

Funding for the UK Research base: delivering against the Industrial Strategy

Plenary Session - Thursday 15 June, 1600-1700

Chairperson: Richard Brooks (FD Solutions)

Speakers: Alice Frost (Hefce), Ian Connatty (British Business Bank), Alexandra Vincent (RCUK) and Ian Brotherston (Innovate UK)

Richard introduced the context of the session where the UK Government is currently developing its long term Industrial Strategy which aims to enable stronger productivity and a more balanced UK growth. KE and TT offices in UK Research Institutions (Universities, Institutes and Centres) have a greater role to play in shaping and delivering against this changing landscape. From facilitating innovation and the commercialisation of world leading research, helping businesses accessing the skills they need to supporting business to start and grow, UK KE and TT offices will play an important role in leading the way to deliver against this strategy.

Alice Frost set the scene from a HEFCE perspective on how we are working together between HEFCE, Research Councils and Innovate UK in the transition to UK Research and Innovation. Part of HEFCE will become Research England which supports the university infrastructure for KE and research. Both HEIF and the Connecting Capability Fund (CCF) are underpinning the capacity to delivering the UK Industrial Strategy and the work from Innovate UK and Research Councils.

HEFCE had already announced the allocation of £160M for HEIF to universities in England and gave notification under purdah which was followed by more detailed publication in the week leading to the conference.

The £100m money allocated to the CCF is additional money to build collaborative capacity in universities to help deliver the UK Industrial Strategy. It will be allocated by two rounds of bidding, and £15m in 2017-18 provided as a formula allocation calculated as 10% addition to the university's main HEIF allocation. The second round of bids will be informed by analysis of Expressions of Interest. The guidance issued by HEFCE explores the opportunity to work with British Business Bank both inside but also maybe outside of the CCF. HEFCE is currently devising the process to work with the British Business Bank (BBB) and PraxisUnico involvement would be useful.

Ian Connatty then explained how the BBB operates. The BBB is the UK economic development bank to help small companies realise their economic potential. The bank mainly work in equity and debt finance and is the most active investor in Venture Capital funds in the UK investing £150M-£200M per year in 6-7 funds. The bank itself is sector agnostic and makes investments in sectors that cover the entire UK market.

Alex Vincent who leads the development of the Industrial Strategy Challenge Fund for RCUK gave an insight as to what the fun aimed to achieve. The Government announced in the last budget additional investments in a National Productivity Fund of which the Industrial Strategy Challenge Fund (ISCF) is one strand. ISCF is additional money to deliver against the Industrial Strategy. The National Productivity Fund will also include funding for skills, places and talent and more announcement should follow in the short to medium term.

The ISCF is new funding which will not necessarily follow the traditional investments done by the Research Councils. It is based on a new way of working, with new deliverables. It is not about research per se but providing business-led solutions to real challenges. The ISCF will

initially be delivered jointly by Research Councils and Innovate UK and then by UK Research and Innovation once established. R&D proposals will need to be industry led and multidisciplinary and while it will not all be about technologies, proposals will need to provide solutions to real challenges. Research Councils and Innovate UK will be looking for ideas that are ambitious in answer to real challenges, pushing the boundaries of existing knowledge and creating new opportunities. And although industry will be in the lead, it will need to pull through different businesses and universities to address the different challenges. The ISCF will bring research and business together to deliver economic not just social impact.

On the 21st April, the Business Secretary announced the first 6 challenges including:

- Cutting hedge healthcare and medicine - £197M over 4 years
- Robotics and artificial intelligence - £93M over 4 years
- Batteries for clean and flexible energy storage – £246M over 4 years
- Self-driving vehicles - £38M
- Manufacturing and materials of the future - £26M
- Satellites and space technology - £99M

Other challenges will be announced in the near future with a second wave of challenges being identified.

Underpinning the Industrial Strategy and the ISCF is the role of people, including investing in the right skills, retaining talents, attracting the right talent to the UK to make sure that the UK remains the best place to do research. Currently, RCUK support 35,000 Primary Investigators (PIs) researchers at any one time and developing skills is one of the pillars of the industrial strategy with the role played by Early Career Researchers (ECRs) really important. Therefore investments in skills are needed to increase productivity as part of the National Productivity Fund. In the UK 40,000 researchers are ECRs, the investments in skills is an opportunity for them to develop and grow considering that 50% PhDs work outside of academia.

Ian Brotherston from Innovate UK reiterated these key messages from the perspective of businesses. Innovate UK also has an interest in skills and has been supporting skills development through KTP for example for a number of years. However, businesses have highlighted that in terms of skills gap in people, it is often the understanding of how business works which is the most lacking *i.e.* understanding how teams work, how each function of a business aligns, project management, understanding basic financial information...

It is the commercial skills that people need in order to be effective in business. This skills gap can often be addressed via placement where individuals work on real commercially focussed projects, not extensions of research projects and this is why KTP is such an effective mechanism.

As highlighted previously, ISCF projects will be business led, addressing real challenges but the role of Research Organisations will be paramount to the success of these projects. ISCF will be about facilitating the exploitation of the great results from the Research Organisations.

As highlighted in the Industrial Strategy, there is a strong role for the different regions of UK and universities in these regions are to play a part in addressing the productivity gap. So the new money from ISCF and regionalism agenda will come together in the near future.

The exciting thing for both businesses and universities is that while ISCF is new money, Innovate UK core funding remains: However, one of the key thing going forward will be the need for good metrics for ISCF. In developing these metrics, the community of knowledge exchange and tech transfer professionals need to let us know what will work for you.

Since the main aim of ISCF is to increase productivity in the UK, it will be important to engage with Tier 2 and Tier 3 companies not only the Tier 1 companies which are already very innovative compared to others. It is the lack of take up of new technology in Tiers 2 and 3 companies that is undermining productivity so it will be essential to engage them when developing bids to ISCF. These Tier 2 and 3 companies probably have absorbing R&D capacity and it is about how to get them interested and engaged in the first place. Innovate UK, with the KTN and the Enterprise Europe Network have a role to play in facilitating this engagement.

In summary it is time to get involved and get ready to bring people together from business and academia. The challenges have been announced and thinking about how to address those using multidisciplinary approaches is essential.

The session ended by questions from the floor including:

How to get industry to put more money in R&D? In the UK, it is often complained that industry invest less in R&D compared to other countries. Could Research Councils mandate that a certain number of PhDs are in collaboration with industry to get academic to engage with industry?

The Government recently announced the creation of 1,000 more PhD studentships. These studentships had to be allocated quickly but we will look to be more strategic in the future.

Since the NPF is about productivity and entrepreneurship skills, are you thinking about creating programme to get ECRs to be more entrepreneurial?

As part of the NPF it is likely that new innovative programme will address the skills gap and notably entrepreneurial skills.

Will university spinout companies be eligible to apply under the ISCF?

As Councils we support excellence in research wherever it is found and we will carry on doing so. Innovate UK sector funding is still there and spinout companies are eligible for Innovate UK funding.

What would a typical ISCF project look like?

This is difficult to answer as it will depend on the challenge to address and what is required to address it. Keep an eye out on call and start thinking about how to bring consortia together.

What role will the British Business Bank play in CCF?

The British Business Bank is part of the ecosystem of support available to business in facilitating the flow of finance and research organisations should explore how to involve the BBB to strengthen CCF bids.

What would success look like in the ISCF?

Successes will include tangible and demonstrable outcomes from the investments linking real solutions to the challenges with the investments having made a difference. Since the real impact and solutions will take years to materialise we will need relevant leading and lagging indicators.