

# Biodiversity Heritage Library for Europe

## Towards a global library of life



co-funded by the  
Community programme  
*eContentplus*



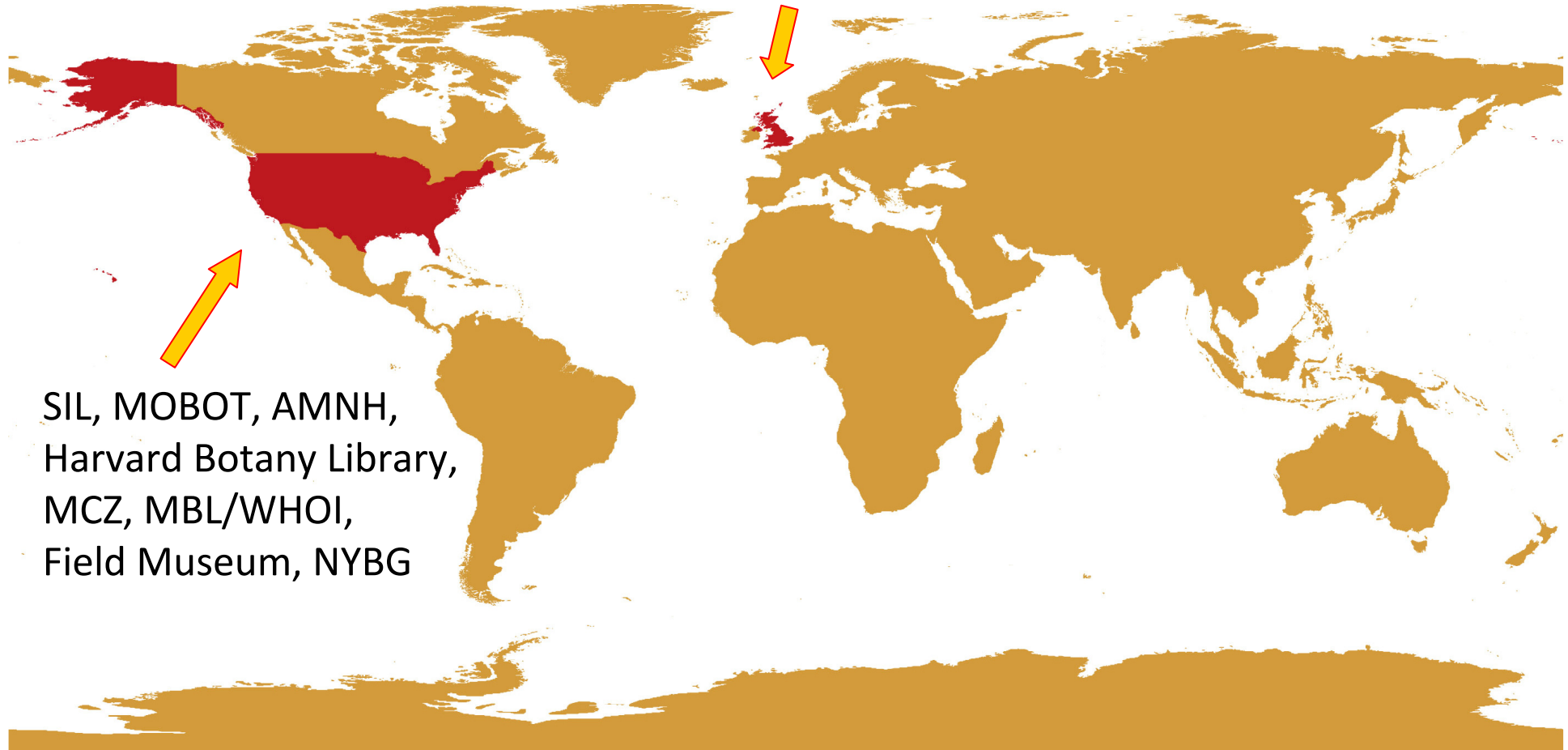
**BHL**  
Biodiversity Heritage Library  
**EUROPE**



- There is a growing need for biodiversity literature
- Recent analysis of demand indicates that users need an online repository of biodiversity literature (original text content) with a multilingual interface and sophisticated search and filtering functionality
- The lack of access to the published literature of biodiversity is one of the principal obstacles to efficient and productive research, outreach, and education (Taxonomic impediment to research)
- Most of the biodiversity literature is held in a few libraries making this literature unavailable for wider use by a broad range of potential users (scientists and non-scientists)
- The cited half-life of publications in taxonomy is longer than in any other scientific discipline (Revisions of taxonomy require seeing all prior literature)
- Repatriation of knowledge to the developing world

