

DiSSCo related output

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Title

DPP Deliverable 9.4 2nd DiSSCo Prepare All Hands Meeting

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DiSSCo Prepare - AHM2

Abstract

DiSSCo's second all-hands meeting (AHM2) took place from 4-8 April 2022 as an online event hosted by the Naturalis Biodiversity Center as coordinator of DiSSCo Prepare. The objective of the meeting was two-fold. First, to collect and share information about the project's status, through a series of work-intensive sessions. Second, to build on the overall understanding necessary to foster further discussion on how to optimise DiSSCo Prepare's last year's performance. The discussions

took into account the multiple synergies but also the dependencies and risks present in the work program.

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DiSSCO PREPARE AHM2

DELIVERABLE 9.4

April 4 - 8, 2022



Table of Content

[Introduction](#)

[Key facts of the event](#)

[Structure of the document](#)

[Section 1 - Agenda & Wrap up sessions](#)

[Section 2 - Presentations during sessions](#)

[Section 3 - List of participants](#)

Introduction

DiSSCo's second all-hands meeting (AHM2) took place from 4-8-22 April 2022 as an online event hosted by the Naturalis Biodiversity Center as coordinator of DiSSCo Prepare.

The objective of the meeting was two-fold. First, to collect and share information about the project's status, through a series of work-intensive sessions. Second, to build on the overall understanding of how to optimise DiSSCo Prepare's outcomes and produce ready-to-implement outcomes for construction. The discussion took into consideration synergies and dependencies present in the work across DiSSCo linked projects and DiSSCo Prepare.

The AHM2 comprised 18 consecutive sessions over five days. The event followed the structure already implemented during the AHM1 (January 2021) and comprised 18 consecutive online sessions over five days. The sessions attracted a high number of attendees who had the opportunity to be updated and thoroughly discuss the work.

Following the structure of the AHM1, the first day included the two project stream sessions (Business stream, Data and Technology stream) and a keynote speech by Dr. George Strawn (Pinto (IPBES), who talked about the crucial contribution of DiSSCo in the international discussions towards a global digital transformation.

Key facts of the event

1. Deliverable 9.4 was delivered in time. Led by Naturalis.
 2. The virtual meeting took place from 4 to 8 April 2021. It comprised 18 consecutive sessions.
 3. Wide international participation: More than 100 participants registered and attended the sessions, fully or partially. These included members from all beneficiary partners of DiSSCo and external experts from other institutions (i.e, CNRI).
 4. Sessions registered an average of 40 participants per session and more than 14 expert teams actively engaged in the organisation of the event.
-

5. + 50% of attendees to the plenary session were women.

6. The attendees perceived it as an excellent way to work together at different levels (task, project, DiSSCo RI)

Structure of the document

The AHM2 allowed participants to get better knowledge and contribute meaningfully to topics that may fall out of their responsibilities in the project.

This report summarises the key outcomes from the working sessions, providing a view of the remarkable progress resulting from the discussions. The report is structured in three main sections:

1. Section 1: Including the agenda and main results coming from the wrap-up sessions
 2. Section 2: Including the material used by conveners during the sessions
 3. Section 3: List of participants
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Section 1 - Agenda & Wrap up sessions

AGENDA

DiSSCo Prepare - All Hands Meeting 2 (4th -8th April, 2022) - Agenda				
Registration in advance is mandatory. See here				
Link to access sessions and plenaries				
Link to the Stream sessions				
ST - Business	https://us02web.zoom.us/j/84042703142?pwd=SkTqTXpad3VEaEtsZUVrZjdqaWthQT09			
ST - Science & Technology	https://us02web.zoom.us/j/89644120122?pwd=UDhtK0xTY3d1bVRubXprVUZ2T050UT09			
Date	WP/Task n.	Title of the working session	Description	Convener
Monday 4th April				
13:00-14:00		Stream sessions	Parallel sessions	Wouter Addink/Ana Casino
<i>Break 15'</i>				
Plenary 14:15-15:30		Welcome & State of play Key Note: "Data Science: Looking back. Looking forward"		Dimitris Koureas Dr. George Strawn
15:30-17:00	WP3 Tasks 3.2 and 3.3	WP3 Capacity enhancement - best practices for data mobilisation and update on secondment policies & practices	Main focus will be on sharing digitisation SoPs and related material developed under Task 3.2. The session will also include an update from Task 3.3 about secondment policies and practices.	Helen Hardy/Lisa French
Tuesday 5th April				
9:00-10:30	WP1 T1.3	Criteria for Digitization	State of D1.3 and planning further work	Henrik Enghoff
<i>Break 15'</i>				
10:45 -12:15	WP7 T7.1/7.2	DiSSCo Governance - What's next?	ERIC Step 1 preparation	Eva Alonso/Serge Scory/Carole Paleco/Wouter Addink
<i>Lunch 45'</i>				
15:00-16:30	WP2 T2.1	Training Strategy	This session will focus on 2 points: share the findings of the T2.1 MS5 on training needs and options on elearning platforms; to present a draft structure of the overall training strategy	Mariano Iossa/Maria Judite Alves
Wednesday 6th April				
9:00-10:30	WP4.4	Pre-procurement opportunities	Overview of possible PCP opportunities and discussion on fit with strategy	Stefaan Pijls
<i>Break 15'</i>				
10:45 -12:15	WP4.1	Costing methodology	DiSSCo costing methodology	Michel Guiraud
<i>Lunch 45'</i>				
13:00-14:30	WP4.2	Market niches and income diversification	Discussion on market niches and income diversification potential	Lisa French/AcrossLimits
<i>Coffee break 30'</i>				
15:00-16:30	WP1 T1.4	Selection of Socio-Economic Impact indicators for DISSCO	First proposal of SEI indicators for DISSCO, planning work for D1.4	Rui Figueira
Thursday 7th April				
9:00-10:30	WP6.2/WP6.3	Common infrastructures for Digital Specimens	Series of (not too) technical talks on DS arch detailing achievements and outlook	Claus Weiland/Wouter Addink
<i>Break 15'</i>				
10:45 -12:15	WP6.2/WP6.3	Framework and requirements for distributed annotation tools	Discussion on requirements for and interfaces to UCAS and other (local) annotation tools	Wouter Addink/Claus Weiland
<i>Lunch 45'</i>				
13:00-14:30	WP 8 T8.1	Thematic Specialisation Plan	Discussion on specialisation criteria towards DiSSCo strategy and objectives	Carole Paleco/ Patrick Semal/ Serge Scory
<i>Coffee break 30'</i>				
15:00-16:30	WP 8 T8.1	Thematic Specialisation Plan (cont.)		Carole Paleco/ Patrick Semal/ Serge Scory
Friday 8th April				
10:45 -12:15	WP2 T2.2	Helpdesk		Maria Judite Alves
<i>Lunch 45'</i>				
13:00-14:30	WP9 T9.4	The Construction Master Plan		Lorenzo Cecchi/Gianna Innocenti
<i>Coffee break 15'</i>				
14:45-16:30		Wrap-up session		Dimitris Koureas
Time Zone: Amsterdam				

ALL HANDS MEETING – AHM2

Wrap-up

Dimitris Koureas





Session 1 - Business Stream

Ana Casino



Achievements:

- **Surveys and landscapes analysis** on skills gaps and relevant training needs services and facilities offered and supporting documentation for support tool (helpdesk) HR policies across EU RIs
- **Prototype and methodology** for Cost book
- **Analysis** on cost models for charging services
- **Identification of structures:** governance model and legal entity model
- **Establishment** of discussion fora and advisory bodies, in collaboration with CSO (NNs, FF, iGA, SAB/TAB), implementation of communication tools and channels, advocacy work for commitments

Ongoing work:

- WP2:** Analysis of results on training needs and learning platforms, compilation of documentation, catalogue of roles and profiles
- WP4:** Testing of methodology for the cost model, further analysis of funding (services provision) / contribution and business models, as well as pre-commercial procurement models for the development of new innovative services
- WP7:** Statutes and by-laws drafting, governance refinement and policies compliance self-assessment tool, together with the strategy and operational frameworks
- WP8:** Continuation of NNs meetings as a critical forum for discussion and knowledge transfer, together with the stakeholders landscape identification. Communication and advocacy remain as regular ongoing tasks.
- WP3:** *Best practices for data mobilization and secondment distributed team working*

Complementarities and dependencies:

- **Between on going projects:**
 - Training strategy on Training catalogue (S+ T2.3)
 - Policies compliance tool on Policies metadata schema (S+ T2.1)
 - Helpdesk performance on helpdesk structure (S+ T2.4)
- **Among WPs:**
 - HR policies and definition of roles and profiles (WP2), together with the identification of competences and skills needed (WP3) and in alignment with governance structures (WP7)
 - Cost model (WP4) receiving input from different areas (e.g. e-services, training or helpdesk) and organizational structures (governance model)
 - Policies compliance tool (WP7) being developed along with the Digital maturity tool (WP3)
 - Specialization Plan (WP8) supported by categories and areas of specialization coming from different perspectives and embedded into the overarching RI technical development and architecture (WPs 5 and 6)
 - Catalogues (WP2 and WP3) included in the Knowledge Base (WP5)

Challenges:

- **Complexity** and size of the entire endeavor
- **Overwhelming commitment vs. usefulness:** Responses to (focused, well structured, purpose-driven) surveys need to constitute a critical mass to be meaningful (to institutions and the project)
- **Shifts** needed in concepts
 - Competency framework towards recommendations on digital maturity
 - Specialization from a plan/framework towards a self-assessment tool
- **Alignment:** As the work progresses, timeframes become tighter, and the alignment effort needed increases



Session 2 - Science & Technology

Wouter Addink



Achievements:

- Documentation
 - Analysis of Life and Earth sciences use cases and user stories
 - Corpus of studies on socioeconomic impact and prioritisation of digitisation
 - Best practice guide for semantic enhancement and interoperability
 - Standardised set of ETL workflows for digitisation: <https://dissco.github.io>
 - Implementation of concepts for sustainability of services, CMS, and overall TR as living doc
 - Compilation of relevant data standards, PIDs
 - CMS Systems Interoperability and Harmonisation
 - DS Arch documentation
- Surveys
 - Surveys on digitisation Skills and Competencies
- Workshops
 - Event storming workshops to identify CMS, GeoCase, COL events
- Pilots & tools
 - Blueprint for a tool to help institutions evaluate their digital capabilities and readiness
 - Knowledgebase pilot + documentation
 - Modelling Framework pilot

Ongoing Work

- Continue work on documentation
 - Further work on digitisation prioritisation criteria and digitisation plans with focus on small collections, deliver brief, readable reference for future digitisation prioritisation.
 - ETL procedures for digitised content, loading into CMS, DiSSCo infrastructure incl handling of quality issues, pre-digitisation curation
 - openDS modelling to implement DES and related digital objects
 - DiSSCo API interaction with end user services (ELViS, UCAS)
 - blueprint for interoperation between DiSSCo, COL , GeoCase
- Surveys
 - Survey for DPP partners and NNs to get a hold of socioeconomic indicators
- Pilots
 - Piloting secondment practices with policy tool development
 - prototype integration of ML and semantic validation in DS Arch
 - prototype integration with CMS and a openrefine based solution for small collections
- Workshops
 - 'big picture' workshop on community infrastructure interactions
- Training
 - Knowledgebase training for partners

Concerns, focal points

- How to speed up digitisation needs to be discussed more
 - how to speed up the process itself
 - consensus on what should be prioritised
 - financial means
 - what is going to help at the national level
 - how DiSSCO services can assist with this
- Surveys and documentation currently lead to isolated datasets and dashboards, disconnected from the FAIR Digital Object infrastructure.
- Further maintenance of collected data, documentation, services needs attention
- Developing openDS is a challenge, it needs to be developed fast to not be a bottleneck for pilot implementations but at the same time needs to be embedded in the global landscape of data and community standards



Session 3 - WP3 Capacity enhancement - best practices for data mobilisation and update on secondment policies & practices

Helen Hardy & Lisa French

Enhancing the technical, human and process capacity
of DiSSCo institutions

COMPETENCIES, CAPABILITIES AND THE DIGITAL TRANSFORMATION

Provided an overview of **Digital Skills and Competencies** Deliverable

Update on **Secondment Practices**

Update on **Distributed Working** pilot

Discussion on **Digitisation Guides**

Digitisation Guides Feedback (dissco.github.io)

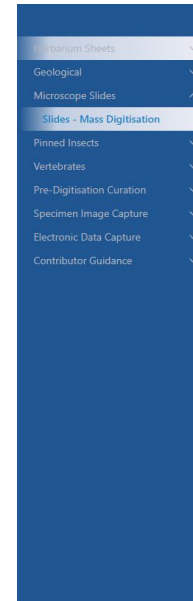
- Workflows easy to understand
- Software/Hardware Requirements sections useful

Agreed Actions

- Update standard operating procedure template
- Include more information on personnel and rates
- Improve workflows: zoom and layout
- Add intro and 'about' pages

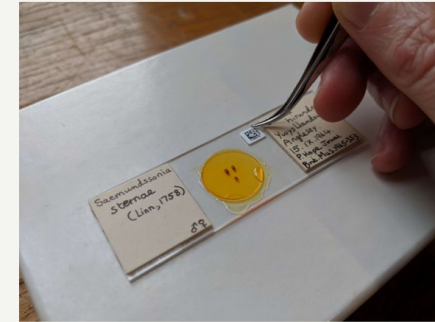
Guide Suggestions

- Stacking Photography Rocks/Minerals
- Spirit collection digitisation
- Quality control



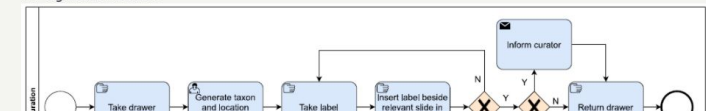
Overview

This page outlines the semi-automated mass digitisation workflow used by the Natural History Museum, London, to digitise its microscope slide collection. It provides a short summary of the workflow developed as part of the ICEDIG project, with more detail to be found in the Novel Automated Mass Digitisation Workflow for Natural History Microscope Slides paper (Allan *et al.*, 2019).



