



DiSSCo

Harnessing the power of Natural
Science Collections (NSC)

DiSSCo

Distributed System of Scientific Collections

DiSSCo Coordination and Support Office



Distributed System of Scientific Collections

The goal: to digitally unify today's fragmented landscape of European NSCs into a single knowledge base under common curation, access policies and practices.

120+ National Facilities,
21 Countries
1 European Collection

DiSSCO members

Austria - Naturhistorisches Museum Wien Belgium - Agentschap Plantentuin Meise - Royal Belgian Institute of Natural Sciences - Instituut voor Natuur-en Bosonderzoek (INBO) - Royal Museum for Central Africa, Tervuren - Flemish Research Institute for Nature and Forest - Royal Zoological Society of Antwerp - Université Libre de Bruxelles, Herbarium - University of Namur - Flanders Marine Institute Bulgaria - Institute of Biodiversity and Ecosystem Research - Bulgarian Academy of Sciences (IBER-BAS) - National Museum of Natural History, Sofia - Bulgarian Academy of Sciences (NMNHS-BAS) Czech Republic - Charles University, Faculty of Science - Institute of Botany, The Czech Academy of Sciences - Institute of Vertebrate Biology, The Czech Academy of Sciences - National Museum, Prague - Nature Conservation Agency of the Czech Republic - Masaryk University Denmark - Natural History Museum of Denmark, University of Copenhagen - Naturhistorisk Museum Aarhus - The Science Museums, Aarhus University Estonia - Estonian Museum of Natural History - Estonian University of Life Sciences - Tallinn University of Technology - University of Tartu Finland - Finnish Museum of Natural History - LUOMUS, University of Helsinki - Biodiversity Unit, University of Oulu - Biodiversity Unit, University of Turku - Digitalium, University of Eastern Finland - Kuopio Natural History Museum - Open Science Centre / Museum, University of Jyväskylä France - Muséum national d'histoire naturelle - Muséum d'histoire naturelle Philadelphie-Thomas de Gaillac - Centre de coopération internationale en recherche agronomique pour le développement - Centre Informatique National de l'Enseignement Supérieur - Nancy Museum-Aquarium - Conservatoire botanique national Alpin - Institut Recherche et Développement - Sorbonne University - La Société National des Sciences Naturelles et Mathématiques de Cherbourg - Le Jardin Botanique de la Ville de Lyon - Muséum d'histoire naturelle de La Rochelle - Université de Toulouse III-Paul Sabatier - Université Lille 1 - Sciences et technologies - Université Claude-Bernard Lyon - Université Clermont Auvergne - Université de Bourgogne - Université de Montpellier - Université de Rennes - Université de Strasbourg - Université Pierre et Marie Curie - Tela Botanica Germany - Bavarian Natural History Collections - SNSB - Berlin Natural History Museum - Botanischer Garten und Botanisches Museum Berlin - Freie Universität Berlin - Centrum für Naturkunde, Universität Hamburg - Senckenberg Gesellschaft für Naturforschung - Zoological Research Museum Alexander Koenig - Museum für Naturkunde - Leibniz Institute for Evolution and Biodiversity Science Berlin - Naturkundemuseum Stuttgart Greece - Natural History Museum of Crete, University of Crete - Mineralogy and Petrology Museum, National and Kapodistrian University of Athens - Museum of Geology and Palaeontology, National and Kapodistrian University of Athens - Museum of Zoology, National and Kapodistrian University of Athens - Botanical Museum, National and Kapodistrian University of Athens - Zoological Museum of the University of Patras - Department of Geology, University of Patras - Botanical Museum of the University of Patras - Museum of Zoology of the Aristotle University of Thessaloniki - Goulandris Natural History Museum - Benaki Phytopathological Institute - Botanical Garden "Ioulia & Alexandros N. Diomidis" - Cephalonia Botanica - Focas-Cosmetatos Foundation - Collection of Micro-organisms, Agricultural University of Athens - Hellenic Collection for Pathogenic Fungi - Herbarium, Agricultural University of Athens - Hippocrates Botanical Garden of Kos - Hippocrates Botanical Garden of Markopoulo - Mycototheca, National and Kapodistrian University of Athens - Natural History Museum of the Municipality of Amaroussion - Phytotheca, National and Kapodistrian University of Athens - Sedbank, National and Kapodistrian University of Athens - The Apollon-Delphi Botanic Garden - Hippocrates Botanical Garden of Limnos, University of the Aegean Hungary - Hungarian Natural History Museum Italy - Natural History Museum, University of Florence - National Academy of Sciences Italian National Academy of Entomology - Italian Botanical Society - Italian Geological Society - Italian Palaeontological Society - Italian Society of Biogeography - National Association of Science Museums - National Research Council (DSSSTA) Luxembourg - Musée national d'histoire naturelle (MnhnL) Netherlands - Naturalis Biodiversity Center - Natural History Museum Rotterdam - Natuurmuseum Maastricht - NIOZ Royal Netherlands Institute for Sea Research - Stichting De Bastei (Natuurmuseum Nijmegen) - Stichting Museon - Stichting TwentseWelle - Teylers Museum, Haarlem - NLBIF - University of Amsterdam - Utrecht University Museum - Westerdijk Fungal Biodiversity Institute - Natuurmuseum Brabant - Natuurmuseum Fryslân Norway - Natural History Museum, University of Oslo - Tromsø University Museum - NTNU University Museum - University Museum of Bergen Poland - Museum and Institute of Zoology, Polish Academy of Sciences - The University of Warsaw Portugal - National Museum of Natural History and Science, University of Lisbon (MUHNAAC - Ulisboa) - Science Museum of the University of Coimbra (MUC - UC) - Natural History and Science Museum, University of Porto (MHNC - UP) - Botanical Garden of the University of Coimbra (JBUC) Slovakia - Plant Science and Biodiversity Centre, Slovak Academy of Sciences, Institute of Botany - Pavol Jozef Šafárik University in Košice - Comenius University Spain - National Museum of Natural Sciences (CSIC-MNCN) - Royal Botanic Garden of Madrid (CSIC-RJB) - Universidad de Navarra (UNAV) - Instituto Geológico y Minero de España (IGME) Sweden - Swedish Museum of Natural History - Bergius Foundation - Department of Biology, Lund University - Gothenburg Botanical Garden - Department of Biological and Environmental Sciences, University of Gothenburg - Department of Ecology and Environmental Science, Umeå University - Uppsala University, Museum of Evolution - Vastarvet, The Gothenburg Museum of Natural History United Kingdom - Natural History Museum London - Royal Botanic Garden Edinburgh - Royal Botanic Gardens, Kew.