- *Library and Laboratory* Conference in February 2005 demonstrated the growing need for digital biodiversity literature.
- Several libraries began meeting and planning for a grand digitizing plan.
- Encyclopedia of Life (EOL) was funded to integrate species level information and used BHL as the literature and scanning component.
- Though BHL has is composed of libraries it has been a domain-specific program, not just a digital library project. It arose from and is responsive to the biodiversity community, which the primary audience.

NHM, Royal Botanic Gardens Kew



SIL, MOBOT, AMNH,  
Harvard Botany Library,  
MCZ, MBL/WHOI,  
Field Museum, NYBG



- 37,233 volumes, 14,990,986 pages online (July 30)
- OCR, page level access
- Indexed by traditional library access points (title, author etc.) as well as taxonomic name from a service Taxon Finder
- *Cite* in beta – a repository for communities of users to deposit vetted bibliographies of key taxonomic citations and associated metadata and digital (pdf) copies.
- 400,000 individual species pages from the Encyclopedia of Life link to pages in the BHL Portal
- Set of metadata for reuse by other project.

- Committed to long-term storage, curation, and preservation of digital text assets for the world-wide biodiversity community
- BHL is a steward for this literature, which is the common heritage of humanity. “Science has no borders.”
- To keep this content available and open for the future requires careful organizational planning.
- Preservation is both a technical and political/social process.

## Main principles:

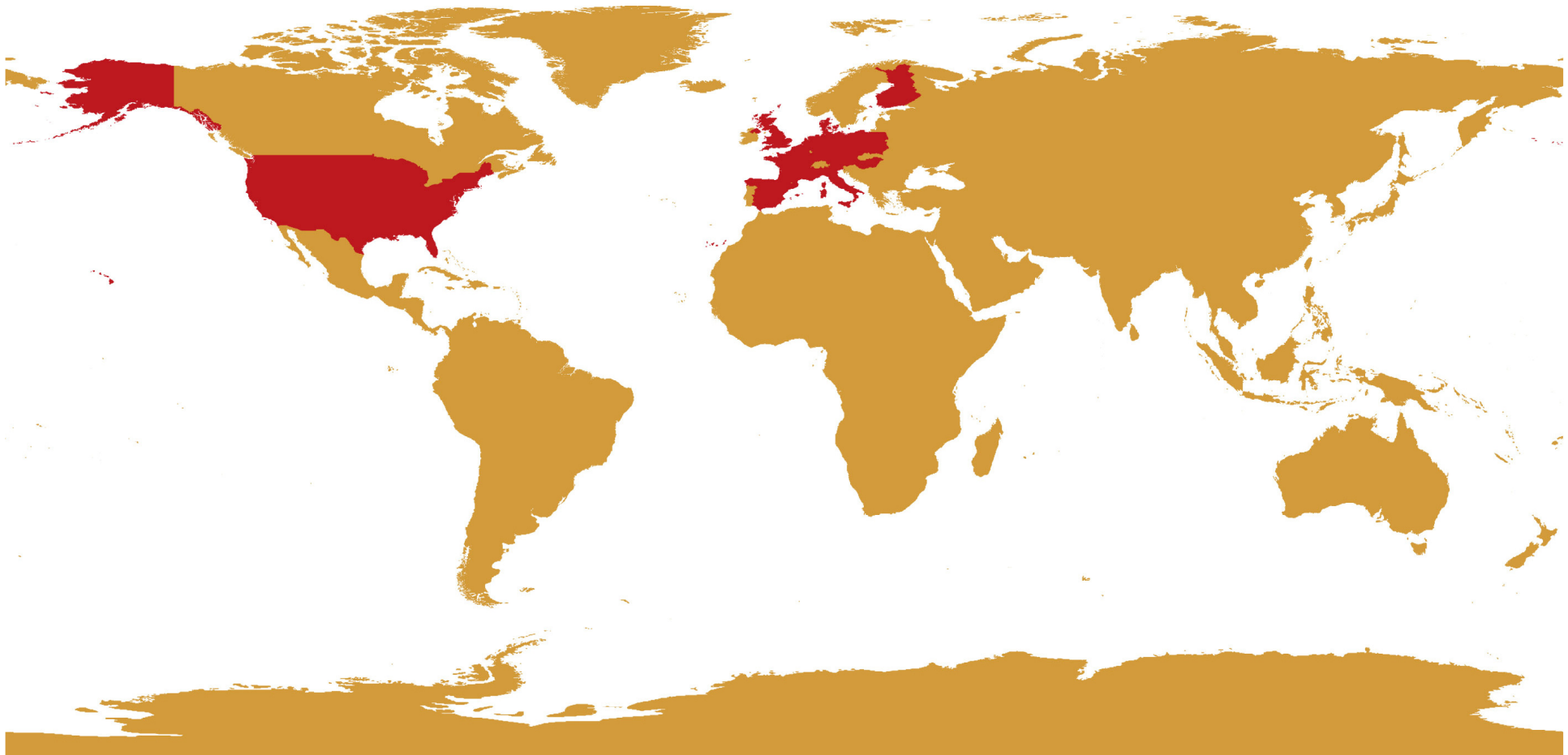
- No digitisation
  - ✘ BHL-Europe is not funded to digitise
- Best Practice Network
  - ✘ no research and development project
  - ✘ building a solution with existing (state-of-the-art) technologies and bring it onto the market