Workflow

Pre-Digitisation Curation



Session 4 - WP1 Criteria for Digitization

Henrik Enghoff



ALL HANDS MEETING – AHM2

Task 1.3 Criteria for Prioritization of digitization

Conveners: Henrik Enghoff & Louise Isager Ahl (UCPH)

D.1.3: “Report on relevant criteria for prioritization of the digitization”

A rough draft was discussed/commented in 4 break-out groups focussed on the main types of criteria:

- Relevance
- Data quality
- Cost
- Feasibility



D.1.3: “Report on relevant criteria for prioritization of the digitization”

Ongoing activities:

- Questionnaire directed at smaller collections (UNIFI)
- Literature search (MNHN)
- Further development of D1.3 draft (UCPH and all)

The ambition is a **brief, readable, and useful** “booklet” to help DiSSCo and partner institutions prioritize their digitization (tables and similar, and maybe much of the introductory text in appendices)

PLAN:

- First full draft **primo JUNE**
- Repeated cycles of consultation and refinement **summer-autumn**
- D1.3 ready for submission **December**

Session 5 - WP7 DiSSCo Governance - What's next?

Eva Alonso

Work in progress:

- Drafting the statutes on the basis of the template provided by the EU Commission.
- Analysis and comparison of (5-6) existing ERIC Statutes.
- Provision of simple, clear, unambiguous and efficient wording for the Articles.

Important issue: How to best organize the consultation process?

- Input of partners is very important but how to make sure the resulting draft statutes will be in agreement with the views of the country representatives (who will make the final decision)?

ERIC Step 1 - Description & Regulations - [Brainstorming](#)

Functions at the Central Hub

Management & Administration
 Communication & Outreach
 Representation, PR, advocacy, international relations
 Core services maintenance & upgrades, access to information
 Governance and strategic operation (SLAs,etc)
 Funding program
 Policies coordination

Principles & Assumptions

Scalable scientific programmes
 Strategic actions centralised in the ERIC
 CH will coordinate with Nodes to maximise use of resources
 Avoid duplication of functions/services
 CH will keep an overall view of needs/opportunities of the RI

What should not be in the Central Hub?

Decision on digitisation prioritisation, equipments
 Decision on research activities
 Creation of new nodes
 Technical expertise, standards
 Duplication of CETAF's existing services reg.training or end-user support

What functions should be shared with Nodes?

Access
 Large scale digitisation
 Call applications
 Coordination of ABS standards, software, data curation
 Advocacy and strategic partnership
 IT development & support
 Service provision

<p>Who should contribute to the document writing?</p> <ul style="list-style-type: none"> ● CSO, Technical Team, SAB & TAB ● Review by DPP WP leads, NNs, consult FF for proper contextualisation ● Infrastructures with relevant contact zones to DiSSCo (including EOSC and International RIs) 	<p>What has to be included (missing in the summary)?</p> <ul style="list-style-type: none"> ● operation between institutions and e-services ● Cross-domain, interdisciplinary opportunities ● sustainable (“green”) infrastructure ● Digitisation on demand ● collaboration with external services, RIs, other external stakeholders.
<p>Principles & Assumptions</p> <ul style="list-style-type: none"> ● Follow the DiSSCo Strategy ● Adhere to the key innovation principles that have guided DiSSCo up to day ● Ensure sustainability (linking to strategic national roadmaps, curation model) ● Describes DiSSCo scientific mission, distributed capacities collective operation ● Inclusiveness (ref. ERA) and harmonization (international partnerships) 	<p>What has to be excluded? Why?</p> <ul style="list-style-type: none"> ● Should not limit DiSSCo in its scientific scope - must have room to expand and develop over time. ● Detailed policies



Session 6 - WP2 Training Strategy

Judite Alves & Mariano Iossa



Key findings & related needs

- Training needs are **ongoing** and **evolve** so we need **mechanisms more than a list**
- **Dual role strategy** (same team for virtual and physical collection) is preferred one
 - Training is crucial, priority training needs in **data and organisational**
- Training policy, systems and practice **not results-oriented, unsystematic**
 - Need a **system** to feed into **DiSSCO training catalogue on annual/ongoing basis**
 - One contact person per institution for training to streamline communication
- **Unequal distribution** of training opportunities and red tape to access it
 - **DiSSCO should provide financially “accessible” trainings + hybrid** for outreach
- **Different needs** for beneficiaries and partners (national level):
 - Different **dedicated methodologies** (General & ToT + SdT)

Recommendations on T2.1 (& T 8.1)

Recommendations:




- Should work closely with T8.1 Specialisation plan to synchronise the **specialization passport** to training strategy purposes both for training offer (**training section**) and to identify trainers (**individual expertise** section)
- Should strengthen out **offer on organizational** - start from **university museums** and explore partnerships with **academia**

Session 7 - WP4 Pre-Commercial opportunities

Stefaan Pijls



Development in the Public Procurement world

	Pre-Commercial Procurement	Public Procurement of Innovation	Standard Procurement
Rules	Laws & Regulations TRL 3 - 6 Specific Guidelines 	Laws & Regulations TRL 7 - 8 Specific Guidelines 	Laws & Regulations TRL 9 
Opportunities	Outsource research dependencies Create innovation opportunities Distribute the risk	Buy in innovative solutions Early adoption supports developers	Reduce overheads CapEx vs OpEx Supply-chain Management
Challenges	Managing the process Scope setting Specifications Selection	Managing the process Matchmaking Specifications	Managing the process Specialised Skills Specifications

Session 8 - WP4 Costing methodology

Michel Guiraud

- 27 people attended

2 aims

- Present and explain the methodology - ways to improve the the excel tool which goes with

- Using this method achievable for the 170 institutions and 23 countries of DISSCo?

- Main issue with the tool: not designed for implementing new services. It may help but it is not predictive (the service must to be run before estimating costs)

- Achievable for all DiSSCo operators? Both opinions were expressed
 - Optimistic: doable and worth doing providing that there is better and more appropriate documentation (video)
 - Pessimistic: institutions have not the resources or have their own system and will resist using a new one. Must find another way to get the information using the same units.
-
- Next: ask the 170 institutions to provide the list of services offered in DISSCo and at which cost. 3 possibilities
 - Use the methodology and send the report sheets (or a synthesis of the reports sheets)
 - Provide the costs and the method used to calculate them (with full cost for one hour which will allow to compare across DiSSCo)
 - Provide the costs (and some basic informations :type of institution, DiSSCo being minor/major activity of institution, type of collection.. *from registry?*)

Session 9 - WP4 Market niches and income diversification

Lisa French



WP4.2

Provided an update on progress to **identify external user needs** from private and public sectors

Preliminary results from **business model survey**

Feedback on **business service use cases**

Feedback on **potential business opportunities**



Session 10 - WP1 Selection of Socio-Economic Impact indicators for DISSCO

Rui Figueira

DPP MLS 1.4

Corpus of previous studies on socioeconomic impact compiled

Report:

<https://tinyurl.com/DPP-mls-1-4>

List:

<https://tinyurl.com/DISSCO-SEIcompilation>

- list of 210 indicators from 3 frameworks and one study of SEI
- scope of DISSCO
 - areas of impact
 - users / stakeholders
 - services
- examples of SEI
 - The Value of Digitising Natural History Collection - NHM London
 - Atlas of Living Australia's Impact and Value

SEI Indicators relevant to DISSCO?

Consultation with the community - survey

- DISSCO partners
- National Nodes

List assessed by session participants:

- 30 indicators
- 26 responses



Outcomes from discussion

- select indicators better adapted to DISSCO outcomes
- some adjustments to the preselected list - international dimension
- define better KPIs and SEI indicators

Next steps in task

- presentation to NN (April)
- survey - June
- suggest framework of indicators
- guidelines for application








Session 11 - WP5-6 Common infrastructures for Digital Specimens

Session 12 - WP6 Framework and requirements for distributed
annotation tools
[Double Feature]

Wouter Addink (org), Falko Gloeckler, David Fichtmueller, Jonas Grieb, Elspeth Haston, Sharif Islam, Sam Leeflang, Laurence Livermore, Julia Pim Reis, Claus Weiland (org), Alexander Wolodkin

Session 11 - WP5-6 Common infrastructures for Digital Specimens

- Series of update, thematic and keynote talks detailing DPP's service and standards portfolio
- Aims:
 - Assessment of achievements with critical reflection of the integration and interoperability of the results presented
 - Identify gaps in the portfolio, dissemination of the data model (Digital Specimen) and technical architecture (DS arch)
 - Determine technical and scientific “down-to-earth” criteria to bring the vision of one integrated virtual NSC into reality

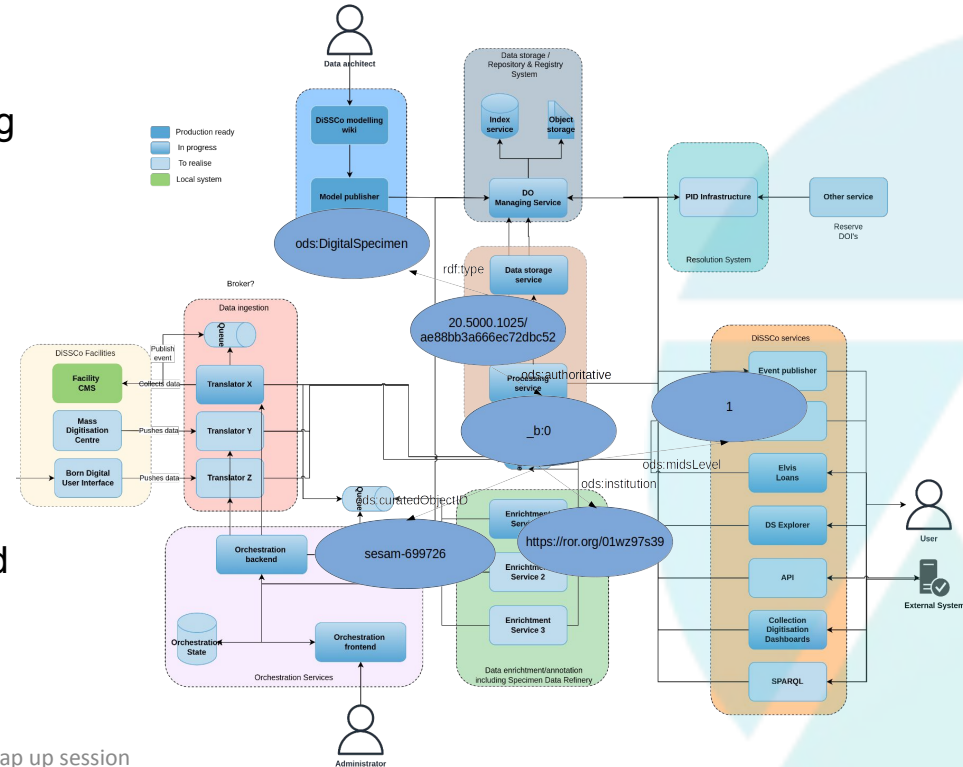
 Genomic data
 Biochemical data
 Morphological data
 Geographical data
 Taxonomic Information
 Species Interactions data
 Ecological data



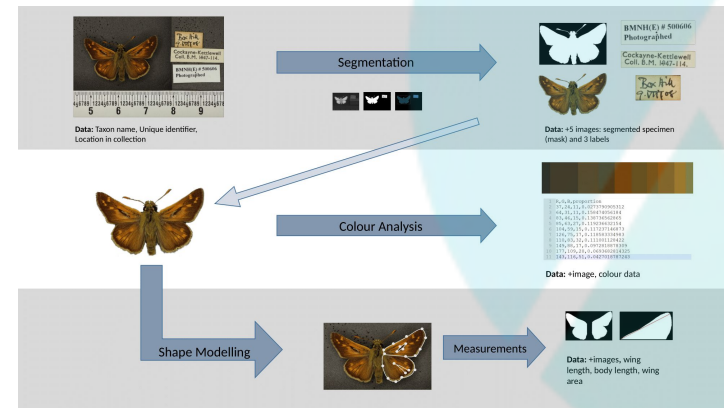
Cont. Session 11 - WP5-6 Common infrastructures for Digital Specimens

Major achievements:

- Improved integration of data model (DS), modeling process (DMF) and core architecture (DS arch)
- Involves data ingest (D6.1), transformation and modeling (M5.6), quality checks/validation and workflow orchestrating pipelines
- Demonstration of tangible evidence that the FDO/DES approach is highly rewarding (real-time annotation of several thousand DS)
- Gaps: Improve alignment of MIDS (-1i,-1m,-3) and openDS specification.



