

## UKRI research and innovation infrastructure roadmap: frequently asked questions

- ***Infrastructure is often interpreted as large scientific facilities; will this be the case with this roadmap?***

We are not limiting this work to large scientific facilities. Whilst we use the term “infrastructure”, others may be more familiar with terms such as facilities, assets, capabilities, collections or platform, which are all synonymous with our use of “infrastructure” in the context of the Roadmap.

Our intention is to generate a broad view of the landscape covering the breadth of disciplines represented within UKRI and including key innovation infrastructures which may be discipline or sector focused. While an infrastructure will need to meet a scale criterion, it is expected that the mapping phase will cover many capabilities across the range of disciplines (e.g. museums, archives and data from cohort studies as well as laboratories and e-infrastructure).

- ***There are important infrastructures outside academia; are these in scope?***

Yes. This programme is focused on large scale activities and looking across the full spectrum of disciplines, inside and outside academia. Our minimum requirements are that the infrastructures must receive **substantial public funding** and meet the following criteria:

- **Purpose:** An infrastructure must provide an essential platform to conduct or facilitate excellent research and innovation that benefits the UK.
- **Accessibility:** An infrastructure must provide access, resources or related services to the wider UK research and innovation community outside the infrastructure host institution / owner / operator. Publicly funded users may include HEIs, institutes, PSREs, RTOs and other R&I organisations. In addition, access may extend to private or charitable users (e.g. industry), international users of UK facilities and UK users of international facilities. Access may be managed, e.g. user registration, fees, competition, merit review, conditions, security.
- **Scale and longevity:** An infrastructure must have some degree of strategic, international, national or regional importance. It must have a sustained and/or substantial UK public funding commitment (e.g. to build, operate, upgrade, decommission). This funding can come from multiple public sources in addition to any funding from non-public sources. Short term, focussed projects without long term sustainability (existing or planned) are not within scope.

- ***Does this include investments in universities capital infrastructure such as kit within departments or individual laboratories?***

We are not seeking to capture all capital investments in all UK universities or research organisations. The focus of this exercise is to capture strategically important infrastructures which are nationally or internationally important to the UK and the research and innovation communities they serve. There are existing catalogues of university kit such as equipment.data that are complementary to our work. In addition, the infrastructures included must provide access, resources or related services to the wider research and innovation community beyond any individual institution.

- ***How will international infrastructures be addressed?***

European and other international infrastructures are in scope for this work. As part of the initial landscape analysis, we will review European and international organisations that are vital for the UK

research and innovation community. This analysis will inform a picture of the UK's current Infrastructure landscape, identifying strengths (current and emerging), gaps and areas of potential duplication nationally or internationally. This will be used to:

- highlight areas where the UK would wish to seek to influence the direction of potential international activities to best meet UK requirements (including potential collaborative arrangements)
- promote the UK as a global leader in research and innovation, supporting international negotiations and attracting new investment partners or collaborators.

- ***What sort of innovation capabilities are you including?***

An example would be the network of Catapult centres who receive funding through Innovate UK.

- ***Will the roadmap include facilities that have been announced but are not up and running yet?***

Yes, we will factor these in.

- ***Will this be an ongoing programme of work or a one-off?***

This is the start of a planned ongoing programme. Initially it will develop the 'first edition' of the roadmap but with an understanding that it will be refreshed and refined on a regular basis (approximately every 3-5 years). This will allow evolution of the approach and for issues that emerge from our analysis which require further work for to be taken forward.

- ***Will the final roadmap determine which organisations and infrastructures will be funded?***

No, this is not a funding programme. The aim of the programme is to map existing capabilities and identify opportunities for new capabilities. This will feed into subsequent work within UK Research and Innovation and with Government as part of broader financial planning. If an infrastructure is included in the roadmap it does not guarantee funding, and if it is not included this does not preclude funding.

- ***How does this fit with the Industrial Strategy and the Government's commitment to 2.4%?***

The Industrial Strategy's clear ambition is for the UK to be the best place in the world for research and business. The availability of internationally-competitive research infrastructure is critical to the UK's global status in research and innovation. The Industrial Strategy Green Paper committed that UKRI would develop a roadmap to "deliver the institutions and infrastructure we need for a world-leading research and innovation base".

This programme forms part of the detailed analysis now underway to develop a broader roadmap to 2.4% of UK GDP invested in R&D.

- ***How does this process link to the current work on the European Strategy Forum on Research Infrastructures (ESFRI) roadmap?***

The UK Roadmap will describe our current commitment to international research infrastructures, including UK participation in ESFRI Research Infrastructure Projects and Landmarks. These research infrastructures are currently prioritised in the ESFRI Roadmap 2016. The next ESFRI Roadmap Update will be published in September 2018, followed by a further update in 2020. In both cases, the ESFRI Roadmap will continue to capture latest updates on UK commitment and participation in ESFRI

Research Infrastructures. The national delegation will ensure that the list of prioritised research infrastructures in the ESFRI Roadmap is up to date and consistent with the UK Roadmap.

- ***How will the roadmap engage with infrastructure and users?***

The programme will engage widely with infrastructures and user communities. Some of this will be focused through the sectors, making use of existing fora where appropriate. We will use a mix of methods to seek feedback including surveys, interviews and workshops and will build on existing work and roadmapping exercises already undertaken within individual communities.

