

Evaluating the impact of the Innovation, Research and Technology Sector on the UK Economy in 2018.

Specification for prospective service providers.

Date: 6 November 2018

Introduction

The UK's Innovation, Research and Technology (IRT) sector operates at the interface between academia and industry, for both private and public sector clients to apply scientific progress and capabilities into new products and services. This sector includes independent Research and Technology Organisations, Catapult Centres, Public Sector Research Establishments, National Laboratories, some university Technology Transfer Offices and some privately held innovation companies, all working across a wide range of industries helping both large and small companies to accelerate their growth, boosting the UK's international competitiveness and anchoring high value R&D dependent sectors in the UK.

The value of this activity was identified and documented in a [2014 report¹](#) commissioned by AIRTO (the Association of Independent Research and Technology Organisations) and undertaken by Oxford Economics. In 2014 the sector was shown to have a combined turnover of £6.9Bn, employing over 57,000 scientific and technical staff (equivalent to the academic staffing of the Russell Group of universities) - significantly larger than the network of Fraunhofer Institutes in Germany both in size and its scope of activities. The sector contributed £34Bn to UK GDP per annum. AIRTO members earn 67% of their revenue from customers/funders in the UK, 10% from exporting services to the EU and 23% from exporting services to the rest of the world.

In the past few years, the landscape for R&D in the UK is transforming. The government has set an ambition for the UK to become the most innovative country in the world! The government has announced a new Industrial Strategy, which puts innovation at the heart of creating a Britain that works for everyone, bring skills and job opportunities to all regions of the UK, whilst addressing some of the biggest 'Grand Challenges' facing our society: artificial intelligence and the data economy; clean growth; the future of mobility; meeting the needs of an ageing society. Alongside considering how best to tackle these challenges, the government is planning for our changing relationship with the EU and the rest of the world, and in doing so the UK's national investment in R&D has been placed under the microscope! As a result the government has set a goal for ensuring that the UK achieves 2.4% of GDP to be invested in R&D by 2027 – an uplift from the current level of 1.7% - to ensure that the UK continues to compete as a world leader in research and innovation. To deliver these new ambitions, and to achieve a joined up strategy for delivering our investment in R&D across all disciplines, the government has launched UKRI (UK Research and Innovation), whose mission is to ensure that world-leading research and innovation continues to grow and flourish in the UK by supporting and helping to connect the best researchers and businesses, and investing public funds to generate outcomes and ultimately impact for citizens, in the UK and across the world. UKRI's role is to ensure that the UK continues to provide the best environment for research and innovation.

Services to be provided

Background and objectives

AIRTO is now seeking a service provider to update and develop the economic and quantitative analysis for 2019, building upon the 2008¹ and 2014¹ reports by Oxford Economics, to produce a fresh updated study appraising the contribution and impact of the sector on UK plc at the outset of 2019. This study will demonstrate clear thought leadership, provide evidence and insights that help inform decisions by policy makers and serve to alert government and industry to the value of the UK's IRT sector.

The study will apply research methodologies and an evidence-based approach that is widely recognised to be independently sourced, robust and valid by government and industry alike.

The service provider needs to be experienced and recognised for expertise and leadership in undertaking economic studies and proficient in economic modelling which can take account of the impact of large and small organisations across a range of industrial sectors and science and technology areas.

Description of the services: What should the study encompass?

The study needs to repeat coverage of H M Treasury's recognised measures adopted in the previous studies ^{1,2} of the direct, indirect and induced contribution of the IRT sector to the UK economy, including specifically:

- The current definition and make-up of the sector.
- The current turnover of the sector as a whole and the monetary value of the sector's contribution and its impact to the UK's GDP.
- The current contribution of the sector in terms of job creation and exports.
- The return on investment for each £1 of public money spent in the IRT sector?
- The return on investment for each £1 of private/industry money spent in the IRT sector?
- Funding of capital and strategic development in organisations operating within the sector and return on capital investment.
- Profile of industry clients by size.
- How the sector compares with its equivalent in other developed nations e.g. Germany, France, Scandinavia. This particular aspect of the study should simply draw upon any easily and readily available information produced by other organisations e.g. EARTO, The Campaign for Science and Engineering, the CBI, The Royal Academy of Engineering, BEIS, OECD, ONS etc.

The study will need to draw conclusions and propose recommendations on what the government could do to make better use of the IRT sector e.g. on commercialisation of research outputs, on grand challenges, and on provision of training opportunities.