- Thought-provoking statements on Ukrainian digital transformation strategies
 - Large community, scatter workload: one-liners + fact-checked messages
 - Make results machine-actionable (bots)
- Open issues:
 - Identification of key targets (Images? Sequences? Publications? Archival materials?)
 - Measuring success/alternative metrics for digitization
 - Terminology: Enrichment (quality) vs. annotation (insight)
 - Scalability of tools - tools for experts and citizen scientists?
- Tasks:
 - Concept for distributed annotation (UCAS) to prove core value and leverage DS/FDO approach for downstream users.
 - Redesign and improve interoperability of the provenance model (towards machine-actionable data management)

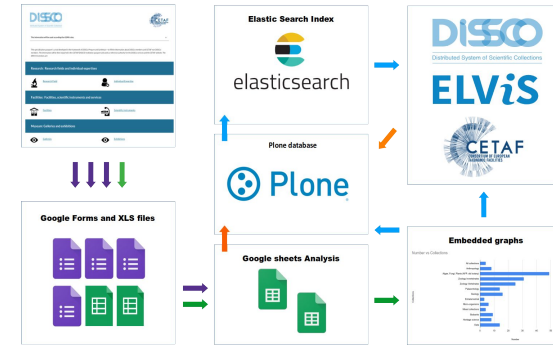




Session 13 - WP8 8.1 Thematic Specialisation Plan

Carole Paleco, Patrick Semal, Ana Casino, Mariano Iossa, Jonas Grieb

- 43 participants
- Opportunity to present the objectives and “place-based” approach of the task
 - Tool enabling to highlight the **specialisations at Institutional and Node level**
 - Better understand **maturity of different institutions in different categories.**
 - The need to **integrate** other WPs **outputs**
 - Examples of training needs integration, of e-services
 - Complementing the tool with :
 - More categories (Feedback collected here <https://docs.google.com/document/d/1VC-hCmS64tuqB-SkjzRHqOscwXB39qC8k/edit>)



- **Ongoing** work on **tool refinement** (till May):
 - **More categories**
 - Organisational, financial,...
 - Include under current categories **new fields**, e.g :
 - **e-services** can be placed both **under facility at institutional level** and at **scientific expertise level** (individual level) regarding scientists that will manage the service
 - Include an expertise as mapping/cartography/GIS
 - **Institution aspirations**/planning/priorities and strategies
 - **Evolving** specialisation plan:
 - Chronological approach with back ups (yearly?) of **image of situation** - ex. Trainers expertise updates
- Informed partners and Nodes of **current need** => is to have tool refinement **feedback for May** and **provision of NN data between June-July**.
- **Analysis** matching **DiSSCo strategy** towards **Deliverable September 2022**.



Session 15 - WP2 Helpdesk

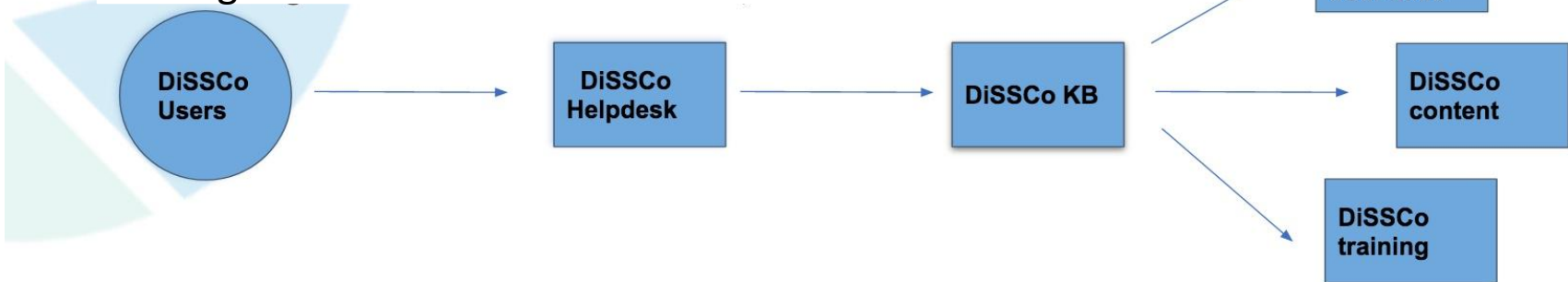
Judite Alves

29 attendees

- opportunity to discuss DPP M2.3. on services and facilities to be offered by the Helpdesk
- share an update on work progress on M2.4 on supporting documentation needs
 - consultation about the relevance of supporting documentation
 - 21 responses
- overview of ELViS helpdesk (Synthesys+)
- integration between the HD with the knowledge-base

Outcomes from the discussion and consultation:

- articulation with the website – Catalogue of Services
- Additional HD service: **Glossary**
- articulation with the Training Service for the provision of Tutorials
- Supporting documentation was considered of 4 / 5 relevant – better evaluation according user groups
- Multilinguality – balance btw. needs/work 24 languages
- Integration with the KB



Session 16 - WP9 The Construction Master Plan

Lorenzo Cecchi & Tina Loo

Session 16 - WP9 The Construction Master Plan

- A simple online **survey** form for **WP leaders** will be developed to be sent two weeks after this AHM (~25 April) to gather inputs on actionable recommendation for the DiSSCo construction phase, to 1) understand critical aspects of the **deliverables relevant** to the Master Plan and 2) immediately identify what we need to pay attention to

Session 16 - WP9 The Construction Master Plan

The collective **brainstorming** has given first insights and a WPs and tasks outcomes skimming to start the document drawing up.

Thanks to the survey, we still received rather heterogeneous views on what the **sources of information** should be.

However, we agree that whatever they are, they must be clearly structured by defining **which final goal they contribute to** and what degree of "maturity" they are in this sense (from "under development" to already "actionable")

Section 2 - Presentations during session

ALL HANDS MEETING – AHM2

Business Stream

4 March 2022

Ana Casino - CETAF

DiSSCo Prepare

Business Stream Coordinator



Funded by the Horizon 2020
Framework Programme
of the European Union

DiSSCo Research Infrastructure



Complex (and still unique)

Diverse (while focused)

Ongoing (though well planned!)

DiSSCo Research Infrastructure



Unique!



DiSSCo Research Infrastructure



Focused!



DiSSCo Research Infrastructure



Well planned!

Coordination Streams

Aims & scope

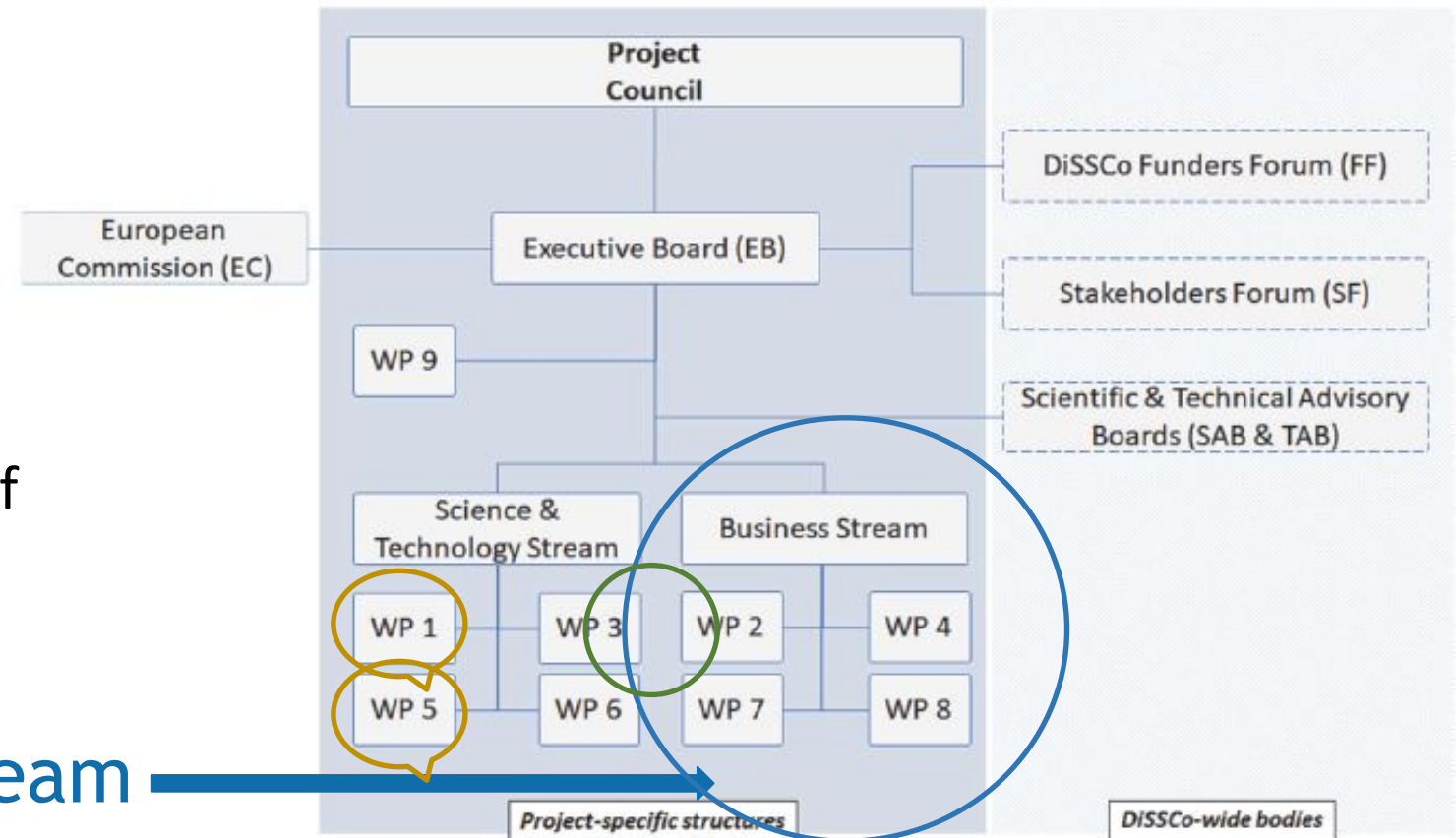
Streams

To help **navigate** complexity

To **interlink** activities

To ensure better **coordination** of thematically related work

Business stream



Parties involved

Business Stream



Lead: Ana Casino (CETAF)

Parties:

WP2 – Human Resources, Training & Users Support - ULISBOA (Judite Alves)
Helpdesk, Training & HR Strategy

WP4 – Business framework – MNHN (Michel Guiraud)
Cost book, Cost model, national contributions, procurement

WP7 – Governance, Policy & Legal frameworks – RBINS (Serge Scory, Carole Paleco)
Governance model, legal entity, DiSSCo policies

WP8 – Stakeholder engagement & Communication Strategy – CETAF (ML Kamatali)
NTF engagement, Dissemination, Advocacy

Invited guests: **WP3** – Capacity Enhancement

Goals and Modes of collaboration



Business Stream

Goals: contributing to Organizational and Financial IRLs



Collaboration:

Stream meetings (online, on the 2nd Tuesday of the month): Coordination meetings of all WP leaders in the Business Stream

Teamwork as repository for all central communications and documents

Stream coordinator **reports** to the Executive Board and **participates** in the DPP Project Council

Business stream

Objective 1

1. FACILITATE a shared reflection:

- Some **bottlenecks**:

Difficulties? Concerns? Lessons learnt? space for improvement?

- Still, a **continuation** on what has showed to be productive, informative and successful get-together:

- regular updating

- identification of synergies, complementarities, supporting actions
- collaboration beyond DPP

- leverage on each other's work

- design of multi-purpose tools
- mechanism to increase coherence at national level

Business stream

Objective 2



2. REINFORCE the space to strengthen the team in the remaining year:

- to drive and secure **coordination**
- to gather broader and thus, more **comprehensive feedback**
- to ensure continuity and **alignment**
- to **advance issues** and react accordingly
- to channel **concerns** to the project coordination and the CSO

Business stream

Objective 3



3. PROVIDE support to develop harmonious, thorough, comprehensive and consistent outcomes:

- To **complement** expertise
- To **integrate community** inputs and approach diversity
- To ensure **quality** checking
- To secure continuity and **consistency**
- To produce **added value**

Business stream

Building a comprehensive, coordinated and meaningful package of deliverables contributing to the DiSSCo Master Plan





WP2 - Human Resources, Training & Users Support

Achievements made

T2.1 Training strategy

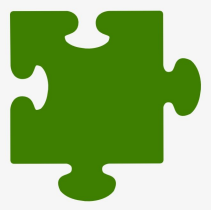
- Survey on skills gaps and relevant training needs - complete

T2.2 Helpdesk

- Compilation of services and facilities to be offered - complete
- Survey on supporting documentation needs - complete

T2.3 Human Resources Policy

- Landscape analysis of HR policies across European RIs - complete



WP2 - Human Resources, Training & Users Support

Ongoing work

T2.1 Training strategy

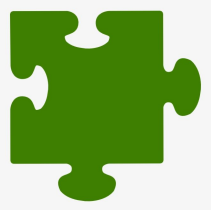
- Identification of skills gaps and relevant training needs - results of survey under analysis
- Identification of training platforms and providers - ongoing

T2.2 Helpdesk

- Compilation of supporting documentation - results of survey under analysis

T2.3 Human Policy

- Library of role profiles being progressed in articulation with WP3 and WP7



WP2 - Human Resources, Training & Users Support

Upcoming activities

Milestones

MS2.1 Recommendations on suitable training mechanisms (April 2022)

MS2.2 Landscape analysis of BPs for training delivery (May 2022)

MS2.4 Needs for helpdesk Supporting Documentation identified (May 2022)

