

Distributed Infrastructure: Provision and use in practice – Event Summary

On 25 January 2023, the NHSF and members of the heritage science community came together to share ideas about connecting heritage science research facilities and expertise in the context of the upcoming roll-out of the Research Infrastructure for Conservation and Heritage Science ([RICHeS](#)) programme.

RICHeS will significantly increase investment in heritage science research and innovation facilities, resources and services, and help to improve access to infrastructure across the UK and across communities of practice. The colloquium provided attendees with an up-to-date picture of the development of RICHeS and served as an opportunity to capture the feedback of the heritage science community to facilitate its successful implementation. ([Event information page](#)).

The morning began with an exciting announcement from keynote speaker **Dr Joanna Dunster**, Senior Investment Manager, Heritage and International Research Infrastructures at AHRC (Arts & Humanities Research Council). She reported that the RICHeS Outline Business Case has been approved by the Department of Business, Energy, and Industrial Strategy (BEIS), securing funding. Accordingly, her address focused on the question, ‘What next?’. After situating RICHeS within its UKRI and AHRC strategic context, Joanna outlined the primary mechanisms of the programme and explained their benefits. Joanna indicated that the Full Business Case would be submitted to Treasury in February 2023, followed by several RICHeS announcement events, and the opening of funding calls for acting as providers of the infrastructure in April 2023. ([Presentation slides](#)).

A constructive Question & Answer session raised the following key points:

- While there are no specific routes for generating early career research roles and training opportunities within RICHeS, the programme will create jobs in heritage science infrastructure.
- After the initial 5-year capital investment and build-phase, RICHeS will receive £7 million p.a. to maintain the Infrastructure Head Quarters (IHQ) and its connection to E-RIHS (European Research Infrastructure for Heritage Science).
- AHRC are carefully considering the need for balancing staffing and equipment funding so that equipment availability doesn’t outpace operational and research capacity.
- While there are synergies between RICHeS and Towards a National Collection (TaNC) there are also distinctions. Connectivity can be built between the two further down the line as needed.

Dr Kristina Gorman from the Natural History Museum delivered the second keynote. To enable attendees to learn from an established infrastructure programme, she showcased [SYNTHEsys+](#), an integrated European infrastructure for natural history collections. Kristina provided a comprehensive overview of its operations, packages, and outputs, and shared considerations for managing a large consortium and accepting new partners. She finished with an explanation of how SYNTHEsys+ will now be incorporated into [DISSCo](#), a Distributed System of Scientific Collections.

The afternoon session began with four short case study presentations on the practicalities of providing and accessing research infrastructure.

Dr Constantina Vlachou from Historic Royal Palaces spoke about the process of accessing MOLAB through the [IPERION-CH](#) project during their Banqueting House Whitehall Rubens Ceiling Paintings Technical Research project. She highlighted the benefits of accessing four transnational MOLAB teams for non-invasive painting analysis, which included new findings and publications.

(See the [presentation slides](#) online).

Dr Lora Angelova took attendees through The National Archives' (TNA) process for creating a framework for Heritage Science and Conservation Research (HSCR) Access. She demonstrated how this had facilitated the provision of their own HSCR infrastructure to external researchers, and had enabled TNA to access equipment from other institutions to develop their own expertise on heritage science in archives. (See the [presentation slides](#) online with links to forms and systems developed.)

Professor Erma Hermens discussed the development of the [Cambridge Heritage Science Hub](#) (CHERISH), which was enabled by a grant from the Capability for Collections (CapCo) Fund. CHERISH is a collaborative hub for imaging and analytical equipment and interdisciplinary object-based research. Erma spoke about the benefits networking had yielded for research outputs, and provided insight into CHERISH's future directions, which include expansion and increased staffing investment.

Lastly, **Marika Spring** from The National Gallery talked about work by [IPERION HS](#) to develop DIGILAB, a developing platform that will offer digital infrastructure and services within a future permanent European infrastructure for heritage science. She summarised the project's components and shared some of the practicalities involved in developing good data management procedures and digital documentation.

The day finished with online and in-person attendees reflecting on the question 'What are the three priorities for inclusion in the new research and innovation infrastructure?'. Several key messages emerged from the discussion:

- It will be important to define the staffing possibilities supported by the scheme as this is a key concern for the heritage science community.
- Knowledge exchange, possibly via training networks, is needed across the system to maximise its benefits.
- True geographic spread across the UK should be achieved.
- Long-term sustainability beyond the initial 5-year period should be ensured.
- Clarity around the processes and criteria for funding allocations is needed so that the community can deliver high-quality responses to the funding calls.
- The IHQ should be responsible for communications functions that develop the community of providers and users.
- There should be a flexible career development programme for research infrastructure staff.
- Consideration should be given to the appointment of a Research Director for strategic leadership across the scheme (similar to the model used for [Towards a National Collection](#)).
- There is a need for rapid activity to continue to develop and define the plans for the Digital Research Services component.