- Libraries
- Digitisation centres
- Digital library / Open Access networks
- Scientists (e.g. Biology)
- Scientists (e.g. History, Cultural heritage)
- Citizen scientists
- Students of different levels (primary to academic)
- School teachers
- Environmental & Conservation agencies / Government officials / Policy makers
- Artists
- European citizens



- Provide a **multilingual access point** for the search and retrieval of biodiversity content through **EUROPEANA & BHL**
- Review and test approaches for the establishment and management of multilingual biodiversity digital libraries
- Improve the **interoperability** of European biodiversity digital libraries by the innovative application of proven technologies (incl. metadata repositories, deduplication tools, workflow systems)
- Promote the adoption of best practice methods, standards and specifications for the **large-scale implementation** of such repositories
- Facilitate the open access (= free of charge) to taxonomic literature for a large number of target users including the **general public**

- **Raise awareness** and ensure that the project outputs are known and used by the target users and that the approach directly addresses user needs
- Develop operational strategies for **long-term preservation** and sustainability of the data produced by national biodiversity digitisation programmes
- Facilitate and enable the **initiation of scanning initiatives** in European countries not yet involved in digitisation programmes and improve the infrastructure for digital libraries in all EU countries
- **Negotiate with Rights Holders** to enable access to in-copyright content