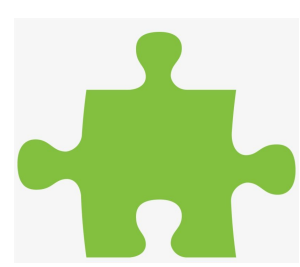
MS2.6 Portfolio of roles and competencies necessary to support DiSSCo operation (May 2022)

Deliverables

D2.1 Training Strategy (Dec 2022)

D2.2 Recommendations on the Helpdesk (Sept 2022)

D2.3 Human Resources Policy (Sept 2022)



WP3 - Capacity Enhancement

Overview & work with this business stream

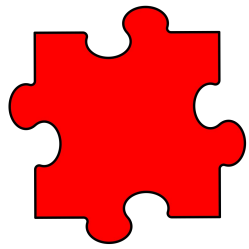
Three tasks:

3.1 Skills & Competencies - complete

3.2 Best practices for data mobilisation - discuss this afternoon!

3.3 Secondment & distributed team working - underway

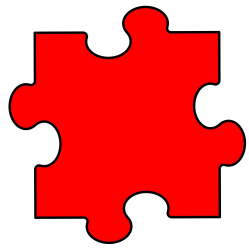
- Digital maturity tool being progressed alongside WP7 policy tool
- Library of role profiles being progressed through WP2, who are also taking competencies & best practices into account for training strategy
- Discussions with WP8 about the thematic specialisation plan



WP4 - Business framework

Achievements made

- 4.1 A methodology of cost calculation has been developed and prototype circulated
- 4.1 First round of discussion with other WP's for estimating the needs
- 4.3 Benchmark realized on funding model
- 4.3 Funding models and processes proposed



WP4 - Business framework

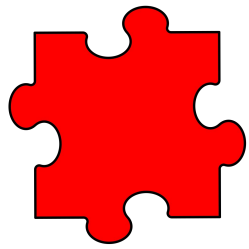
Ongoing work

4.1 Test prototype

4.1 Cost of services : focus on digitisation costs

4.2 Potential income: survey on existing services in DiSSCo

4.4 Landscape analysis: pre commercial procurement



WP4 - Business framework

Upcoming activities

Milestones

MS2.2 - Needs listed based on potential financial return (M27)

MS4.7 - IT infrastructure and data preservation indicators for the cost book (M30)

MS4.4 - requirements for implementation of cost book (M30)

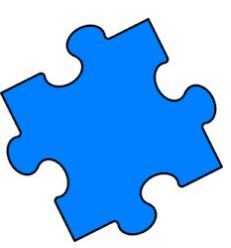
Deliverables

D4.1 The Cost Book of DiSSCo (36)

D4.2 Cost Book sheet for all the DiSSCo services (36)

D4.3 Report on recommendations for the most suitable model (36)

D4.4 Roadmap for the partnerships project within the EU PCP framework (36)



WP7 - Governance, Policy & Legal frameworks

Achievements made

T7.1 Task 7.1 Refinement of the governance model, Strategy and Operational planning (Naturalis)

- Governance model decision from iGA model 3

Task 7.2 Towards the creation of a legal entity (RBINS)

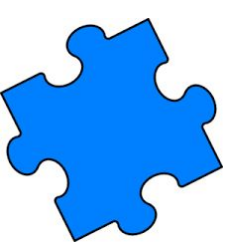
- Statutes and bylaws under draft based on Governance model 3

Task 7.3 Develop and establish DiSSCo policies (NHM)

- Policy Framework tool being under development and refinement input from S+ 2.1 Metadata schema

Work progress MS and Deliverables

- T7.1 : MS7.4 Governance models refinement consultation (M25)
- T7.1 : MS7.3 Draft strategy document and operational planning (M18) (M23) (ext M28)
- T7.2 : Progress towards D7.2 Draft statutes and by-laws; implementation plan (M23)
- T7.3 : Progress towards D7.3 Assessment tools and direction map to the implementation of common DiSSCo policies (M30)



WP7 - Governance, Policy & Legal frameworks

Ongoing work

Statutes of {name} ERIC

Contents

CHAPTER 1 — GENERAL PROVISIONS

- {Article 1 — Definitions}
- Article 2 — Name, seat, location and working language
- Article 3 — Task and activities

CHAPTER 2 — MEMBERSHIP

- Article 4 — Membership and representing entity
- Article 5 — Conditions for becoming a member or an observer
- Article 6 — Withdrawal of a member or an observer/Termination of membership or observer status

CHAPTER 3 — RIGHTS AND OBLIGATIONS OF MEMBERS AND OBSERVERS

- Article 7 — Members
- Article 8 — Observers
- {Article 9 — Contributions}

CHAPTER 4 — GOVERNANCE

- Article 10 — {Assembly of members}
- Article 11 — {Advisory body}
- Article 12 — {Director or board of directors}
- {Article 13 — Committee assisting the director in the implementation of his/her tasks}
- {Article 14 — Committee representing the different entities involved in the activities at national level}

CHAPTER 5 — REPORTING TO THE COMMISSION

- Article 15 — Reporting to the Commission

CHAPTER 6 — FINANCE, LIABILITY

- Article 16 — Resources
- Article 17 — Budgetary principles, accounts and audits
- Article 18 — Tax {and excise duty} exemptions
- Article 19 — Liability and insurance

CHAPTER 7 — POLICIES

- Article 20 — Access policy for users
- Article 21 — Scientific evaluation policy
- Article 22 — Dissemination policy
- Article 23 — Intellectual property rights policy
- Article 24 — Employment policy
- Article 25 — Procurement policy
- Article 26 — Data policy

CHAPTER 8 — DURATION, WINDING UP, DISPUTES, SET UP PROVISIONS

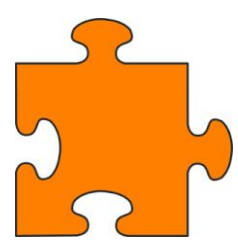
- Article 27 — Duration
- Article 28 — Winding up
- Article 29 — Applicable law
- Article 30 — Disputes
- Article 31 — Statutes updates and availability
- {Article 32 — Setting-up provisions}

ANNEX I — LIST OF MEMBERS, OBSERVERS AND THEIR REPRESENTING ENTITIES

ANNEX II — BUDGET — CONTRIBUTIONS

Work on Governance model and Statutes to be presented and discussed

T7.1 & T7.2 during AHM2 on April 5 @ 10h45



WP8 - Stakeholder engagement & Communication Strategy

Achievements made



- T8.1 - NNs is already a consistent and **well established forum**
- will become sustainable beyond DPP through CETAF
 - needs to become an interaction platform
- T8.2 - Communication is a **powerful tool** that boosts awareness and raises visibility
- New materials (Key messages, Brochure, ppt template and) together with the Binnacle (T3.1) will also support internal understanding and alignment
- T8.3 - Stakeholders analysis has started as a very **ambitious long-term effort** to scan the surrounding landscape and identify collaboration pipelines
- leveraging on other parallel initiatives will contribute to build it coherently and more robust
- T8.4 - Advocacy and outreach contribute to **expand DiSSCo community**
- New members are joining the community (Consortia from Switzerland and Israel joined at iGA4)





WP8 - Stakeholder engagement & Communication Strategy

Ongoing work



- T8.1 - NNs meet on regular **monthly basis**
- Special reference to the **Thematic Specialization Plan**
 - Connected to self-assessment tools (T3.2 and T7.3)
- T8.2 - Dissemination efforts are focused on external **conceptual alignment** and internally, on **transferring knowledge** throughout participants
- The visual stories and the DiSSCo Bulletin (aligned with CETAF Newsletter) will complement current initiatives
- T8.3 - Stakeholders **landscape analysis** is currently shaping its structure in 4 big axes: 1) RIs and initiatives in the env domain; 2) industrial actors; 3) decision making bodies; and 4) users communities
- T8.4 - Advocacy efforts focused towards the **constitution of the ERIC**
- Deployment of the ERIC Roadmap to anchor national commitments





WP8 - Stakeholder engagement & Communication Strategy

Upcoming activities



Milestones

All delivered (MS8.1-MS8.7)

Deliverables

D8.2-Specialization Plan (M32-Sept 2022)

Methodology to follow to identify niches of excellence across the community, services creators and providers as well as specialized nodes within a distributed RI. Automated means for continuous updating will be critical

D8.3-Partnership Best Practices (M34-Nov 2022)

Recommendations to guide different axes, to create long-term partnerships, scenarios for collaborative development of services and a cross-cutting fertilization among RIs and complementary initiatives



OPEN DISCUSSION

1. Major concerns

Potential risks affecting delivery of the expected outcomes

- On time
- Content-wise

OPEN DISCUSSION

2. Needs for coordination

Areas that may require special attention (to complement, avoid duplication and leverage on each other)

- Time constraints
- Different approaches
- Others

OPEN DISCUSSION

3. Detected gaps towards the DiSSCo Master Plan

Contributions to the 5 RLs dimensions

- Niches for further development
- Recommendations for tasks to follow-up
- Others

ALL HANDS MEETING – AHM2

Science & Technology Stream

4 April 2022

Wouter Addink - CSO

DiSSCo Prepare

Science & Technology Stream Coordinator



Funded by the Horizon 2020
Framework Programme
of the European Union

DiSSCo Research Infrastructure



Complex (and still unique)

Diverse (while focused)

Ongoing (though well planned!)

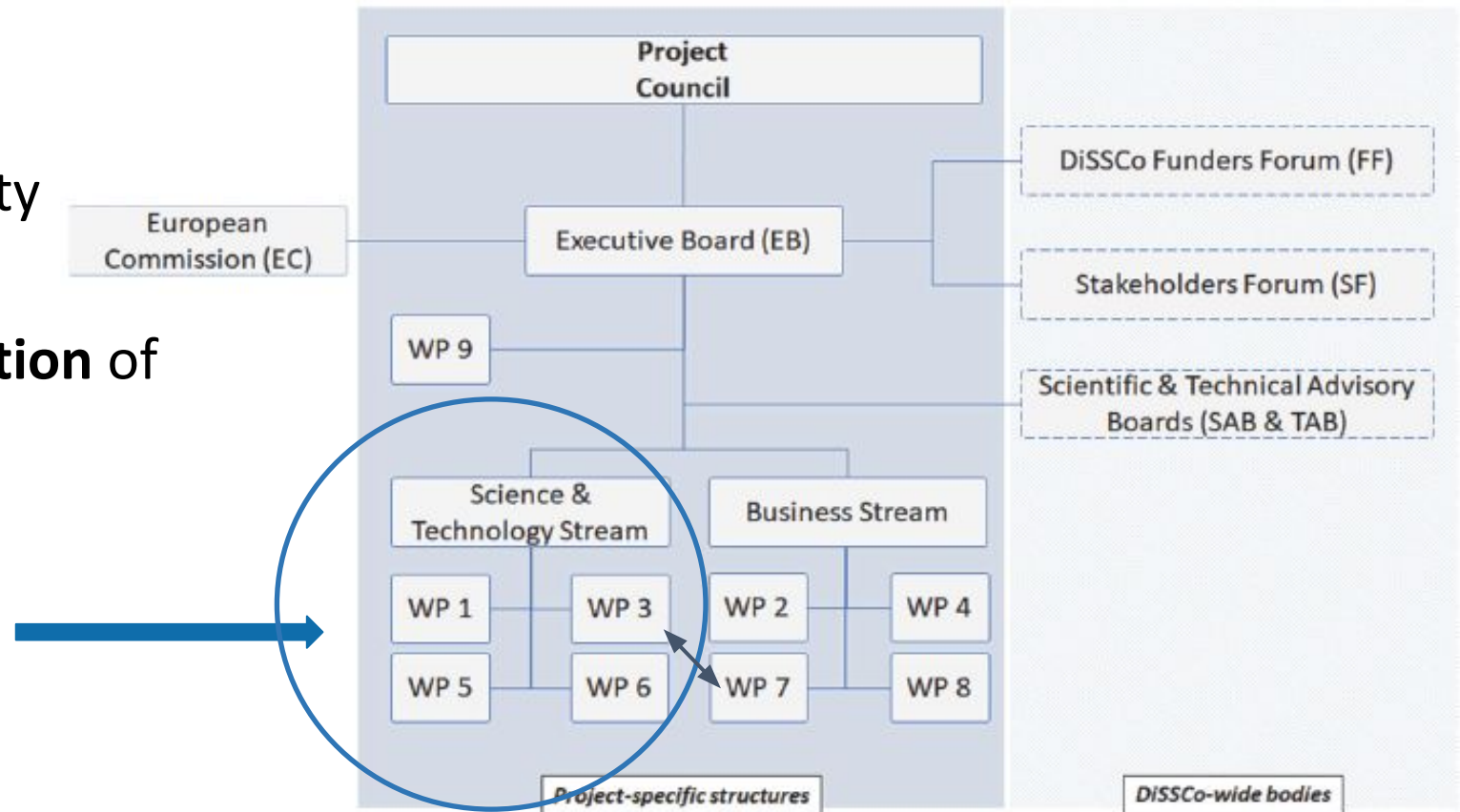
Coordination Streams

Aims & scope

Streams

- To help **navigate** complexity
- To **interlink** activities
- To ensure better **coordination** of thematically related work

Science &
Technology Stream



Parties involved

Science & Technology Stream



Stream coordinator: Wouter Addink (CSO)

Parties:

WP1 – User Needs and Socioeconomic impact - UCPH (Henrik Enghoff)

Service development framework, Criteria for digitisation priority, Socioeconomic benefits framework for partners and countries

WP3 – Capacity Enhancement - NHM (Vincent Smith)

Mechanisms to improve digital skills, Best practices for data mobilisation, Secondment

WP5 – Common Resources & Standards - MfN (Mareike Petersen)

Knowledgebase, Modelling Framework, Data cross-linking & interoperability, Key services

WP6 – Technical Architecture & Service Provision - SGN (Claus Weiland)

DiSSCo technical architecture, Roadmap for integration with global technical landscape

Goals and Modes of collaboration

Science & Technology Stream



Goals: contributing to Data & Scientific Readiness

Collaboration:

Stream meetings (online, monthly): Coordination meetings of all WP leaders in the Science & Technology Stream + CSO Technical team members

Teamwork as repository for all central communications and documents

Stream coordinator **reports** to the Executive Board and **participates** in the DPP Project Council

Science & Technology Stream

Objective 1



1. FACILITATE a shared reflection:

- Some **bottlenecks**:

Difficulties? Concerns? Lessons learnt? space for improvement?