In addition, the new study should assess, where possible, the role of the IRT sector in helping to deliver the government's Industrial Strategy - in particular its role and potential in:

¹ [Study of the impact of the Intermediate Research and Technology Sector on the UK Economy; Oxford Economics, May 2008](#)

- Developing skills (including through partnering with universities)
- Bringing job opportunities to regions of the UK
- Addressing some of the biggest 'Grand Challenges' facing our society: artificial intelligence and the data economy; clean growth; the future of mobility; meeting the needs of an ageing society.
- Contributing to the UK's research infrastructure (that which complements the government funded infrastructure currently being mapped by UKRI).
- Contributing to the government's goal for the UK to reach 2.4% of GDP being invested in R&D by 2027 (an uplift from 1.7% in 2018).

Defining the IRT sector

There are a significant number of Research and Technology and similar Organisations (generically referred to here as RTOs) that operate in the IRT sector - many of them are members of AIRTO. The approach to defining the sector should be broadly similar to that as that in the 2014 Oxford Economics studies ¹, but may be subject to further detailed discussion with AIRTO.

Approach to the study

The service provider will undertake to carry out the study in a way that enables direct comparison with data published in the original studies, subject to further detailed discussion with AIRTO. The previous studies' approaches involved:

- Undertaking a survey of AIRTO members in order to gather financial, employment and R&D statistics.
- Gathering Companies House records in order to estimate the contribution to UK GDP made by IRT sector companies who are not members of AIRTO.
- Undertaking selected structured interviews with clients of the IRT sector, to further establish the ways in which the IRT sector contributes to the performance of the UK economy.
- Using these data in conjunction with pre-existing macro and sectorial models of the UK economy to estimate contribution to GDP and related parameters.

Timescales

The project will take 6 months to complete and the final report will be published in summer 2019. A short interim report will need to be produced by the end of March 2019, outlining a synopsis of the key data on the sector. E.g. size of sector and number of staff it employs.

Scope of the contract

Information gathered and analysis undertaken should cover AIRTO members, as well as relevant organisations not in membership of AIRTO. Member-sourced information should be treated with a high degree of confidentiality.

Contract tasks

The contractor will define a work plan for addressing the following tasks:

Task 1: Undertaking data collection and analysis on AIRTO members and other relevant organisations in order to gather financial, employment and R&D statistics, and gathering Companies House records in order to estimate the contribution to UK GDP made by IRT sector companies who are not members of AIRTO. The format for data collection will be the same as that used in 2014, with appropriate additions or amendments and will be subject to consultation with AIRTO. This will be followed by analysis of data collected.

Task 2: Undertaking selected structured interviews with clients of the IRT sector, to further establish the ways in which the IRT sector contributes to the performance of the UK economy. The methodology for constructing/sourcing case studies will be the same as that used in 2014, with appropriate additions or amendments and will be subject to consultation with AIRTO.

Deliverables

The contractor will deliver:

1. A draft project plan as part of the project proposal, to be refined for final approval within two weeks of commencement of the project.
2. An interim report following initial consultation with AIRTO at the end of month two to detail progress.
3. A further interim report at three months.
4. A draft version of the final report for input and comment by AIRTO at the beginning of month five. The final report will draw upon the format of the 2014 report and will include an executive summary.
5. The final report will be produced at the end of month six; this will be published in pdf format as well as delivering 100 printed copies (exact specification to be agreed with AIRTO regarding the print design).
6. At the end of the project, copies of transcripts and raw data from interviews and surveys will be supplied to AIRTO for reference purposes.
7. A press release will be agreed with the supplier and the supplier will participate in presentations of the report where appropriate.

Meetings

To report on progress and receive input and feedback the contractor shall meet with AIRTO at:

1. The beginning of the project to initiate the work and to inform refinement of the project plan.
2. The end of month one to review initial progress.
2. The end of month two to report on initial progress.
3. The end of month three, an interim report on progress with interviews and the data collection and analysis.
4. The end of month five to discuss the initial draft report and findings.
5. The end of month six to present the final report.

Contact information:

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Submission of proposals:

Written proposals to undertake the activity described should be submitted by **5pm on Tuesday 20th November, 2018** by email to Dr Jane Gate, Executive Director, AIRTO Ltd.

Email: jane.gate@airto.co.uk

