



Submission to:

UK Research and Innovation, UKRI

New Deal for Postgraduate Research – [Call for Input](#)

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From:

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Background

AIRTO (the Association of Innovation, Research and Technology Organisations, on behalf of its members, has prepared the following response to the questions posed in [the Call for Input from UKRI](#).

AIRTO represents the Innovation, Research and Technology (IRT) sector in the UK. Its membership comprises approximately 60 organisations who undertake research, development and demonstration of new technologies, for industry, government and public benefit. Its members have a range of connections with universities in the area of postgraduate research. These include supporting projects, collaborating with individual students and departments, and operating postgraduate institutes where the students place of research may be within a member's laboratories. Members also have large numbers of staff with doctorates awarded in the UK and overseas, and recruit a significant number of such staff every year.

These responses to the Call for Input are made from the specific viewpoint of the current and future IRT sector's involvement in postgraduate research.

Question 1: What should be the goals for contemporary postgraduate research training?

There are two clear overall goals for contemporary postgraduate research training:

- The achievement of research objectives.
- The preparation of the student for their future career.

The first of these is crucial to the student achieving the relevant qualification, but it is also of major importance to the department, university, and those supporting the student such as funding bodies, charities/foundations and business/industry. There is also a wider public and societal interest in research success which can range from cultural interests to direct and indirect contributions to national prosperity, security and health.

Future careers for postgraduate students involve a very wide spectrum of opportunities from continuing in academic research, through undertaking more applied research and development, to roles in industry, business and professional occupations. Continuous professional development of students should target this range of possibilities leading to a full understanding of career choice, and also the opportunity to move between different parts of the 'spectrum' as their career develops.

These two overall goals do largely differentiate between the research and taught aspects of postgraduate research training. Whereas the research aspects must be the primary focus of the student, it is suggested that a full course of continuous professional development is available with key core items being mandatory, whatever the future career aspirations of the student.

Question 2: Are there any additional areas that we should explore under models and access?

Please state why.

As UKRI's explanatory notes for the question point out, there are many funding models for postgraduate research. Many of these are alternatives, where coordination and cooperation would benefit all the stakeholders, and particularly the potential student.

As stated above, AIRTO members are involved in many aspects of postgraduate education, but this is largely on an ad hoc basis, with individual members setting up their own schemes - from hosting individual students to larger scale initiatives such as those operated by [NPL](#) and [TWI](#). There will be significant benefit from a comprehensive coordination of the IRT sector and the relevant Research

Councils. This activity could involve both the resources and interest of the research organisations, and also those of their business partners. AIRTO is willing to explore this possibility with UKRI, on behalf of its members.

As discussed in the answer to Question 1, there is a balance to be achieved between research and taught aspects of a postgraduate course. There is also a crucial balance to be achieved between the freedom of a particular student to undertake their research and the supervision and support that student may need. This supervision and support will have both academic and wider monitoring and advice aspects. The training of supervisors and the identification of procedures and resources in individual departments is important in defining and giving the academic and non-academic support to students. STFC, through its Education, Training and Careers Committee (ETCC), has run an accreditation process for a number of years for departments receiving its postgraduate funding. This accreditation ensures there is appropriate levels of support and professional development available for the student at all stages of their postgraduate studies. It is suggested that this accreditation process is examined to assess its suitability for all Research Councils – and potentially other funders of postgraduate research.

Question 3: What challenges should we prioritise under models and access?

Improved levels of coordination and cooperation between public funders of postgraduate research students and the IRT sector, leading to enhanced collaboration in funding a wider range of potential students. This will also lead to more flexibility and interchange of students in their future careers.

Question 4: Are there any additional areas that we should explore under routes in, through and out of postgraduate research? Please state why.

A number of AIRTO members have large postgraduate programmes, in collaboration with a range of different universities. These programmes are largely based on industry/market led research, and provide a career path for the researchers into IRT organisations and industry. Students often aspire to careers in industry, and find this type of postgraduate research more suitable to their future requirements.

As discussed above, these programmes have been organised on an ad hoc basis and the possibility of better coordination in the sector and with UKRI would lead to improved access to a wider range of potential students.

Question 5: What challenges should we prioritise under routes in, through and out?

A key challenge is to provide comprehensive information on all the routes into undertaking postgraduate research, in order that a potential student can select the one most appropriate to their interests, career aspirations and personal situation. This potentially is a role for UKRI, even where it is not providing the funding for the student.

Question 6: Are there any additional areas that we should consider in our work on rights and conditions? Please state why.

No answer provided.

Question 7: What challenges should we prioritise in our work on rights and conditions?

Ensuring the relevant information is cascaded down in all stakeholder's organisation to all relevant staff and students.

Question 8: Are there any additional areas that we should explore in our work on funding and support?

Funding and support for postgraduate training is a complex area. Although universities and other organisations have their own guidance for prospective postgraduate research students, an authoritative, comprehensive guide to the funding of postgraduate students will be beneficial to all stakeholders.

AIRTO, together with their industrial partners, do fund significant numbers of postgraduate research students. Better coordination of this support with other funders will both enhance the funding available, and encourage additional students into postgraduate research. Such improved coordination would be catalysed by a more comprehensive guide to funding.

Question 9: What challenges should we prioritise in our work on funding and financial support?

The preparation of the authoritative, comprehensive guide to funding, and ensuring transparency in information on such funding.

Question 10: Are there any areas that we could usefully focus on, or other questions that we should explore, not covered within our four focus areas?

With the increased emphasis on research in the government's plans, should the new deal include guidance for stakeholders on dissemination of postgraduate research to the general public?

Question 11: Do you have any further comments on the new deal?

An important part of the new deal will be the monitoring of actions undertaken and their level of success. Monitoring the impact of the new deal should be carried out with involvement of a wide range of stakeholders, including IRT sector representation. The possibility of modifying and enhancing the actions undertaken and planned should be a part of the new deal, after sufficient time has been allowed for the consequences of actions to be fully assessed.

Question 12: What factors should we consider as we develop our engagement plans for future New Deal work?

The engagement plan should include:

- An overall, high level strategic document describing the plan for all stakeholders in postgraduate education.
- More detailed plans tailored for each group of stakeholders, detailing actions and the intended benefit to that specific group.
- Recommendations to key stakeholders (such as universities and other suppliers of postgraduate research) on disseminating the details of the new plan to all relevant staff and students within the organisation.

About AIRTO

AIRTO is the Association of Innovation, Research and Technology Organisations. Its membership comprises approximately sixty of the principal organisations operating in the UK's Innovation, Research and Technology (IRT) sector. The IRT sector has 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) and, for comparison, it is significantly larger than the network of Fraunhofer Institutes in Germany both in size and its scope of activities. The sector contributes £34Bn to UK GDP. AIRTO's members work at the interface between academia and industry, for both private and public sector clients.

Members include independent Research and Technology Organisations, Catapult Centres, Public Sector Research Establishments, National Laboratories, and some privately held innovation companies.

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