- Still, a **continuation** on what has showed to be productive, informative and successful get-together:

- regular updating
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 - collaboration beyond DPP
- leverage on each other's work
 - design of multi-purpose tools
 - mechanism to increase coherence at technical level

Science & Technology Stream

Objective 2



2. REINFORCE the space to strengthen the team in the remaining year:

- to drive and secure **coordination**
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Science & Technology Stream

Objective 3



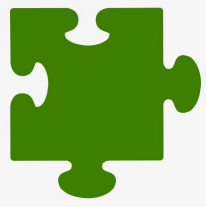
3. PROVIDE support to develop harmonious, thorough, comprehensive and consistent outcomes:

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- To **integrate community** inputs and approach diversity
- To ensure **quality** checking
- To secure continuity and **consistency**
- To produce **added value**

Science & Technology Stream

Building a comprehensive, coordinated and meaningful package





WP1 – User Needs and Socioeconomic impact

Achievements made



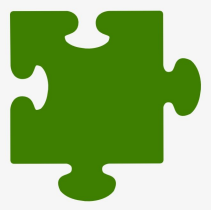
T1.1. D1.1. Analyse life sciences use cases and user stories **DONE**

T1.2. D1.2 Analyse Earth sciences use cases and user stories **DONE**

T1.3. MS1.3: “Corpus of previous studies on prioritisation of digitisation compiled” **DONE**

T1.4. MS1.4: Corpus of previous studies on socioeconomic Impact compiled **DONE**





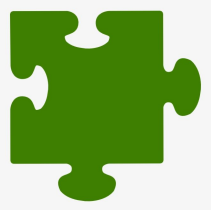
WP1 – User Needs and Socioeconomic impact

Ongoing work T1.3 Criteria for Prioritization



- Questionnaire to attract more replies. **UNIFI**
- Search for literature. **MNHN**
- “Digestion” of previous literature. **UCPH**
- Digitisation plans & criteria used by DiSSCo. **UCPH**
- First draft of D 1.3. **UCPH**



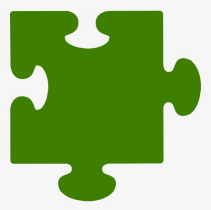


WP1 – User Needs and Socioeconomic impact

Ongoing work T1.4 Socioeconomic indicators



- Review the consolidated table of indicators to identify possible incoherences, lack of support information (e.g., definition, methods for calculation) and gaps;
- Assess applicability and preliminary relevance for DiSSCo, namely in terms of Indicators scope and Operationalization requirements
- Revise indicators (definition) to include specificities for DiSSCo
- Prepare a preliminary list of indicators for DiSSCo
- Perform a **survey** to DPP partners (WP leaders), **including national nodes** to assess the relevance of the indicators;
- Create a suggested table of SEI to be adopted by DiSSCo;
- Identify requirements of information and data sources for indicators;
- Provide Guidelines for the SEI of DiSSCo
- Provide guidance for future updates of indicators, namely to accommodate with recommendations on alignments with EOscs KPIs



WP1 – User Needs and Socioeconomic impact

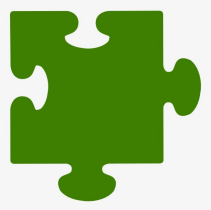
Upcoming activities T1.3 Criteria for Prioritization



Deliverables

D1.3 Report on relevant criteria for prioritisation of the digitisation.

- first draft planned for **1 JUNE 2022**
- Ambition: **KEEP IT BRIEF, READABLE AND USEFUL**
- planned submission **DECEMBER 2022**



WP1 – User Needs and Socioeconomic impact

Upcoming activities T1.4 Socioeconomic indicators

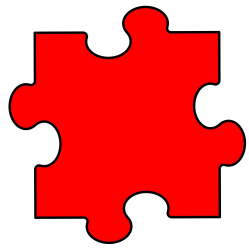


Deliverables

D1.4 Report on socioeconomic impact indicators

planned submission **DECEMBER 2022**





WP3 - Capacity Enhancement

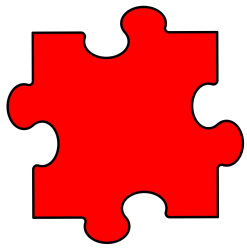
Achievements made



Task 3.1 Digital Skills and Competencies all milestones and deliverable completed and available in the DiSSCo Knowledgebase:

- Deliverable: Summary Insights & Recommendations
- MS3.1: Case studies & analysis
- MS3.2: Design blueprint for Digital Maturity Tool
- MS3.3: Additional case studies & analysis
- MS3.4: Proposed content for Digital Maturity Tool





WP3 - Capacity Enhancement

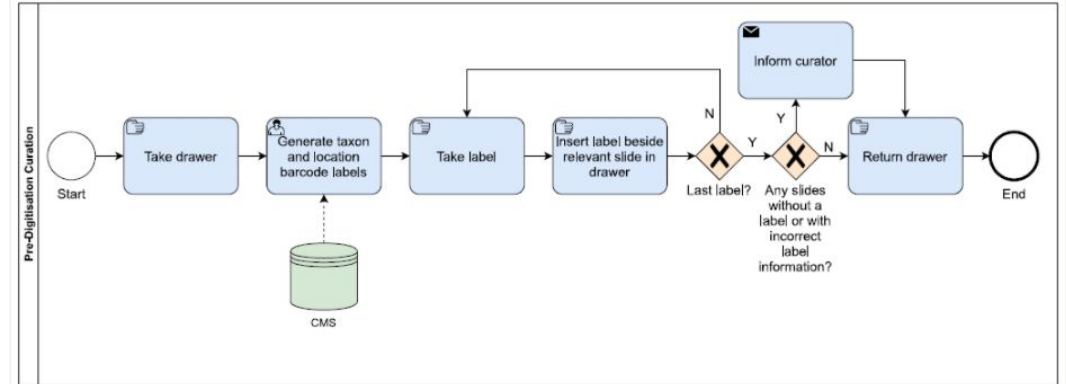
Ongoing work

- **Task 3.2 best practices in data mobilisation:**
 - Draft standard operating procedures/digitisation workflows available - please come to this afternoon's session to discuss!
 - Extract, Transform and Load procedures milestone drafted
 - Website: <https://dissco.github.io>



Workflow

Pre-Digitisation Curation



The workflow above shows the steps taken in the pre-digitisation curation stage. Drawer location and taxon barcode labels are printed from the Museum's Collection Management System (CMS) (Figure 1a). These are then inserted into the collection (Figure 1b). If there is no label for a taxon, or the label information is incorrect, this information is passed to the curator who then updates the CMS.

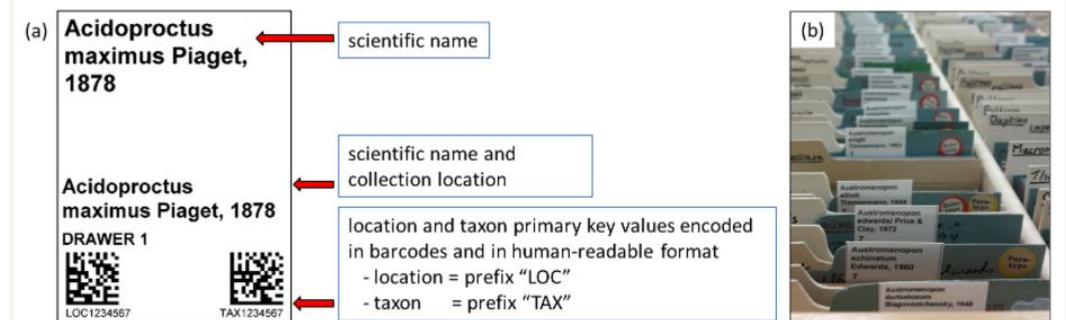
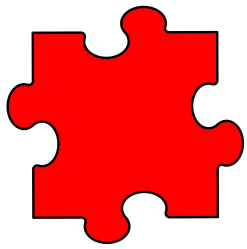


Figure 1: a) Shows the temporary taxon and location barcodes b) Shows how the temporary labels are inserted into the collection

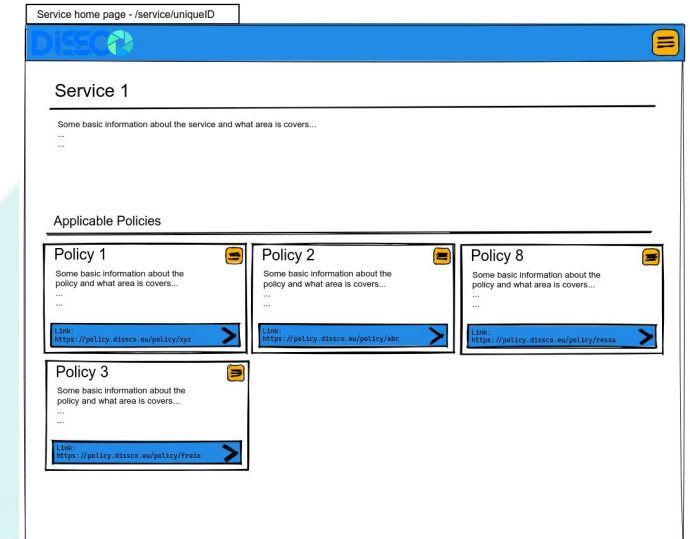
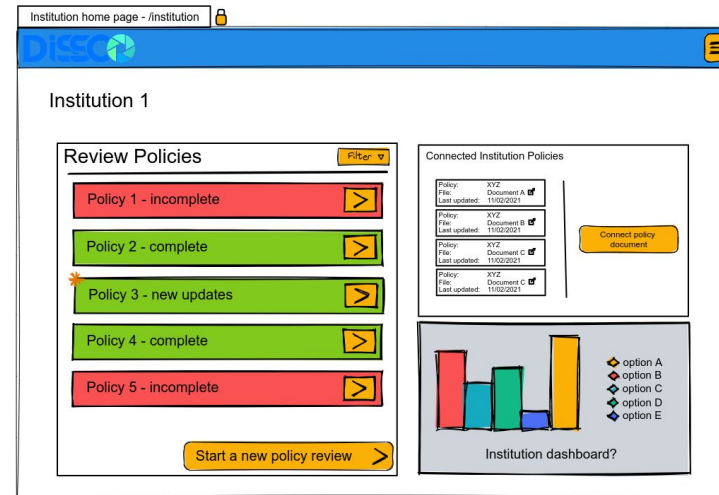
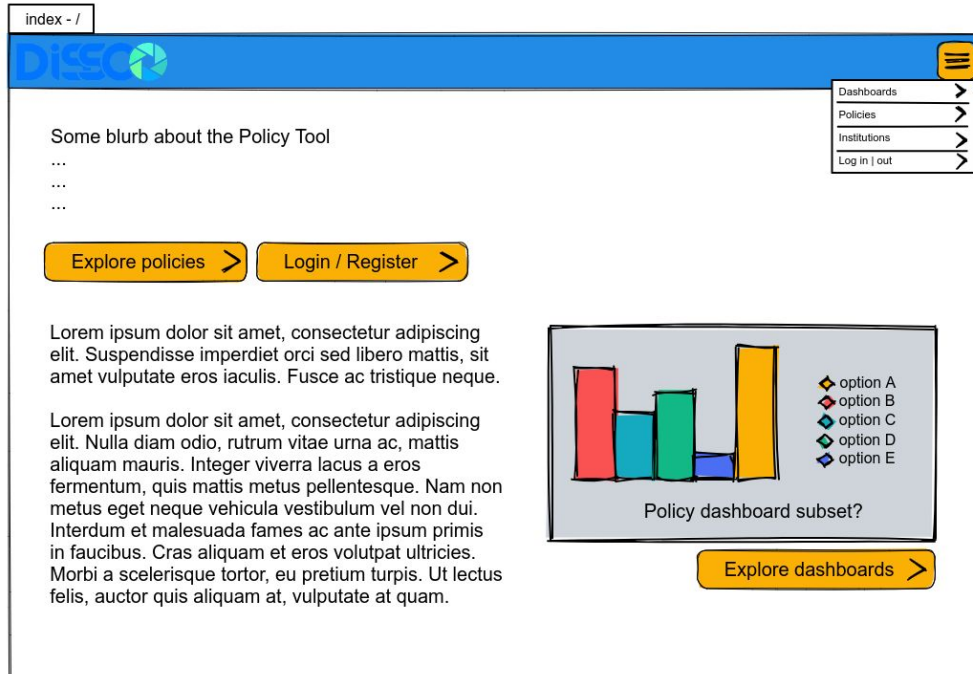


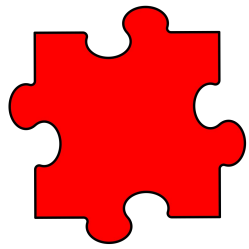
WP3 - Capacity Enhancement

Ongoing work



- Digital Maturity tool progressing alongside Task 7.3 policy tool, and acting as distributed working pilot for Task 3.3
- Task 3.3 milestone about secondment practices will be shared mid April





WP3 - Capacity Enhancement

Upcoming activities



Milestones

MS3.5 complete (Digitisation SoPs), **MS3.6 (ETL) nearly complete** and being reviewed before submission on 8th April

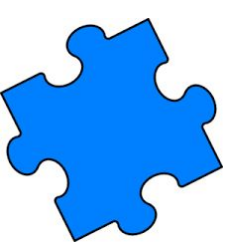
MS3.7 pre-digitisation curation next to be worked on.

