



## SUMMARY OF REPRESENTATION

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The government's commitment to support research, development, and innovation (RD&I) is essential to UK prosperity. The UK should aspire to be a leading nation in the G7 for investment (public and private) in RD&I as a proportion of GDP. To achieve this the UK must ensure sustained and growing long-term investment in RD&I, advancing beyond 3% for Gross Expenditure (public and private) on R&D as a percentage of GDP by 2030 to sit in the top quartile of OECD nations.

Therefore, HMG must meet current commitments and enhance them as finances allow. Much public funding is currently targeted at fundamental research which needs substantial time to benefit the economy. There is a need for much faster economic benefit from the investment to catalyse growth and productivity by providing industry with support to innovate products and processes (a core purpose of the Innovation, Research & Technology, IRT, sector), and by introducing supportive regulatory regimes to underpin investor confidence. 'Supercharging' these activities with dedicated national programmes will have immediate effects on the economy. AIRTO, recommends the following specific actions:

- Focus increases in R&D spending on applied research, development and demonstration.
- Fund a national, co-ordinated programme of interventions by the IRT sector to drive innovation for industry. This requires £50m in initial annual funding, rising to £100m per annum once established.
- Provide further iterations of the Research and Innovation Organisations (RIO) Infrastructure Fund. This is essential to replace, renew and enhance capital equipment in IRT sector organisations. A £75m annual investment will greatly enhance the support the IRT sector can deliver to industry.
- Measures to increase the effectiveness of RD&I by reducing bureaucracy and rapidly 'killing' failing projects.

## INTRODUCTION

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AIRTO, the Association of Innovation, Research & Technology Organisations, on behalf of its members, has prepared this written response to the call for representations by HM Treasury for the Spending Review 2025 - Phase 2.

AIRTO represents the UK's extensive Innovation, Research and Technology (IRT) sector, which employs 57,000 highly skilled people, has a combined annual turnover of [£6.9Bn and contributes £34Bn to UK GDP](#). Organisations in this critical sector work with industry, government and academia to promote and support the introduction of innovation to the full range of industrial sectors, and to provide technical solutions to new challenges and crises. The IRT sector is a key partner for industry in delivering the support needed for innovation driven economic growth.

Via our recent [representation to HM Treasury for the Budget 2024](#) and our recent [response to the Industrial Strategy Green Paper](#), AIRTO has been calling for a clear, consistent, innovation-led strategy that will boost growth to address the UK's immediate economic and societal challenges, and in the long-term lead to a strong, growing energy-secure Net Zero economy. This representation proposes both strategic actions to secure the UK's exploitation of its R&D strengths, and immediate actions that will provide support for industry to further innovate in its products and processes resulting in short- and medium-term growth in turnover and productivity.

## AN INNOVATION LED STRATEGY FOR BOOSTING GROWTH

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AIRTO welcomes the commitments to public investment in science and innovation, made in recent years aimed at boosting economic growth, and recommends that this is a key objective for the 2025 Spending Review.

In the wake of the current and persisting financial pressures on government, it is critical that the government continues to recognise and invest in innovation as a key mechanism for stimulating the economy and supporting businesses to raise productivity, competitiveness and growth. Innovation is also a key to tackling the climate crisis and safeguarding our energy supply.

This means continuing to honour recent public funding commitments for science and innovation in the short-term and increasing this funding in the long-term to the levels invested by the leading, competitor nations. It also means introducing supportive regulatory regimes to provide greater certainty for investors and entrepreneurs to act quickly to exploit successful RD&I outcomes with growth potential.

Public funding commitments are essential to achieve the UK's global ambitions for science and technology. Continued investment in the science base is a vital part of playing a leading role on the global stage. In parallel there must be a better balance of support for development and innovation activities if the full economic benefit of achieving the UK's global ambitions for science and technology are to be realised. Such an innovation-led strategy (as discussed in AIRTO's Position Paper ['More D!'](#)) will stimulate the UK's commercial exploitation of science and innovation resulting in a significant and continuing boost to economic growth. Whereas this focus on applied research, development and demonstration has the very necessary short-term goals, a more robust pathway for exploiting more fundamental research will ultimately provide longer-term benefit from and justification for continuing support of more fundamental research. The national ambition for science and technology and the ensuing economic growth is strongly supported by AIRTO and its members, but it is accepted that this endeavour will require considerable and sustained strategic investment in skills and infrastructure by all the relevant stakeholders, and especially government which must take the lead in defining and orchestrating the goal.

Clear, consistent government plans are critical to provide industry with the confidence to invest in the UK, in the necessary private funding for innovation, physical infrastructure, and expanding commercial operations. This private investment is essential for future UK economic growth. The Spending Review should commit to current plans for the public funding of RD&I, and set a fresh goal to lift R&D intensity up to compete globally. By 2030, AIRTO is calling for the UK to advance the target for R&D intensity (public and private) beyond 3% of GDP, to sit in the top quartile of OECD nations.