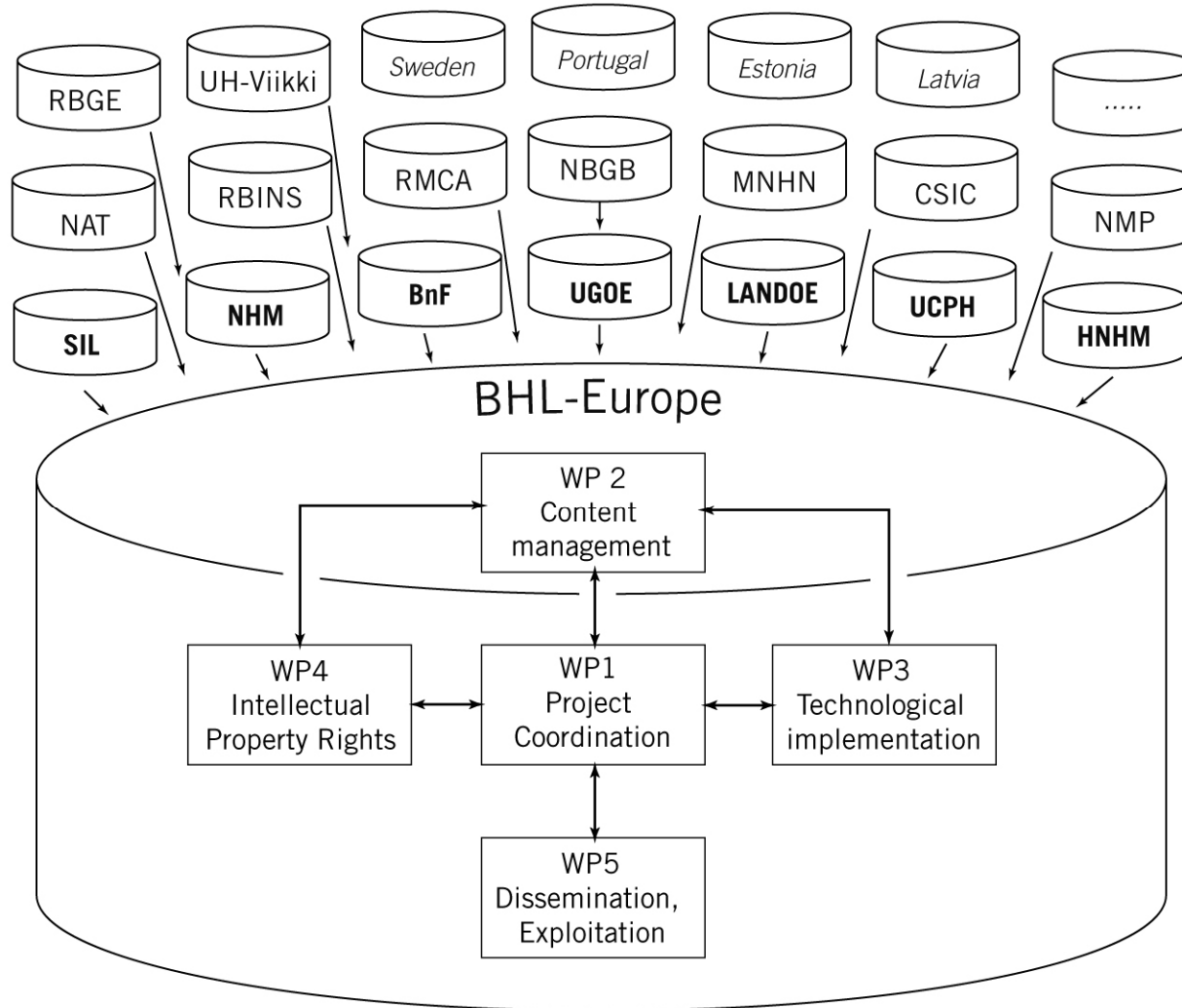
- Museum für Naturkunde, Berlin, DE
- Natural History Museum, London, UK
- Narodni muzeum, Prague, CZ
- European Digital Library Foundation, NL
- Angewandte Informationstechnik Forschungsgesellschaft mbH, AT
- ATOS Origin Integration France, FR
- Freie Universität Berlin (Botanic Garden & Museum), DE
- Georg-August-Universität Göttingen Stiftung Öffentlichen Rechts, DE
- Land Oberösterreich (Oberösterreichische Landesmuseen), AT
- Naturhistorisches Museum, Vienna, AT
- Hungarian Natural History Museum, HU
- Museum and Institute of Zoology, Polish Academy of Science, Warsaw, PL
- University of Copenhagen (Natural History Museum of Denmark), DK
- Stichting Nationaal Natuurhistorisch Museum Naturalis, Leiden, NL