MS3.8 Digitisation Monitoring - this work will be contained within D3.2, rather than a separate output.

Deliverables

Task 3.2 deliverable due July 2022

Task 3.3 deliverable (and milestone) due Jan 2023 - work meanwhile to survey / understand distributed teamworking over the last two years; as well as continuing to monitor DiSSCo tool development as a pilot.



WP5 - Common Resources & Standards

Achievements made



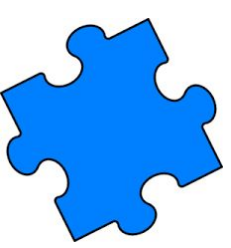
Task 5.1 DiSSCo Knowledgebase (concluded Jan. 2022)

DiSSCo Knowledgebase pilot implementation <https://know.dissco.eu/>
(see D5.1)

- MS5.2 Implementation of concepts for sustainability of services, CMS, and overall TRL - **completed**
- MS5.5 Compilation of relevant data standards - **completed**
- MS5.3 Documentation of PIDs relevant for DiSSCo technical infrastructure - **completed**
- MS5.1 Functional technical implementation of DiSSCo Knowledgebase and documentation of most relevant building blocks - **completed**

The screenshot shows the DiSSCo Knowledgebase website. At the top, it says "DiSSCo Knowledgebase" and "This is a 1.0 beta interface". Below that, it says "Welcome to the DiSSCo Knowledgebase" and provides a brief overview of the project. It mentions that the European Research Infrastructure DiSSCo (Distributed System of Scientific Collections) is committed to open science and makes outputs openly available as much as possible. It also states that the DiSSCo Knowledgebase was developed in the course of the DiSSCo Preparatory Phase Project (DiSSCo Prepare) to provide a structured and standardised technical documentation environment for relevant building blocks of DiSSCo's technical infrastructure. It is a curated hub of information unifying deliverables of DiSSCo-linked projects (DiSSCo Prepare, ICEDIG, ENVRI-FAIR, MOBILISE, SYNTHESYS + and BICIKL) and common knowledge for the construction of DiSSCo, a Research Infrastructure digitally uniting the natural science collections in Europe. There is a call to action for users to upload content or provide feedback via GitHub. At the bottom, there are three buttons: "Explore", "Latest", and "Read more".





WP5 - Common Resources & Standards

Achievements made

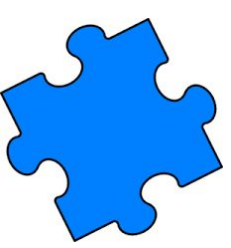


Task 5.2 DiSSCo Modelling Framework

- D5.2 DiSSCo Modelling Framework - **completed**
- MS5.6 A functional prototype of DiSSCo Modelling Framework - **completed**
- MS5.7 Compilation of data standards forming the basis for the initial version of the DiSSCo Digital Specimen Object Specification - **submitted**

The screenshot shows the Wikibase interface for the DiSSCo Modelling Framework. The top navigation bar includes 'Main page' and 'Discussion'. The main heading is 'Main Page'. Below the heading, there is a welcome message: 'Welcome to the DiSSCo Modelling Framework' and a note: 'This is the Wikibase Installation in which the DiSSCo Data Model will be developed.' A 'Links:' section lists two items: 'DiSSCo Website: <https://www.dissco.eu/>' and 'DiSSCo Tech Blog: <https://dissco.tech/>'. On the left side, there is a sidebar menu with the following items: 'Main page', 'Recent changes', 'Add Item', 'Add Property', 'Query Service', and 'QuickStatements'.





WP5 - Common Resources & Standards

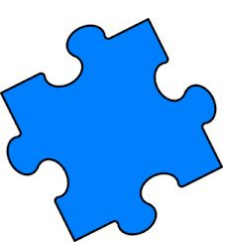
Achievements made



Task 5.3 Semantic enhancement and interoperability (concluded in Jan. 2021)

- D5.4 A best practice guide for semantic enhancement and improvement of semantic interoperability - **completed**





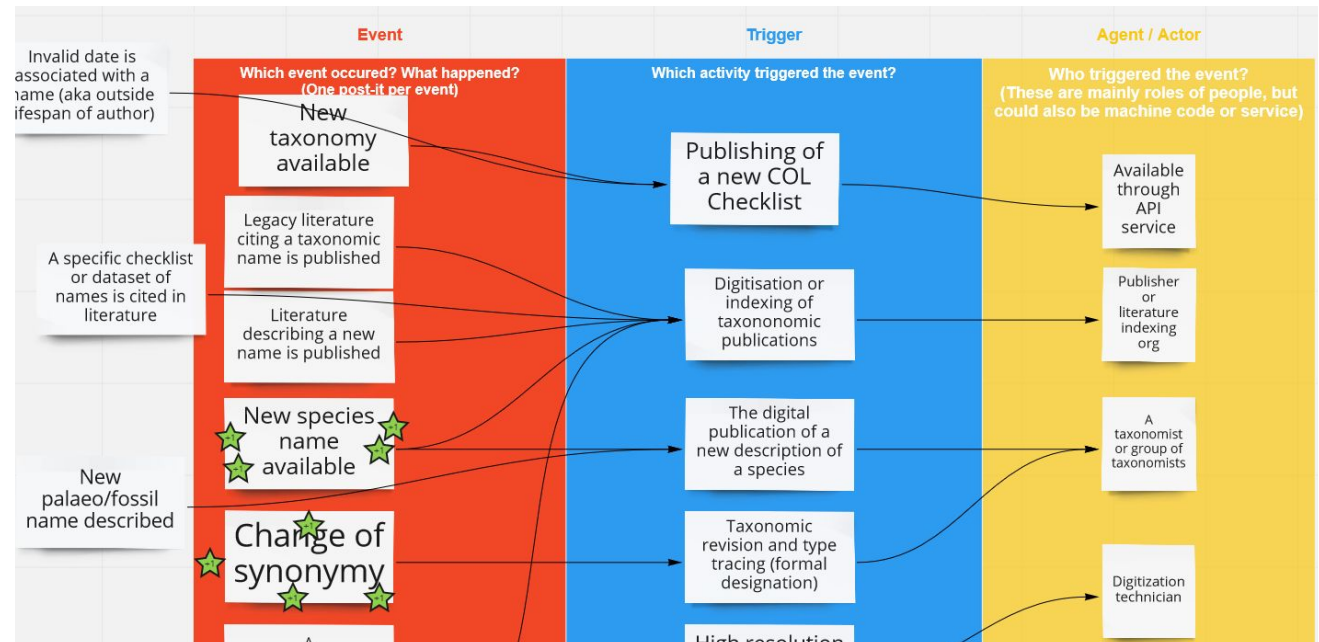
WP5 - Common Resources & Standards

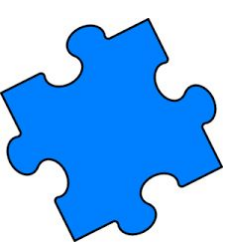
Achievements made



Task 5.4 Modernising technical infrastructure for science data mobilisation and publication

- Event storming workshop (35 participants, Jan. 2022) to identify key events of GeoCAsE, Catalogue of Life and DiSSCo services
- exploratory analysis of GeoCAsE and CoL API





WP5 - Common Resources & Standards

Ongoing work



Task 5.1 - DiSSCo Knowledgebase

- training of partners
- video tutorials for the DiSSCo KB
- further content upload and curation

Task 5.2 - Modelling Framework

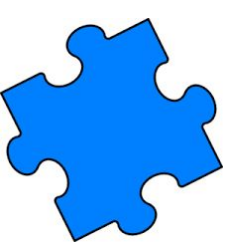
- further development on openDS (together with T6.2)

Task 5.3 - Semantic Enrichment

- Work on publication (disambiguation of persons)

Task 5.4 - Modernising Technical Infrastructure

- 'Big picture' workshop on community infrastructure interactions (originally planned for AHM2)
- develop a technical blueprint for interoperation between DiSSCo services, GeoCASE and Catalogue of Life



WP5 - Common Resources & Standards

Upcoming activities



Milestones

-

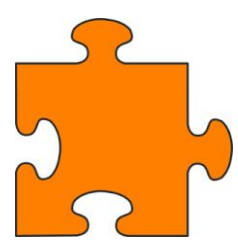
Deliverables

- D5.5 “Construction plans for the improvement of technical infrastructure in the areas of geo-collection data and taxonomic services” (will be moved to **Nov. 2022**)
- D5.3 "DiSSCo Digital Specimen Object Specifications" (building on MS5.7, due **Jan. 2023**)

AOB

- DiSSCo KB @SPNHC





WP6 - Technical Architecture & Service Provision

Achievements made



Task 6.1 CMS systems interoperability and harmonisation (MfN)

- Deliverable 6.1 *Harmonization and migration plan for the integration of CMSs into the coherent DiSSCo Research Infrastructure* finalized
- DiSSCo Event Storming Workshop (+60 participants) involving a multitude of stakeholder groups like CMS developers/vendors, curators, data federations and researchers
- openRefine based prototype to link local collection data to the DiSSCo Digital Specimen architecture (part Milestone 6.1)

OpenRefine training dataset species camera ids augmented server

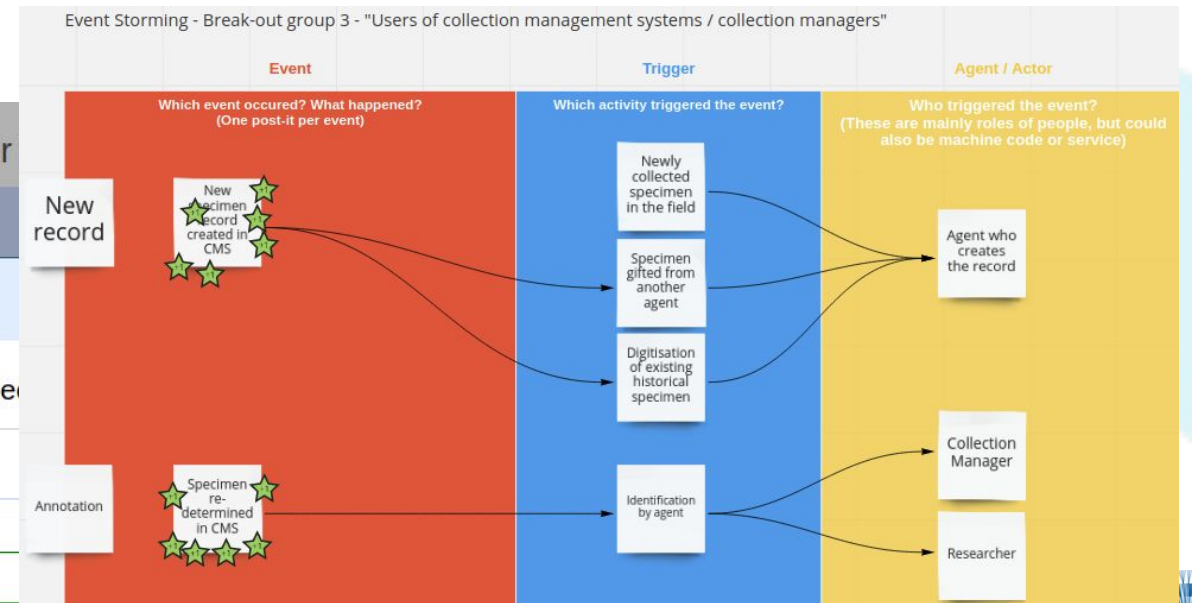
Facet / Filter Undo / Redo 11 / 11 3000 records

Cordra schema alignment

Here you can modify the mapping from the columns to the attributes of the DigitalObject

