

# DISCO

Distributed System of Scientific Collections

1,5 billion specimens, 5,000 scientists, 170+ institutions, 23 countries... in 1 European digital collection.



DiSSCo Community
E-services



## A door to the digital transformation: DiSSCo Community Services

The Distributed System of Scientific Collections aims to create a new business model for a single European collection that digitally unifies all European natural science assets under common access, curation, policies and practices.

The new model will provide a unique access point for integrated data analysis and interpretation through a wide array of digital services provided by the DiSSCo community of institutions. The services aim to serve real life needs and therefore are based on the priorities set by collection providers and a robust base of user stories.

### What are we trying to achieve?

- ✓ Support and improve both physical and digital access to European natural history collections.
- Enable and support industrial scale digitisation of natural collections.
- ✓ Provide enhanced interpretation, curation, annotation and use of specimen data by novel, machine-actionable mechanisms.



Photo: ©Trustees of the Natural History Museum, London



### One-stop shop for access to Natural History Collections

### ELViS: European Loans and Visits System

https://elvis.dissco.eu/



#### **Description**

ELViS is a one-stop shop for access to the collections in Europe. It provides a unified way to request visits, loans and virtual access. Virtual access requests through ELViS provide digitisation on demand as a new type of access, including support for collaborating on VA ideas and proposal submission.

The request mechanism implemented in ELViS also enables future services for tracking usage metrics, monitoring and reporting and connecting collection usage with research outputs.

To know more about ELViS latest developments and TRL status, please visit: <a href="https://www.dissco.eu/services/#elvis">https://www.dissco.eu/services/#elvis</a>



### CDD: Visualizing collections across institutions

### Collection Digitisation Dashboard

https://rebrand.ly/synth-cdd
(working prototype)



#### **Description**

The interactive dashboard visually summarises the digitisation status, content and strengths of collections across the community of institutions through a number of visual elements.

It displays progress in digitisation and provides summaries and comparisons regarding the number of objects, taxonomic scope, categories of preservation, stratigraphic age, geospatial range, level of digitisation and digital content availability for reuse. The dashboards implement a novel specification for standardised collection descriptions to enable cross-institutional aggregation and comparison of data.

To know more about CDD latest developments and TRL status, please visit: <a href="https://www.dissco.eu/services/#cdd">https://www.dissco.eu/services/#cdd</a>



### SDR: Taking digitisation to an industrial scale

#### **Specimen Data Refinery**



#### **Description**

SDR will contribute to transform the model of digitisation workflows that process individual specimens and their metadata one-by-one into a model of industrial scale digitisation. For that purpose, SDR will provide a platform that integrates artificial intelligence and human-in-the-loop approaches to extract, enhance and annotate data at scale from digital specimen images and records. When connected with DiSSCo infrastructure, a wide range of potential applications could be developed by third party providers such as automated condition checking of specimens, natural language descriptions provision for specimens and taxonomic trait extraction.

To know more about SDR latest developments and TRL status, please visit: <a href="https://www.dissco.eu/services/#sdr">https://www.dissco.eu/services/#sdr</a>



#### DiSSCo's commitment to Open Science

#### DiSSCo Knowledge Base

https://know.dissco.eu/



#### **Description**

The Knowledge Base provides a central search and browse interface to find all documentation related to DiSSCo. These include research outputs created in DiSSCo linked projects (DiSSCo Prepare, ICEDIG, ENVRI-FAIR, MOBILISE and SYNTHESYS +) but also other contents: training materials, Frequently Asked Questions (FAQs), best practices, guidelines, recommendations, technical documentation and documented decisions.

The Knowledge Base is implemented with DSpace, which includes a hierarchical structure for the documents, full text search, a REST API, custom metadata, versioned documents and DOIs. The service will be integrated with other DiSSCo services that require linkage to documentation such as the helpdesk. Schema.org metadata inclusion will ensure findability in search engines like Google.

