

The Impossible Museum: A national infrastructure to digitise the UK's natural science collections

Vincent Stuart Smith[‡], Helen Hardy[‡], Laurence Livermore[‡], Lisa French[‡], Tara Wainwright[‡], Josh Humphries[‡]

[‡] Natural History Museum, London, United Kingdom

Corresponding author: Vincent Stuart Smith (v.smith@nhm.ac.uk)

Abstract

The [Distributed System of Scientific Collections UK](#) (DiSSCo United Kingdom, Smith et al. 2022) is a proposal to the [UK Research and Innovation](#) (UKRI) Infrastructure Programme to revolutionise how we manage, share and use the UK's natural science collections, creating a distributed network that provides a step change in research infrastructure for the UK. While the physical integration of such a collection would be almost inconceivable, its digital integration is within reach. Building on the UK Natural History Museum's ([NHM](#)) digitisation programme and in partnership with more than 90 collection-holding institutions across the length and breadth of the UK, DiSSCo UK seeks to unlock the full scientific, economic and social benefits of the UK's natural science collections, which are presently constrained by the limits of physical access. With just 8% of the UK's 137 million specimens currently available digitally, their role in the emerging biodiversity data revolution is diminished. Through nationally coordinated action, DiSSCo UK seeks to massively accelerate the digitisation of these collections and the impact of these data.

Five options to digitise UK collections are presently under consideration. These options iterate across the collection groups, number and type of institution, technical infrastructure level and "catalysis" to capitalise on the benefits of unlocking data and accelerating data production. Subject to UKRI approval, the full business cases for a preferred option will go through an 18–24 month approval process starting November 2023, unlocking tens to hundreds of millions of pounds of investment in UK collections. We will outline the strategic case, options and operational model for DiSSCo UK, updating on our coordination, digitisation and catalysis activities.

Keywords

DiSSCo, specimens, digitisation, research, biodiversity, geodiversity, UKRI, data

Presenting author

Vincent Stuart Smith

Presented at

TDWG 2023

Conflicts of interest

The authors have declared that no competing interests exist.

References

- Smith VS, Hardy H, Wainwright T, Livermore L, Fraser N, Horák J, Aspinall J, Howe M (2022) Harnessing the power of natural science collections: a blueprint for the UK. Zenodo <https://doi.org/10.5281/zenodo.6472238>