We also plan to produce an interim report in the autumn which will support further engagement before the final report in April 2019.

- ***How can I stay in touch with the programme as it develops?***

You can engage in the process through talking to your funding body as part of ongoing conversations about future needs and priorities. You can also contact us via [infrastructure@ukri.org](mailto:infrastructure@ukri.org).

## UKRI Research and Innovation Infrastructures (RIIs) – Landscape Survey 1

### **How are you engaging with Research and Innovation Infrastructures? How are you using the inputs?**

We are engaging with RIIs primarily using surveys. The surveys are a critical part of our work to understand the current UK landscape. This will help by showcasing our capability to wider stakeholders, producing insights into gaps in capability and providing a better understanding of how different RIs operate.

We have conducted an initial survey to gather background data on UK RIIs. We approached those RIIs that we and our advisory boards were aware of, and contacted higher education institutions and other organisations to help us spread the word. That survey closed in spring 2018 and since then we've been analysing the data and checking that we've obtained the best coverage we could have. We're following up with these RIIs in summer 2018 using a second survey that is going into more depth in a few areas, based on the analysis of the initial survey data.

### **How many responses have you received to the surveys?**

We received more than 600 responses to the initial survey and some more are in the pipeline after our checks for gaps.

### **How will you publish the results from the survey?**

The survey will help inform the whole Infrastructure Roadmap process. In addition, there will be two direct outputs that it will feed into. Firstly, the data that we gather from these surveys will populate a public online searchable tool that will allow people to discover these important resources and facilities. We are seeking to map and showcase RIIs across the full range of disciplines, including physical sciences, medical and biological sciences, environmental sciences, arts and humanities.

Secondly, we plan to publish a Landscape Report that will summarise the UK's RII landscape (using aggregated survey data). We expect both the report and online tool to be available before April 2019.

### **What size RII were in scope for the Landscape Survey?**

We were interested in RIIs that provide a unique research or innovation capability - so a state of the art lab or NMR would not necessarily be in scope if many other institutions in the UK have similar facilities, but a collection of rare texts or data may well be, as would be a regional or national facility. Institutional-based facilities may also be in scope, as long as they're offering some unique or specialist capability. The RII must also offer some type of access to users outside of the host institution to be considered. For smaller equipment and facilities the *equipment.data* catalogue already does a great job of discovery and promotion and we're not aiming to replicate this. We're looking for the level above that.

### **What about institutes that house multiple RIIs?**

We needed responses to our survey per RII, not per host institution. There may be cases where these are one and the same, such as Diamond Light Source, The European Social Survey etc. There may also be cases where one institution only hosts one RII but also performs other functions (e.g. a museum that has a public education role as well as operating a RII). Here we'd need the response to consider just the RII aspect. There will also be many host institutions that house multiple RIIs – and so we'd need separate responses. This will help with our aim of understanding and disseminating the UK RII landscape.

### **What about RIIs located outside of the UK for the survey?**

We were interested in all RIIs provided to the UK research community, whether they are based in the UK and abroad.

### **How did you decide who to contact for the survey?**

We previously undertook a desk study to identify as many RIIs as possible. We included sources of information such as the ESFRI and MERIL international-scope RIIs, GO-Science Science Landscape papers, BIS/BEIS Capital investment reports, NAO audits, Research Council/RCUK/Innovate UK large facility lists and contacts across UK Government Departments etc. We also sought advice from a steering board composed of representatives of the nine constituent bodies of UKRI, BEIS, BEIS partner institutions, national academies, UUK and others.

However, one of the reasons for undertaking this exercise is that we do not already have a comprehensive awareness of what RIIs exist in the UK and it's likely we may have got some of these suggestions wrong. For this reason, in addition to writing to all RIIs that we could identify through these mechanisms, HEFCE and the devolved funders contacted all higher education institutions in the UK and offered potential RIIs to self-nominate and complete the survey. Some other partners have publicised the link to their networks too for example AIRTO and the National Academies.

All in all there were probably over a thousand invitations sent through the different channels.

### **Can you tell me the names of everyone/the list of RIIs who have been contacted in my institution?**

No, unfortunately not, not with any accuracy. The survey has been promoted through our partners as well as through us directly so we do not have a complete list of everyone who has been contacted.

### **I'd like to see all the responses from my host institution, is that possible?**

We will publish all of the eligible RIIs completing the Landscape survey in the online tool unless they have chosen to opt out. Unfortunately, due to data protection regulation we cannot share their raw data.

**I think my infrastructure should have been included in the surveys but it hasn't. How can I get involved?**

Please get in touch with the infrastructure roadmap team via [infrastructure@ukri.org](mailto:infrastructure@ukri.org) as soon as possible, since this work is now well underway. There will also be further opportunities to get involved once we publish the online searchable tool of RIIs.

**What other ways will you engage with the community in developing the Roadmap? What's next?**

We will also be contacting users of the RIIs to get their views, and other important stakeholder groups. The best way to keep abreast of opportunities for involvement is through our webpage which will be regularly updated: <https://www.ukri.org/news/infrastructure-roadmap/>