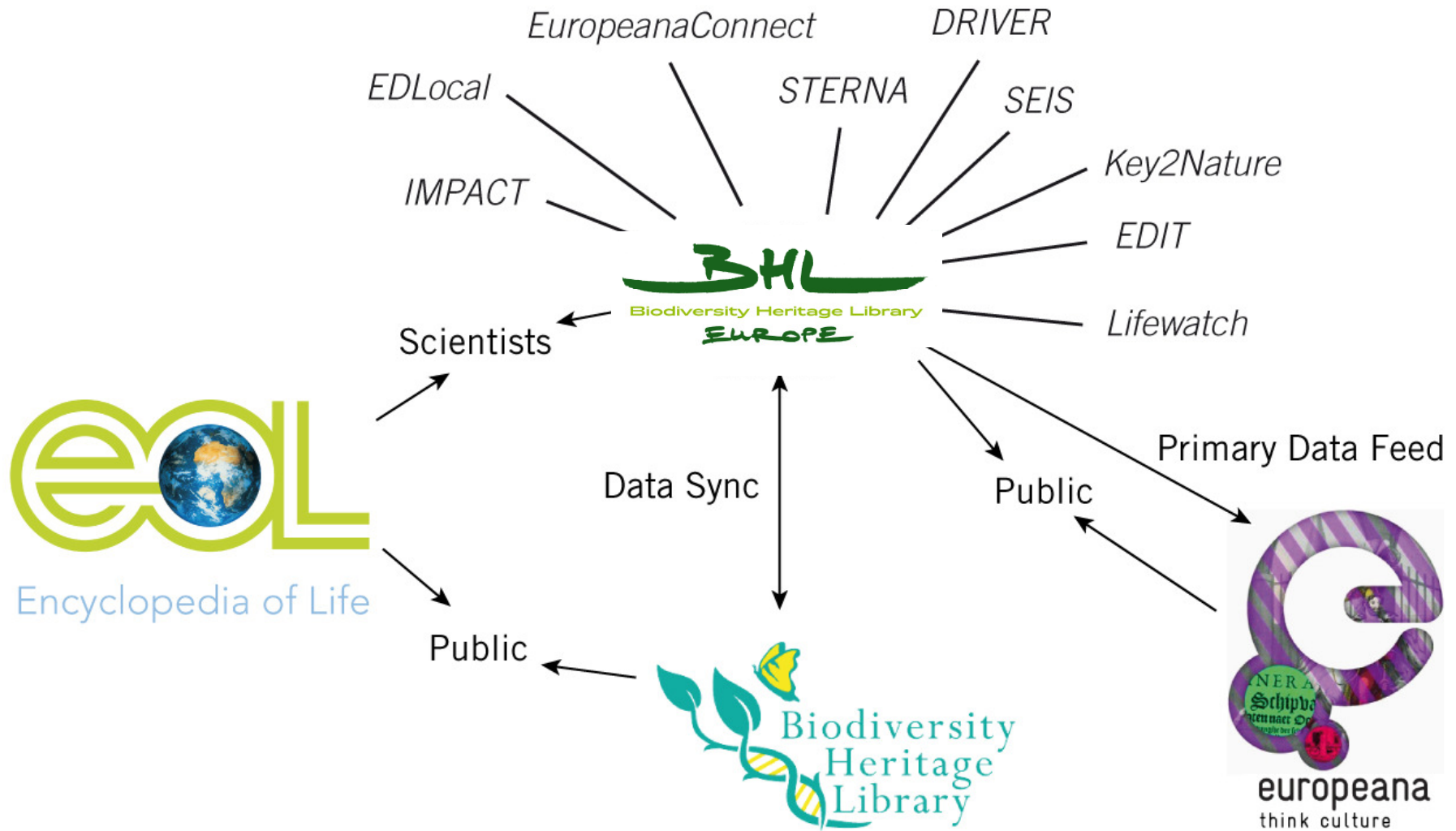
- National Botanic Garden of Belgium, BE
- Royal Museum for Central Africa, Tervuren, BE
- Royal Belgian Institute of Natural Sciences, Brussels, BE
- Bibliothèque nationale de France, FR
- Muséum national d'histoire naturelle, Paris, FR
- Consejo Superior de Investigaciones Científicas, Madrid, ES
- Royal Botanic Garden Edinburgh, UK
- Università degli Studi di Firenze (Museo di Storia Naturale), Florence, IT
- Missouri Botanical Garden, USA
- Smithsonian Institution, USA
- Species 2000, UK
- John Wiley & Sons limited, UK
- Helsingin yliopisto, Helsinki, FI
- Humboldt-Universität zu Berlin, DE

- Horizon scanning and analysis of current technical environment (Months 1-3) – Phase 1
- Consensus building, standards, and processes agreement (Months 4-6) – Phase 2
- Enrich content and test of implementation approach (Months 7-24) – Phase 3
- Evaluation, validation, exploitation, and demonstration (Months 25-36) – Phase 4



- WP1: Project Coordination and management
- WP2: Analysis of domain content and management of the content acquisition process
- WP3: Technological implementation
- WP4: Intellectual Property Rights
- WP5: Dissemination, Exploitation and Evaluation







