, the UK research sector and the Catapults were strong. However, companies also considered issues of scale and how much money was being invested in R&D, Maier said. Unfortunately, the UK ranked poorly in that regard, he argued, and did not scale enough.

Lord Hollick (Lab) then questioned to what extent the Catapults were considered an important part of the innovation landscape in the UK, and whether changes needed to be made to Catapults to improve their offer to industry.

Maier answered that the Catapults were essential, particularly in relation to transferring research into commercial products that could be made and exported from the UK. Moreover, the UK would struggle to meet its two-point-four-percent target for research and development unless the Catapults were scaled more. That was particularly important as companies invested more in innovation and commercially viable products over blue-sky research, he added.

What could be done to achieve the scale that was essential for success, Lord Hollick followed up, to which Maier responded that the UK had to improve the definitions of its industrial strategies, better target its investment and

increase the scale of R&D. He noted, for example, that France and Germany were investing considerably more billions into both the research and innovation ecosystems for electric cars.

What other barriers were there, other than scale, to encouraging greater investment, Baroness Young of Old Scone (Lab) then inquired.

Maier answered that there were two further barriers: a lack of long-term strategic approaches and a lack of engagement with SMEs and tech start-up companies. More activities, such as the Made Smarter programme, were needed Maier continued, through which SMEs, large companies and research institutions could coordinate and engage with one another in an efficacious manner.

Session II

Catapults

The session was opened by the Chair, Lord Patel KT (Crossbench) who asked how engaged the businesses represented on the panel were with Catapults.

Felicity Burch, Director of Innovation and Digital, Confederation of British Industry (CBI), responded that in a survey conducted of CBI members in 2016, over twenty-five percent of those asked said that Catapults were very important. However, she noted that a further twenty-five percent said that they were unaware of Catapult centres at all. Moreover, Burch continued, larger and overseas headquartered companies were likely to be more aware of Catapults than smaller and UK headquartered companies.

Burch further told the committee that that members of the CBI considered there to be a range of benefits to the Catapults, though the main benefit was seen in their ability to link various parts of industry with each other and with research and development .

Roger Marsh OBE DL, Chair, Northern Powerhouse 11 (NP11), Chair, Leeds City Region Enterprise Partnership (LEP), then advised the committee that the LEP had had little engagement with Catapults, despite their importance for innovation. However, he noted that SMEs in the Leeds City Region was increasingly engaging with Catapults in recent years.

Baroness Blackwood of North Oxford (Con) asked for examples of successful industry-Catapult collaborations that had led to private sector investments in R&D that otherwise would not have materialised.

Burch responded that one of the best examples had been around the Ventilator Challenge. The Value Manufacturing Catapult had brought together businesses and universities to tackle the urgent problem of ventilators. That would not have been achieved without the Catapult, she said.

Did the Catapults have the skills and expertise in-house to partner with industry effectively, Baroness Blackwood followed up, to which Burch responded that they did. She said that the CBI had received very positive feedback regarding the facilities and skills of Catapults. The problem however, she said, was the ability to continue to invest at the cutting edge, as funding was declining.

Barriers to Investment

What were the barriers to greater private sector investment in research and innovation in the UK and in what ways could Catapults assist in addressing those barriers, Rt Hon. Lord Browne of Ladyton (Lab) questioned.

Burch responded that one of the most significant barriers to business investment in R&D in the UK was funding. That had been exacerbated by the economic decline resulting from the pandemic, she said, as businesses had less cash to invest. However, R&D investment as a percentage of GDP had been systemically low in the UK, Burch stated, as a result of continuous changes within the R&D landscape and, particularly, the underfunding of development and innovation relative to research.

Catapult centres could help businesses overcome some of these barriers, and help the UK increase investment at the macro level, Burch then advised the committee, particularly through support businesses in tackling issues of investment and risk. However, they had to be scaled appropriately in order to do so, she argued.

Marsh concurred, adding that one of the barriers for Catapults was understanding their role in the levelling-up agenda. Moreover, the landscape of Catapults had to be reconsidered to be more effective he said, particularly in terms of where the Catapults were geographically based. Better distribution would enhance engagement with relevant businesses, Marsh suggested.

R&D National Target

Given the problems around long term funding and investment in R&D in the UK, was the Government's new target of two-point-four percent realistic, Baroness Hilton of Eggardon QPM (Lab) inquired.