Edit mapping Preview

Term	Mapping	Type	Default
Target digital object		CaptureEvent0.1	



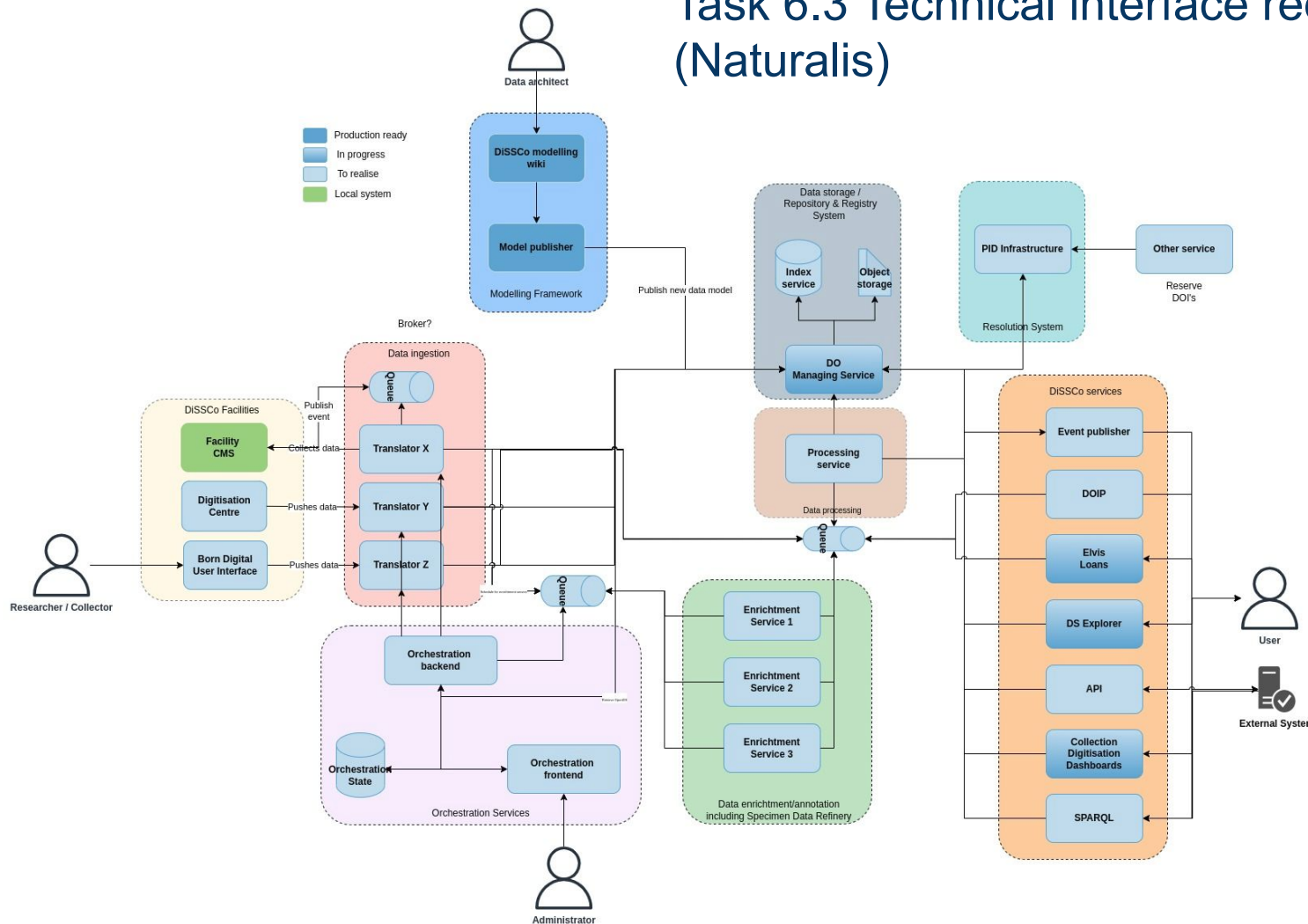


WP6 - Technical Architecture & Service Provision

Ongoing work



Task 6.3 Technical interface requirements of the end-user services (Naturalis)



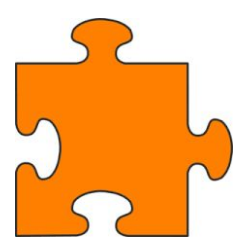
- Major update of the design of DS arch and the embedded service ecosystem (lead S. Leeflang, W. Addink & S. Islam)
- Developed fundamental distributed event- and stream-processing infrastructure (DS infra) based on Apache Kafka.

RiO Home Articles About About Pensoft Books Jour

Research Article Research Ideas and Outcomes 7: e67379
<https://doi.org/10.3897/ri.7.e67379> (06 Jul 2021)

A choice of persistent identifier schemes for the Distributed System of Scientific Collections (DiSSCo)

▼ Alex R Hardisty, Wouter Addink, Falko Glöckler, Anton Güntsch, Sharif Islam, Claus Weiland



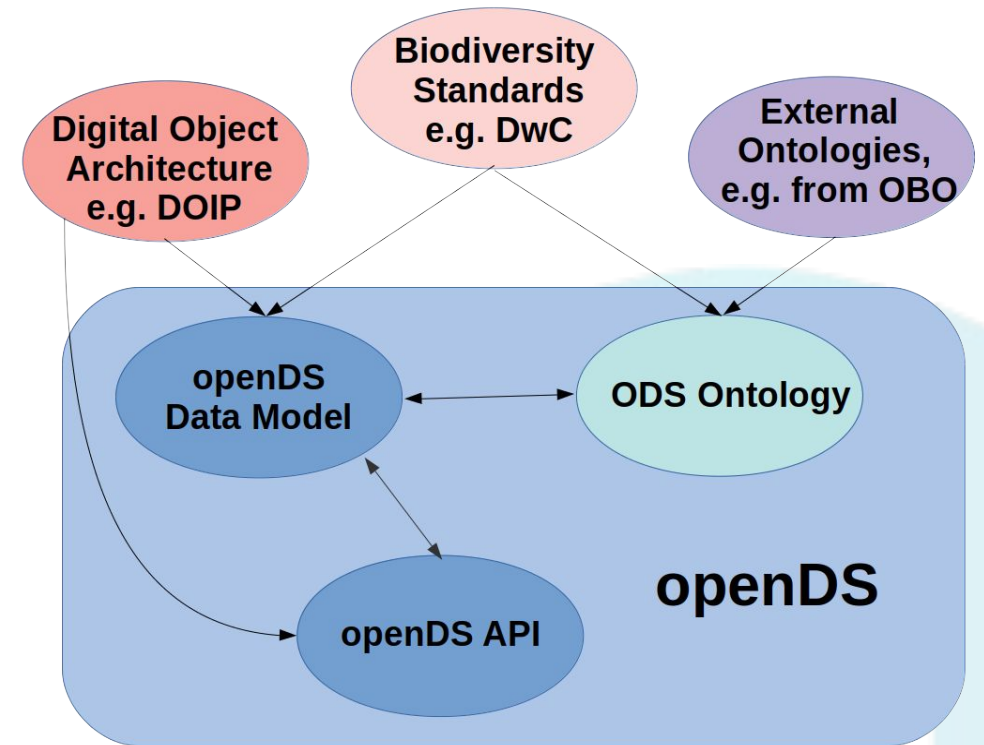
WP6 - Technical Architecture & Service Provision

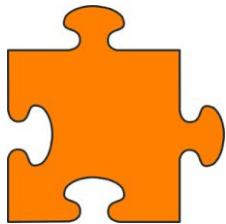
Ongoing work



Task 6.2 Evaluation of the DiSSCo Architecture & Task 6.4 Embedding DiSSCo in the technical landscape

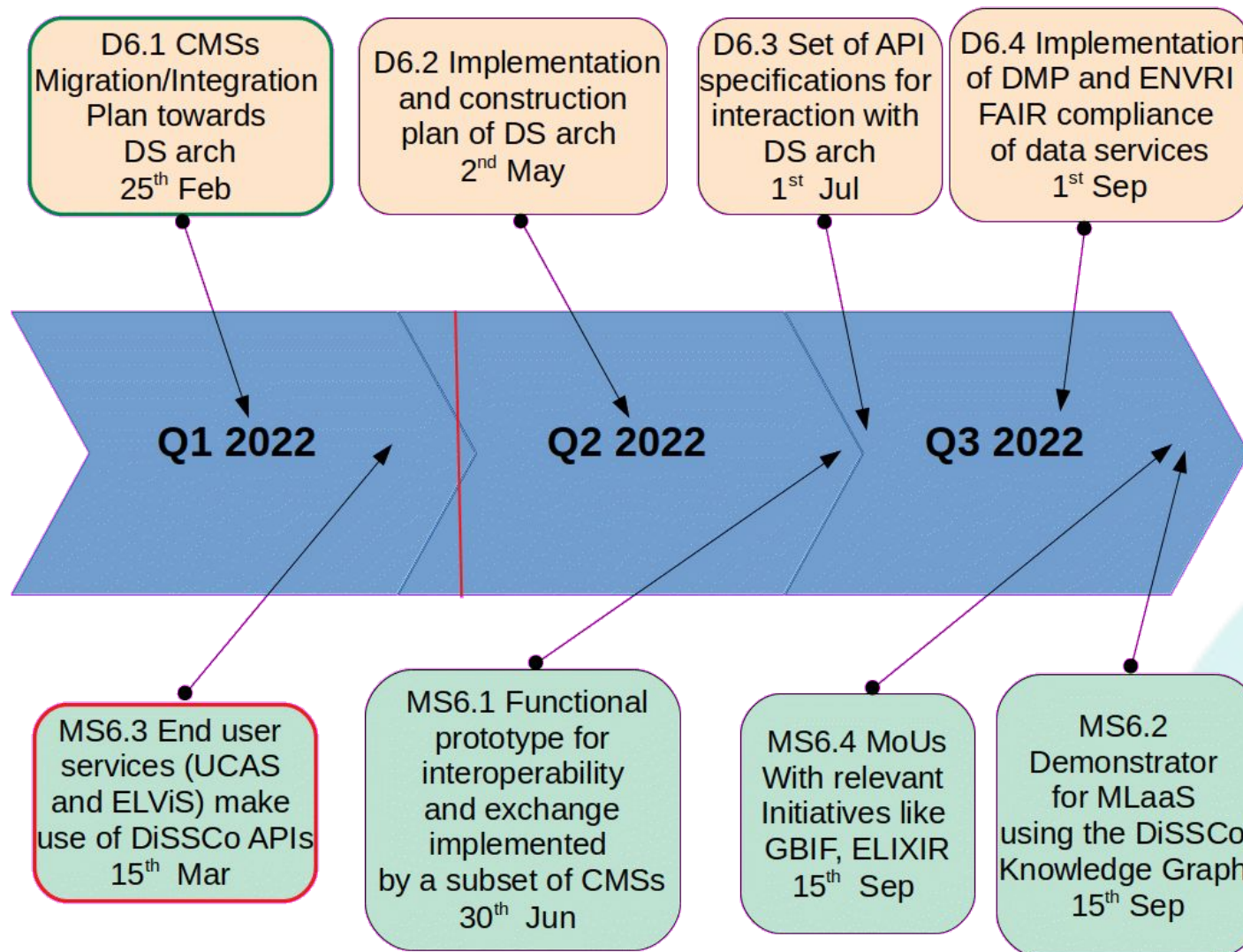
- Published prototype demonstrating the integration of Machine Learning algorithms and semantic validation in DS arch (part of M6.2)
- Approach is embedded in the wider framework of the FAIR Digital Objects Forum (FDOF, <https://fairdo.org>)
- Ongoing development (together with T5.2) of the openDS specification to implement Digital Extended Specimens and other curated objects like media objects as typed FAIR Digital Objects





WP6 - Technical Architecture & Service Provision

Upcoming activities



OPEN DISCUSSION



1. Major concerns

Potential risks affecting delivery of the expected outcomes

- On time
- Content-wise

OPEN DISCUSSION



2. Needs for coordination

Areas that may require special attention (to complement, avoid duplication and leverage on each other)

- Time constraints
- Different approaches
- Others



OPEN DISCUSSION



3. Detected gaps towards the DiSSCo Master Plan

Contributions to the 5 RLs dimensions

- Niches for further development
- Recommendations for tasks to follow-up
- Others

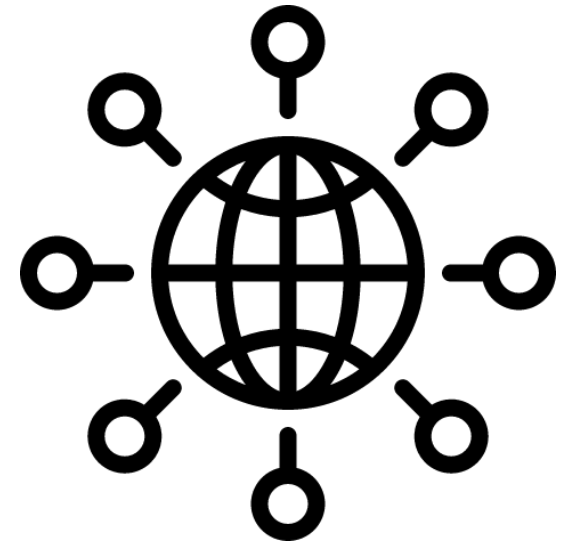


A. Implement DiSSCo **Digitisation** programme

Goal: Accelerate and lower barriers for digitisation across European Natural History Collections

Strategic objectives:

- Developing strategies for **prioritising digitisation** at various levels based on community consensus.
- Develop **open digitisation workflows, training and best practices.**
- Establish & operate **regional digitisation centres & centres of excellence.**
- **Select and implement the use of annotation tool(s)** consistent with capabilities of Specimen Data Refinery (SDR) and integrate other developing technologies and resources where appropriate (AI, robotics, citizen science).