### MORE D! (AND BEYOND D!)

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AIRTO advocates an innovation-led strategy for stimulating the economy to address the UK's immediate economic challenges, and for the long-term development of an energy-secure Net Zero economy. A focus on activities that promote existing knowledge and innovation to industry will ensure that significant short-term economic benefits will be realised, which is crucial in the current economic environment. This means a change in focus of funding to applied research, development and demonstration (as discussed in AIRTO's position paper ['More D!'](#)). Additionally, a programme to catalyse the transfer of existing knowledge from the IRT sector to industry, which is focussed beyond R&D capabilities (beyond 'D!') will reap immediate benefits and is essential for achieving this benefit. This can be achieved by introducing a specific IRT sector knowledge exploitation programme. Such a programme would be an IRT sector equivalent of the HEI focused [HEIF programme](#) but with immediate objectives and short-term benefits. It is essential for boosting immediate industrial growth and productivity.

AIRTO members have undertaken such programmes previously, supported by national and regional funding, and have achieved very significant, measurable outputs from their work with a wide range of industry, and organisations from SMEs to large enterprises. A good example of an effective programme has been [Analysis for Innovators](#), involving a number of PSREs and overseen by Innovate UK. The extensive range of examples exhibited across the network of Catapult Centres also offer models of good practice in near to market support offered to industry. A co-ordinated national programme involving the full breadth of the IRT sector will significantly build on these proven interventions. ‘Beyond D!’ activities and capabilities are soon to be further considered in a forthcoming AIRTO position paper later in 2025, which will explore measures to speed up the translation of R&D outcomes to commercial markets and public sector applications.

In addition, AIRTO contends that as part of its previously stated commitments to increase the public expenditure on research and development, the government should bolster specific commitments to research, development and innovation (RD&I) aimed at advancing the UK’s path to Net Zero, signalling its commitment to addressing the climate crisis, clean growth and achieving energy security. Such further commitment will provide the confidence for business that is necessary to drive increases in private industrial investment.

## THE ROLE OF THE IRT SECTOR

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The UK has a wide range of world-leading organisations that comprise the IRT sector. These are independent and trusted agents for driving innovation in industry. Some of these organisations are government owned, some are not-for-profit entities, and others are private research organisations. All are a key part of the nation’s science and technology infrastructure, working closely with industry, and collaborating with academia.

The sector has huge potential for significantly increasing its support for industry and government. In the short- and medium-term this will be a key part of the plan for stronger economic growth. In the longer term it will be an increasing, integral part of the country’s science and innovation infrastructure and strategy, aimed at achieving the goal of raising the level of GDP invested in RD&I and working with industry to effectively exploit the resulting technology.

A major area of activity for the IRT sector operations is research, development, innovation and demonstration in the mid Technology Readiness Level (TRL), where public investment has a ‘multiplier effect’ due to the generic nature of the activity and its relevance across whole sectors and industries. Appropriate public funding is also significantly multiplied by industrial investment both directly and through the IRT sector. This is reinforced by the IRT sector’s commitment to the transfer of knowledge to industry and its deployment for innovative activity. As discussed above, AIRTO advocates to re-balance public funding for research, development and innovation to provide more mid-technology readiness level support (e.g., demonstrators) for key sectors and industries, and reduce the cost and time to translate technologies to market (as discussed in AIRTO’s Position Paper [‘More D!’](#)).

The IRT sector can play a crucial role in ensuring the nation reaps the full benefit from increased investment in RD&I. To achieve this, there are changes needed in the government’s support for the IRT sector, as recommended in Sir Paul Nurse’s [Independent review of the research, development and innovation \(RDI\) organisational landscape](#). This will involve investment in the RD&I physical and digital infrastructure and skills, providing the necessary resources and capabilities to create a catalytic effect that further attracts private industrial funding, with its associated economic benefits.

Therefore, it is recommended that the government create a recapitalisation fund for the non-profit distributing IRT organisations which do not have recourse to shareholder funding (because of their

ownership and commitment to mission-driven support). This will allow a significant increase in their support of and benefit to UK plc. and will complement existing government investment in Catapult Centres and Public Sector Research Establishments (PSREs). A key feature of this resource allocation, for it to be effective, is longevity. Support longevity is equally vital for the current funding mechanisms for Catapult Centres and PSREs.

At the end of 2023, the [Research and Innovation Organisation \(RIO\) Infrastructure Fund](#) was opened to non-profit distributing IRT organisations in addition to Public Sector Research Establishments. This was very welcome as a first step. However, with a comparatively modest budget (£25m) and a very short timescale to develop proposals, it is a scheme that should be further developed and expanded to fulfil IRT Organisations' needs if they are to play their full part in supporting UK industry.