No.	Deliverable title	Delivery date
1	D2.1 Catalogue of content holder requirements (quality, quantity, accessibility, standards and specifications of content and metadata)	M 3
2	D3.1 Deliver composition of Technology Management Board and initial meeting	M 3
3	D5.1 Web site, including multimedia presentation	M 3
4	D5.2 BHL-Europe newsletter and mailing list	M 3
5	D5.3 Database of relevant conferences/events and ownership for BHL-Europe presentations	M 3
6	D5.4 Deliver composition of Communications Working Group and 1 <sup>st</sup> dissemination plan	M 3
7	D1.1 Progress Report 1	M 6
8	D3.2 Document agreed standards, best practice and system components	M 6
9	D3.3 Plan for managing interoperability issues, data harmonisation and the integration of the content into BHL-Europe, EUROPEANA and the BHL	M 6
10	D5.5 BHL-Europe dissemination plan	M 6
11	D5.6 BHL-Europe promotion kit	M 6

No.	Deliverable title	Delivery date
12	D2.2 Prototypes of deduplication tool and bibliographic database system for monographs and serials	M 9
13	D3.4 Implement plans for all components in WP3, incl. data models, technology standards etc.	M 9
14	D4.1 Delivery of IPR working documents, including best practice guide, due diligence guide, pro forma agreements and process for formally agreeing rights management with rights holders. Complete agreement with EUROPEANA and BHL for reciprocal access and Rights metadata.	M 9
15	D1.2 Progress Report 2 including pre-financing request	M 12
16	D1.3 Annual Report 1 including first ideas for BHL-Europe business plan	M 12
17	D2.3 Prototype of Web-database for content management and collection analysis	M 12
18	D2.4 Content analysis and management status report 1 (metadata, page numbers, content providers)	M 12
19	D3.5 Technical architecture status and progress report with particular focus on the development of the German prototype	M 12
20	D5.7 Online questionnaires for user survey	M 12
21	D5.8 First user evaluation report	M 15
22	D1.4 Progress Report 3	M 18

No.	Deliverable title	Delivery date
23	D3.6 Release German prototype	M 18
24	D1.5 First overview of the business plan for long-term sustainability	M 24
25	D1.6 Progress Report 4 including pre-financing request	M 24
26	D1.7 Annual Report 2	M 24
27	D2.5 Final and enhanced Web-database for content management and collection analysis	M 24
28	D2.6 Delivery of the first version of the approved best practice guidelines and standards	M 24
29	D2.7 Content analysis and management status report 2 (metadata, page numbers, content providers)	M 24
30	D3.7 Key components documented for output of D3.5 e.g. BHL-Europe Portal, OCR demonstrators, distributed storage model, etc.	M 24
31	D4.2 Complete signed agreements with first group of rights holders to enable material to be used in the BHL or EUROPEANA, and establish process for addition of further material.	M 24
32	D4.3 Deliver IPR framework to support long-term access and sustainability of the digitised material	M 24
33	D1.8 Progress Report 5	M 30



No.	Deliverable title	Delivery date
34	D3.8 Sustainability policy for continuation of service e.g. hosting, future development, helpdesk provision for service users/content providers etc.	M 30
35	D5.9 Second user evaluation report	M 30
36	D1.9 Business plan for long-term sustainability	M 36
37	D1.10 Implementation of results of BHL-Europe in other projects	M 36
38	D1.11 Progress Report 6 including Financial Statement	M 36
39	D1.12 Final Report	M 36
40	D2.8 Content analysis and management status report 3 (metadata, page numbers, content providers)	M 36
41	D2.9 Delivery of the final revised best practice guidelines and standards	M 36
42	D3.9 Live BHL-Europe system, with distributed storage and management and appropriate tools for the continued development of services and ingress of multilingual content	M 36
43	D5.10 BHL-Europe multimedia presentation, final version	M 36
44	D5.11 Illustrated book on best practice guidelines and standards for the public	M 36

## Libraries:

- Do you have a digital repository of scanned literature?
- Are you planning to start scanning operations?

## Users:

- Do you have criticism and feedback you would like to share?
- Do you have ideas how to improve BHL?

## Scientific community:

- You might be asked to improve the OCR!
- You might be asked to actively contribute to name databases

**Dr. Henning Scholz**

*Project Coordinator BHL-Europe*

Museum für Naturkunde

Invalidenstraße 43

D-10115 Berlin

Germany

Tel.: +49-30-2093-8864

Fax: +49-30-2093-8868

Email: [henning.scholz@mfn-berlin.de](mailto:henning.scholz@mfn-berlin.de)

**BHL-Email:** [bhl-europe@mfn-berlin.de](mailto:bhl-europe@mfn-berlin.de)

**More information:** <http://www.bhl-europe.eu>

