

The UK's role in global research

How the UK can live up to its place in the world

Executive summary

The UK is a global leader in research, but a new vision is needed to ensure the future of UK research is as bright as its past and to maximise the impact of increases in research spending. To be a true 'science superpower', as the UK Government aspires to be, the UK must not only be a source of high-quality research but must use that research to have global influence and impact, and to take a leading role in tackling global challenges.

Wellcome has set out four enduring principles that define the role that the UK should aspire to in international research. Accompanying recommendations guide the shorter-term actions needed to meet these principles and the Government's ambitions for research.

Principles

1. The UK must be open — openness underpins scientific progress, encouraging the interaction of people and ideas which leads to new solutions. To be open the UK must:

- **Make itself a hub for global talent.** Being able to attract global talent has been a key factor in making the UK one of the world's leading scientific nations.
- **Maximise the benefits of outward mobility** by encouraging and supporting UK-based researchers to move around the world. Doing so will provide new skills and networks as well as demonstrating the UK's commitment to global collaboration.
- **Create a 'single front door' for UK research** to overcome a disjointed international image. The UK must ensure that it is easy to work with and has a clear offer to the international research community.

2. The UK must build networks around the world — International research collaboration is now essential to deliver world-leading science. To develop these networks the UK must:

- **Understand the importance of collaboration** and aim to make the UK the collaborative partner of choice, recognising that being globally competitive is achieved by being globally collaborative.
- **Secure the UK's research relationship with Europe**, one of the most research-intensive areas in the world and the UK's most common research partner.
- **Forge new partnerships beyond Europe** with new agile funding structures which support both top down nation-to-nation agreements and organic, researcher led, collaborations.

3. The UK must be strategic — As a medium-sized nation, the UK will need to deploy its resources strategically and efficiently to maximise its impact. To do this it must:

- **Avoid duplication and inefficiency in infrastructure** by working with others to share the cost and risk.
- **Ensure bilateral and multilateral funding is efficient** by avoiding unnecessary administrative duplication caused by “double jeopardy”. To achieve this, the UK will have to be comfortable with giving trusted partner nations the lead role in overseeing any grant application and review process.
- **Choose international partners strategically** by ensuring new research partnerships have a clear purpose built around shared priorities and are invested in over the long term.

4. The UK must use its influence for global good — The UK must use its scientific reputation to take on a true leadership role in tackling global challenges, combining research expertise with political and diplomatic knowhow. To do this the UK must:

- **Progress from being ‘world-leading’ in research to true global leadership** by strategically selecting scientific challenges for long-term UK leadership, building on and amplifying existing research expertise. The UK must not only be a nation of high quality research, but one that uses that research to have global impact.
- **Maximise diplomatic and routes for informal influence** by combining the knowledge and expertise of its scientific community with its diplomatic strength and position in multinational organisations (such as the G7, UN and WHO).
- **Be a pioneer of regulatory diplomacy** in order to support the global development of regulation and standards that will underpin future research success.

Essential prerequisites

Following the principles above will set the UK on the right path, but there are four essential actions that must underpin this approach.

- **Secure the UK’s domestic research environment** by implementing the Government’s R&D Roadmap.
- **Commission an ‘international’ equivalent of the R&D Roadmap** that will become the “North Star” for government decision making.
- **Craft a clear engaging narrative for the UK’s approach to international research**, ensuring that it resonates with researcher community and reframes UK science in a global context. Phrases such as ‘science superpower’ and ‘Global Britain’ may not suit this purpose.
- **Continue to be an internationally engaged country** committed to solving global, as well as national, problems. The UK’s Official Development Assistance spend is an important part of this commitment and should be maintained.

Next Steps

The UK must be a country that is global in outlook, collaborative in nature, and welcoming at heart. It must be a leader in tackling global challenges — both because it is in the UK's interest to do so, and to share the burden faced by others. The UK must be globally competitive, but recognise that this is achieved by being globally collaborative. The UK must be strategic and make sure that it uses its influence to deliver evidence-driven solutions that improve people's lives. Only then will the UK be able to live up to the title of science superpower.