Lastly, the sector's members are well placed to help develop optimised standards and regulation for key areas of emerging technology and to offer facilities for independent assessment of compliance, for safety critical applications, in particular.

## **FASTER INNOVATION: SPIN-OUTS VERSES SUPPORTING ESTABLISHED ORGANISATIONS**

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There is much emphasis in government policy and rhetoric on the importance of spin-out companies, particularly from universities, to future national prosperity. These are important when they become substantial, world-class technology-based companies, and in particular 'unicorns'.

However, there should be some caveats to the support for such spin-outs:

- Successful spin-outs represent a small proportion of technology based industry in the UK.
- The economic benefits to the nation are in the long-term.
- Success rates are low and deployment of publicly funded support at the initial stage of commercial exploitation is comparatively inefficient.

AIRTO advocates for the continuing public support for spin-outs. In addition, we contend that there should be:

- Enhanced innovation support for existing companies which will give short-term economic benefit to the UK and much higher likelihood of success.
- More robust assessment of emerging spin-outs before public funding support is committed, (either directly or via publicly funded university programmes), involving industry experts (both technical and commercial), learned societies and IRT sector organisations, to ensure higher success rates and more effective deployment of public funds.
- Prioritisation of actions that quicken progress in the commercial exploitation of innovations to drive speed to market, to maximise competitiveness. Amongst such actions is commitment to appropriate updating of standards in conjunction with industry and appropriate reform of regulations.

## **RECOMMENDATION FOR SPECIFIC SPENDING ACTIONS**

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In the current economic climate in the UK, there is a need for a much faster economic benefit from the investment in RD&I to catalyse more immediate growth and productivity. This can be achieved by directly providing industry with support to innovate products and processes, a role that is one of main purposes of the IRT sector. 'Supercharging' these activities of the IRT sector with dedicated national programmes will

have immediate short- and medium-term effects on the national economy. AIRTO calls for the following specific actions in the 2025 Spending Review:

- Focus increases in R&D spending on applied research, development and demonstration in order to provide more immediate innovation support to industry. (As discussed in AIRTO's paper '[More D!](#)').
- Fund a national, co-ordinated programme of interventions by the IRT sector to introduce innovation into industry. Previous ad hoc programmes within the IRT sector have proved highly successful in increasing turnover, productivity and employment. The need for innovation must be 'market driven' and may be highly innovative, or simply innovative for a particular organisation. This programme will have some parallels with the [HEIF](#) programme deployed in the academic sector, but will deliver much more immediate results and guaranteed successes. This programme requires initial annual funding of £50m, ramping up to £100m per annum once it is established and running smoothly.
- Support for further iterations of the [Research and Innovation Organisations \(RIO\) Infrastructure Fund](#). This is essential to enable IRT sector organisations to replace, renew and enhance capital equipment in order to remain competitive and continue to extend their innovation support for industry. The most recent awards made in January 2024 allowed a number of organisations to improve their resources with funding from a relatively small fund (£25m). Having proved the principle of the funding and seen the benefits, AIRTO calls for an expanded programme with a £75m annual budget to greatly enhance the support that the sector can deliver to industry.

## **COST SAVING AND EFFICIENT WORKING**

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AIRTO In addition to recommendations for government spending on RD&I, AIRTO is also putting forward suggestions about how such funding can be more efficiently deployed:

- The length of publicly funded programmes and projects should be aligned with the aim and state of the technology in question under development. This could involve longer timescales than are current practice. The process of applying for further funding for continuation of programmes is a costly endeavour for organisations and can result in unnecessary/avoidable delays to projects. However, any adjustments to the length of funding made available should not result in any compromise on the level of technical assessment applied to programmes, and failing projects should be curtailed.
- The application process for public funding should be streamlined, with shorter, more focused documentation required from applicants and faster decision-making.
- The bureaucracy involved in the management of public funded projects should be reviewed and where appropriate streamlined. Light touch monitoring and review processes should be used for projects that are well run and managed, with more extensive oversight reserved for those projects that are failing to meet technical, financial and managerial requirements.

## **OTHER POINTS OF CONSIDERATION**

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AIRTO also urges HMG to consider two other themes which are pertinent to the relationship between RD&I capabilities and the success of its Industrial Strategy, nationally and regionally. These include:

- The critical importance of utilising public procurement, with Government as first customer to drive growth and scale-up. There are roles for central government and for local government and other public sector agencies etc. in this, and the need for support and optimisation of processes to enable fledgling businesses to win contracts.
- The role of RTOs/IRT organisations and others in the ecosystem, including academia, in driving the development of the skills base in regions and thereby attracting and anchoring companies as part of the formation of clusters (either organically or intentionally) – ultimately creating opportunities and jobs. As such, supporting the IRT sector to take forward initiatives to develop skills is a positive way for HMG to drive job creation, prosperity and growth.

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