Burch answered that the target was very challenging, particularly within the context of R&D investment as a proportion of GDP having been flat since the 1980s. There was international evidence that the uplift target was achievable, she said, but that necessitated the right levels of funding to incentivise a dynamic ecosystem . Risk had to be reduced and access to resources had to be increased for businesses to undertake R&D, Burch added.

Marsh then advised the committee that the target was attainable, but that it was essential to connect public money in various areas with leveraging the private sector to advantage particular places in the most efficacious manner. A coherent strategy national was needed in that regard, he argued.

Overseas Investment

What proportion of investment into R&D, particularly in innovation, in the UK came from overseas, The Rt Hon Lord Kakkar (Crossbench) questioned, to which Marsh responded that universities could play a much bigger role in onshoring overseas investment. Moreover, greater coordination between business, universities and the Department for International Trade could increase overseas investment in the UK.

Was there a lack of ambition in trying to attract overseas investment, Lord Kakkar asked, to which Marsh replied that there wasn't a lack of ambition, but perhaps a lack of a common agenda.

Burch then advised the committee that the UK was relatively good at bringing in international R&D investment. The latest figures, she said, showed that forty-eight percent of business R&D in the UK had been funded by non-UK businesses. That was a consequence of the quality of the UK's R&D base, she said, but also strong local offers in terms of place, skills, planning, resources and facilities.

Session III

UK R&D Target

The session was opened by the Chair, who asked what contribution the Catapults might be able to make to the two-point-four percent target for R&D.

Amanda Solloway MP, Parliamentary Under Secretary of State (Minister for Science, Research and Innovation), Department for Business, Energy and Industrial Strategy (BEIS) responded that Catapults had a significant part to play in the R&D target.

Baroness Manningham-Buller LG DCB (Crossbench) subsequently asked what the chances were of the UK reaching the target by 2027, to which Solloway replied that she was very optimistic, despite the current economic difficulties. The target could be achieved as long as the Government focused on the R&D roadmap and on the current economic recovery while being minded of challenges such as the net zero target.

How much funding did the Government expect to leverage from the private sector to meet that target, Baroness Manningham-Buller then inquired.

Solloway answered that the role of the private sector could not be underestimated. It was important to encourage relationships between private businesses and the Catapults, she said.

Catapults

Viscount Ridley BL (Con) asked for an update regarding the BEIS review and asked the minister to comment on the frequency of the reviews of the Catapults.

Solloway responded that it was always to have review measures such as KPIs. However, reviews for reviews sake were unhelpful, Solloway conceded, particularly when they were overly bureaucratic. It was important to ensure that reviews were not inhibitive she continued, while monitoring and supporting the Catapults in their role of increasing investment in innovation. It was for that reason that the review was not public, she said.

The current review, Solloway told the committee, was looking at a range of areas including skills, resources and engagement. She then noted that Catapults had an efficacious role in upskilling the UK workforce, while also participating in the Government's levelling-up agenda.

Baroness Rock (Con) asked for a timeframe for developing the long-term plan for the Catapult network, to which Solloway responded that she was unable to provide a timeframe, as there were nine Catapults all at different stages in their development. However, she said, increased sharing of expertise and good practice between the Catapults would help level out their progress.

What was being done to improve the interactivity of the Catapult network as a whole, to which Solloway responded that communication between the Catapults was not as strong as it needed to be and could be improved.

R&D Funding

Baroness Young asked whether Innovate UK should be given an additional share of the funding set aside for R&D in the most recent spending review to fund greater collaborative research.

Solloway responded that not all issues could be resolved through more money. The issue rather, she said, was that of skills, expertise and the sharing of best practice. However, she did advise the committee that the department was reviewing the issue.

Baroness Young subsequently raised concerns that there had been a significant decline in collaborative funding, to which Solloway replied that there were a range of funding processes available, and that the Catapults should be using their position within the model to leverage greater private investment and commercially viable research.

Should there be more flexible financial rules, Baroness Hilton inquired, to which Solloway replied that she could not comment before having assessed the outcome of the review. However, she argued that the current system of splitting the funding thirds worked and had been beneficial. As such, Solloway said, she was minded to keep the current model.

How was the Government seeking to encourage riskier and more transformative R&D, Baroness Blackwood then questioned.

Solloway responded that Innovate UK had a key role in supporting riskier and more transformative R&D. Louise Dunsby, Deputy Director for Innovation Policy, Department for Business, Energy and Industrial Strategy, added that the Catapults were specifically designed to bring in private investment by sharing risk. As such they inherently encouraged riskier innovation. She then agreed to write to the committee with a range of case studies.