The following actions must be taken by the UK Government over the coming 18 months to make its research ambitions a reality.

1. Implement the actions highlighted in the BEIS R&D Roadmap to supercharge the UK's domestic research environment.
2. Commission an 'international' equivalent of the BEIS R&D Roadmap that sets the overall vision for Britain's place in the world for research. This should become the 'North Star' for Government decision-making, based around clear goals.
3. Create an engaging narrative for the UK's research ambitions that resonates with the community who are needed to deliver it. Develop phrases and slogans in the same way as for any political campaign — by message-testing with the intended audience.
4. Mandate the Office for Talent to radically improve the 'user experience' for researchers and their teams coming to the UK for both short-term visits and long-term work. Requesting a visa should be a smooth process and joined-up with any funding applications the applicant has made.
5. Make visas for researchers and their teams cheaper. Find innovative ways to ensure that the UK does not price itself out of the market, or restrict itself to research talent that already has considerable financial means at its disposal.
6. Fully embrace the benefits of outward mobility and strengthen the UK's existing overseas network, for example by setting up a UK research alumni network.
7. Further encourage an exchange of research talent with strategic partners around the world. This could include provisions in Free Trade Agreements or science and innovation agreements, or singular standalone programmes such as joint PhD or exchange schemes.
8. Create a 'single front door' for UK research around the world. The existing Science and Innovation Network could be resourced to provide this.
9. Conduct an internal review of the capacity of the Science and Innovation Network to ensure it can clearly signpost the UK's research offer, in terms of its capabilities and strengths, and guide potential collaborative partners. It should become a true network that is both well-connected in the host country, connected with stakeholders in the UK and across the rest of SIN.
10. Make every effort to secure full association to the Horizon Europe research programme, as the first step in building research relationships around the world.

11. If full association is not possible following wider Brexit negotiations, the UK should seek opportunities to remain involved in the European research community — including through third country participation in funding programmes.
12. Increase funding sources which provide flexibility at the front-line, such as QR funding, to allow universities to support organic collaborations.
13. Establish an 'Agility Fund' to support different types of top-down international collaborations, as recommended in the Smith-Reid Review.
14. Use multilateral funding programs where possible to ensure a more strategic, coordinated and efficient approach to funding international partnerships.
15. Pursue a strategy of coordination, rather than duplication, to ensure access to cutting-edge research infrastructure.
16. Avoid double-jeopardy in setting up bilateral and multilateral funding arrangements by allowing partner nations to take a lead role where appropriate.
17. Ensure new research partnerships have a clear strategic purpose built around shared priorities and are invested in over the long term. The UK needs to have a clear overarching strategy setting out what it wants to achieve from these partnerships, and ensure any new relationship fits that strategy.
18. Reframe relationships with the Global South by shifting the centre of gravity, including funding, leadership and decision making, to where it is best suited and will have the greatest impact.
19. Strategically select scientific challenges for long-term UK leadership, building on and amplifying existing research expertise. This could include challenges where the UK has a strong track record like AMR and areas where it has already heavily invested in research efforts, like Covid-19.
20. Use opportunities like the upcoming UK G7 presidency to make progress on priority issues, including the global effort to develop and deliver Covid-19 vaccines, diagnostics and treatments, and new financing mechanisms for these global public goods.
21. Continue to make use of the UK's informal networks across Europe, particularly if the UK associates to Horizon Europe.
22. Harness the global reputation of the UK's scientific advice mechanisms, by giving Chief Scientific Advisers leadership roles on tackling global challenges and including them in trade missions.
23. Deliver on the Prime Minister's invitation to host an event in London on the global regulation of emerging technologies to make progress on determining shared norms and standards.
24. Broaden the remit of the Regulatory Horizons Council to have an explicit international focus. Doing so will allow the Council to monitor, work with, and learn from, similar bodies around the world.