Current model

- Slow
- Expensive
- Inefficient
- Limited to physical access



Integrated RI model

- Wide access
- Lower costs
- Faster
- New insights
- Optimised
- FAIR data



- DiSSCo links data: DIGITAL OBJECT architecture
- Not just any kind of data: actionable, FAIR data

PHYSICAL SPECIMEN



Digitisation
Analysis
Computation



DIGITAL SPECIMEN Actionable Knowledge Unit



FAIRdata
Findable
Actionable
Interoperable
Reusable

• DiSSCo is a service-oriented infrastructure:

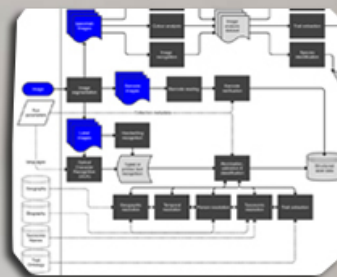
- e-Science services
- Physical and remote access to NSCs
- Support & Training services



EUROPEAN LOANS
AND VISITS SYSTEM



COLLECTION
MONITORING
DASHBOARD



SPECIMEN DATA
REFINERY



KNOWLEDGE BASE

➤ DiSSCo will bring about a digital transformation

DISSCO in Italia: decine di milioni di campioni
in centinaia di collezioni – pronti per la
digitalizzazione

Rete dei Musei

(coordinamento del Sistema Museale di Ateneo, Firenze,
Marco Benvenuti e Luca Bartolozzi)

Accademie e società scientifiche

Università

Partecipazione del CNR: ISMAR, IRET, IGG, ...