To know more about the Knowledge Base latest developments and TRL status, please visit: <a href="https://www.dissco.gev/services/#kb">https://www.dissco.gev/services/#kb</a>



#### Information and support in one place

#### DiSSCo Helpdesk

https://dissco.jitbit.com/helpdesk



#### **Description**

The DiSSCo Helpdesk will be a central place for all questions related to DiSSCo services or access programmes,

such as the virtual access and transnational access calls in ELViS. It will be integrated with DiSSCo services, starting with ELViS in 2022.

The Helpdesk is using JitBit software. First line support is done by CETAF secretariat while second line support goes to selected CETAF/DiSSCo institutions (starting with SYNTHESYS+ NA2 partners). Third line support goes to developers of services such as Picturae for ELVIS.

To know more about the Helpdesk latest developments and TRL status, please visit: <a href="https://www.dissco.eu/services/#hd">https://www.dissco.eu/services/#hd</a>

Dissco offers different technical knowledge platforms at the scientific community's disposal:

#### DiSSCoTech

Get the latest technical posts about the design of DiSSCo's Infrastructure.

https://dissco.tech/

#### DiSSCo Labs

A preview of experimental services and demonstrators by the DiSSCo community.

#### DiSSCo GitHub

Code hosting for DiSSCo software, version control and collaboration.

https://github.com/DiSSCo





### AAI: Improved identification and access

#### Authorisation and Authentication Infrastructure

https://login-demo.dissco.eu/auth/admin/dissco/console/#/realms/dissco/clients(demo)



#### **Description**

An infrastructure will be created to be used by services that require authentication (identification of a user) or authorisation (level of access for a user). Users can authenticate themselves through their institutional accounts, if the institution is connected to eduGAIN. If their institution does not yet offer this possibility, users can authenticate themselves through login with their ORCID iD or social media credentials (single sign-on). Institutions will be able to give selected users of services authorization to access data that has legal restrictions, such as sensitive data on rare species.

For verification of users the system will experiment with ORCID profiles augmented with extra data about expertise and affiliation.

To know more about AAI latest developments and TRL status, please visit: https://www.dissco.eu/services/#aai

#### UCAS: Connecting specimen data

### Unified Curation and Annotation System

#### **Description**

UCAS will provide event-based curation and annotation functions on the Digital Specimen for experts in the community and for machines. Transactions on the data will be stored as well as provenance information related to the curation or annotation events.

To know more about UCAS latest developments and TRL status, please visit: <a href="https://www.dissco.eu/services/#ucas">https://www.dissco.eu/services/#ucas</a>





#### A space for test and experimentation

#### **Digital Specimen Repository**

http://www.sandbox.dissco.tech/



#### **Description**

NSIDR.org is a data repository for experimentation with Digital Specimen and other DiSSCo-related FAIR Digital Objects. It uses Cordra software to manage the digital objects and resolvable identifiers (Handles, DOI).

To know more about NSIDR latest developments and TRL status, please visit: https://www.dissco.eu/services/#nsidr



- collections providers, they will help them become an integral part of the European and Global scientific community and to adapt to changing user needs and advanced scientific usage. More generally, DiSSCo services will support acknowledgement for the value of natural collections and will reduce digitisation costs, also bringing new opportunities for funding.
- For researchers, the services will improve efficiency to become more responsive to urgent needs, accelerate biodiversity discovery and improve visibility in their contributions to FAIR and high quality data.

For more information about DiSSCo services, please visit: https://www.dissco.eu/services



DiSSCo represents the largest ever formal agreement between natural history museums, botanic gardens and collection-holding universities in the world.

More than 170+ institutions from 23 countries are part of DiSSCo. Participating countries: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Israel, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, United Kingdom.

#### **DiSSCo-linked projects**













#### **Contact:**

The DiSSCo Coordination and Support Office (CSO) is a distributed team, located in Leiden and Brussels.



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