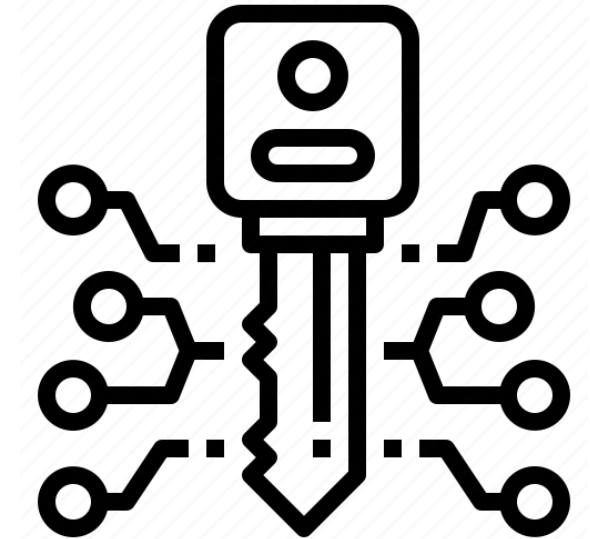


B. Implement DiSSCo **Access** programme

Goal: Create, measure and support multimodal **standardised routes to access collections**

Strategic objectives:

- Enlarge the scope of ELViS, together with a **robust access policy** and institutional policies.
- Establish an inclusive physical and remote access programme (**triage physical access requests based on digital availability of collections**).
- Attract **users/requests external to our community** (e.g. industry, cultural heritage).

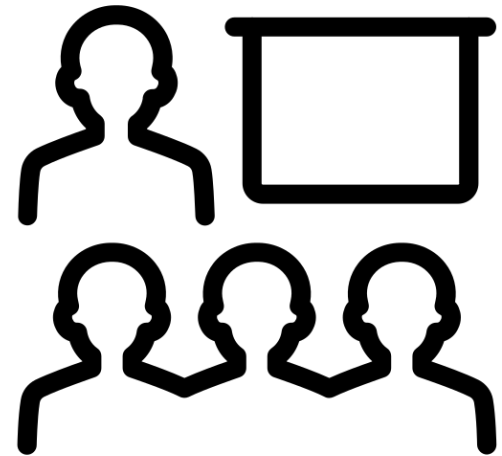


C. Implement DiSSCo **Capacity Building** programme

Goal: Users and partners are **confidently supplying/using data through DiSSCo** and are making use of DiSSCo's services

Strategic objectives:

- Partners understand their level of **digital maturity** across a range of DiSSCo's services and have **targeted areas for improvement**.
- Training availability within the DiSSCo consortium to **build in-house capacity** whenever needed.
- Continue to play a leading role in **refining and implementing standards** to ensure that DiSSCo's data and services are FAIR and impact research and scientific/societal innovation.

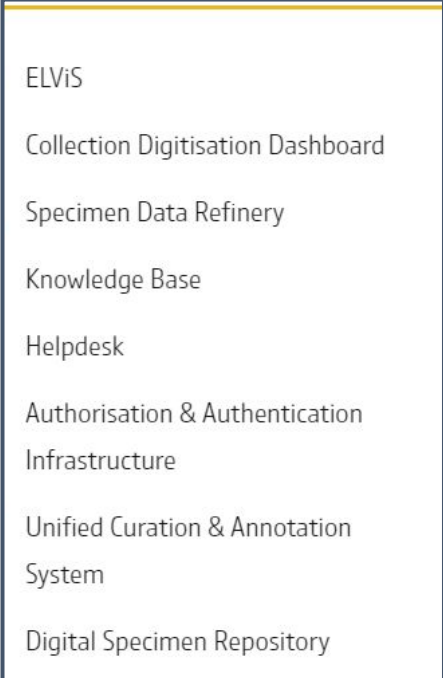


D. Implement DiSSCo **e-Services** programme

Goal: Development of **e-Services based on user needs** defined through engaging with our stakeholders.

Strategic objectives:

- Facilitate a novel **community curation model** that pulls together expertise from a wider pool of researchers and taxonomists.
- Achieve **FAIRness**; all data having PIDs and machine actionable metadata.
- **Automated specimen enhancement services**, implementing AI technologies to increase the volume and improve the quality of specimen-linked data.
- **Make e-Services sustainable** through the DiSSCo business model, ensuring human capacity and continuous service management.



ELViS
Collection Digitisation Dashboard
Specimen Data Refinery
Knowledge Base
Helpdesk
Authorisation & Authentication
Infrastructure
Unified Curation & Annotation
System
Digital Specimen Repository

AHM2 Science & Technology Stream

Monday 4 April 2022, 13-14 CEST

Agenda

- 13.00 - 13.10 Stream Introduction (Wouter Addink)
- 13.10 - 13.40 WP presentations (WP leaders)
- 13.40 - 14.00 Open discussion (All)

Attendees (name, affiliation and role in the project:)

François DUSOULIER, MNHN, France
Lorenzo CECCHI, UNIFI NHM, Italy
Claus Weiland, Senckenberg, Germany
Henrik Enghoff, UCPH, WP1 lead
Emily Veltjen, INBO, Belgium
Mathias Dillen, MeiseBG, Belgium, Task 5.3 lead
Ann Van Baelen, KU Leuven, Belgium
Sabine von Mering, MfN Berlin, Germany
Matt Woodburn, NHM London, UK, Task 5.4 lead
Anton Güntsch, BGBM, Germany, Task 5.2 lead
David Fichtmueller, BGBM, Germany
Vania Ferreira (DiSSCo CSO) (Host)
Stefaan Pijls (MBG)
Wouter Addink, Stream Leader (DiSSCo CSO)
Dag Endresen
Elspeth Haston
Julia Pim
Kari Lahti (FMNH, Finland)
Katharine Worley (MNHN)
Louise Ahl
Mareike Petersen, MfN, WP5 lead
Niels Raes, Naturalis, NL
Paul Braun
Philippe Loret
Pierre-Yves Gagnier, MNHN
Sam Leeflang, Naturalis, NL
Sharif Islam, DiSSCo CSO
Sonia La Felice
Tim Claerhout (UGent)
Tina Loo, DiSSCo CSO
Vince Smith, NHM

1. Introduction	2
2. DiSSCo RI	2
3. Coordination Streams	2
4. Parties Involved	3
5. Goals and Modes of Collaboration	3
a. Modes of collaboration	3
b. (Objective 1) Facilitate a shared reflection	3
c. (Objective 2) Reinforce the space to strengthen the team in the last year to:	4
d. (Objective 3) Provide support to develop a harmonious, thorough, comprehensive and consistent outcomes to:	4
6. Work Package Updates	4
a. WP1, User Needs and Socioeconomic impact, Henrik Enghoff, UCPH	4
Task 1.3 is about the criteria for prioritisation of digitisation.	5
Task 1.4 regarding Socioeconomic Indicators led by Portugal.	5
b. WP3, Capacity Enhancement, Vince Smith, NHM	6
Task 3.1, digitisation Skills and Competencies	6
Task 3.2 Best Practices in Data Mobilisation	6
Task 3.3: Capacity Enhancement	7
WP3 Upcoming activities	7
c. WP5, Common Resources and Standards, Mareike Petersen, MfN	8
Task 5.2, DiSSCo Modelling Framework, BGBM	9
Task 5.3 Semantic Enhancement	10
Task 5.4 Modernising technical infrastructure for science data mobilisation and publication	10
WP5, Ongoing work	11
d. WP6, Technical Architecture and Service Provision, Claus Weiland, SGN	12
Task 6.1 CMS Systems Interoperability and Harmonisation (MfN)	12
Task 6.3 Technical interface requirements of the end-user services (Naturalis)	13
Task 6.2 Evaluation of the DiSSCo Architecture and Task 6.4 Embedding DiSSCo in the Technical Landscape	14
WP6 Upcoming Activities	15
7. Open Discussion	16
a. DiSSCo Strategy, Niels Raes	16

1. Introduction

Wouter Addink, Science and Technology Stream Coordinator

WA: The structure of the parallel stream sessions will be the same. There will be a short introduction including why we have the stream and what it is composed of. After that we'll have science and technology Work Package updates, and with the remaining time, discuss any issues for the remaining project year.

But before the discussion, Niels Raes will review the current state of the DiSSCo planning strategy under development so it can be factored into discussions with respect to thinking about gaps or things that need to be better addressed.

2. DiSSCo RI

DiSSCo is a very complex and diverse project, diverse in terms of its members that range from very small to very large institutions, and diverse across countries and cultures. It is complex because there are a wide variety of use cases and user needs. Some user needs are for researchers, some are for assisting large scale digitisation and curation. DiSSCo is in the preparation phase which means the infrastructure is being developed to the necessary maturity to begin construction, and finally operation in 2026.

3. Coordination Streams

There are two coordination streams whose aim is to:

- help navigate the complexity of elements needing development, particularly the five areas requiring implementation readiness
- interlink activities in different work packages
- ensure better coordination of thematically related work.

The science and technology stream work packages are 1, 5, 3, 6.

The business stream work packages are: 2, 4, 7, 8.

There is a relationship and coordination between Work Packages 3 and 7 for secondment and aligning tooling, but that will be discussed more in the presentation of WP3.

4. Parties Involved

WA is the Technology Stream coordinator.

There are four work packages.

- WP1, User Needs and Socioeconomic Impact, led by Henrik Enghoff, UCPH
The WP is about the Service Development Framework for which user stories are critical. And includes the Criteria for digitisation Priority and the Socioeconomic Benefits Framework for partners and countries.
- WP3: Capacity Enhancement, led by Vince Smith, NHM
This work package is about the Mechanisms to Improve Digital Skills, Best Practices for Data Mobilisation, and Secondment Procedures.
- WP5: Common Resources and Standards, led by Mareike Petersen, MfN
This includes work towards a Knowledgebase, a Modeling Framework, Data Crosslinking and Interoperability, and Key Services for the DiSSCo RI.
- WP6: Technical Architecture and Service Provision, led by Claus Weiland, SGN
This WP is about development of plans for the DiSSCo Technical Architecture, and the Roadmap for Integration with the Global Technical Landscape.

5. Goals and Modes of Collaboration

The goal is to reach data and scientific implementation readiness levels.

a. Modes of collaboration

- Stream meetings are held once per month to coordinate stream WPs with WP leaders and CSO tech team members for technical alignment with system architecture.
- Teamwork is used as a repository for all central communications and documents.
- As a stream coordinator, WA participates in the Executive Board and in the Project Counsel.

b. (Objective 1) Facilitate a shared reflection

- Discuss bottlenecks, lessons learned from earlier work, and room for improvement.

- A continuation of what has been shown to be successful, productive and informative so there are regular updates to identify possible synergies and collaboration beyond the DiSSCo Prepare Project.
- leverage each other's work, for example, in the design of multipurpose tools, and mechanisms to increase the coherence at the technical level.

c. (Objective 2) Reinforce the space to strengthen the team in the last year to:

- drive and secure coordination
- gather more comprehensive feedback
- ensure continuity and alignment
- advance issues, if any, and react accordingly
- channel any concerns to project coordination and the CSO


d. (Objective 3) Provide support to develop a harmonious, thorough, comprehensive and consistent outcomes to:

- complement expertise in the different WPs
- integrate community input and approach diversity
- ensure quality checking
- secure continuity and consistency
- produce added value.

6. Work Package Updates

a. WP1, User Needs and Socioeconomic impact, Henrik Enghoff, UCPH

WP1 – User Needs and Socioeconomic impact
Achievements made



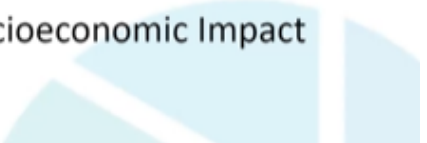
D
Henrik Enghoff
PREPARE

T1.1. D1.1. Analyse life sciences use cases and user stories **DONE**

T1.2. D1.2 Analyse Earth sciences use cases and user stories **DONE**

T1.3. MS1.3: “Corpus of previous studies on prioritisation of digitisation compiled” **DONE**

T1.4. MS1.4: Corpus of previous studies on socioeconomic Impact compiled **DONE**



HE: WP1 consists of four tasks, two are ongoing, and two are complete. So the update here will focus on the ongoing tasks.

Task 1.3 is about the criteria for prioritisation of digitisation.

- It is ongoing with a MS delivered.
- A questionnaire has been prepared directed at smaller collections regarding their digitisation prioritisation criteria and digitisation plans.
- Task team is also on the lookout for additional relevant literature to help write the deliverable due at the end of DPP (December 2022), and is looking at literature already in their possession.
- Made an analysis of digitisation prioritisation criteria used by DiSSCo partners.
- Working on the first draft of the deliverable. They hope to have the first draft ready by the beginning of June 2022 and will circulate it widely throughout DPP members, to gather as much information as possible. There may be several review rounds over the summer and autumn.
- The ambition is to keep the deliverable brief, readable and useful because they want it to continue to be a DiSSCo reference for future digitisation prioritisation. There are discussions about publishing part of the deliverable separately as a booklet or online.

Task 1.4 regarding Socioeconomic Indicators led by Portugal.

- The MS has been delivered and work is continuing on MS reported work.
- They have been looking at existing studies on socioeconomic indicators relevant to DiSSCo.
- They will perform a survey for DPP partners and NNs to get a hold of socioeconomic indicators.
- The work is difficult because it is not concrete but work is progressing according to plan and will be submitted in December 2022. Task 4 will have a draft deliverable to send for further consultation.

b. WP3, Capacity Enhancement, Vince Smith, NHM

WP3 - Capacity Enhancement Achievements made



Task 3.1 Digital Skills and Competencies all milestones and deliverable completed and available in the DiSSCo Knowledgebase:

- Deliverable: Summary Insights & Recommendations
- MS3.1: Case studies & analysis
- MS3.2: Design blueprint for Digital Maturity Tool
- MS3.3: Additional case studies & analysis
- MS3.4: Proposed content for Digital Maturity Tool



VS: WP3 is about capacity enhancement. There are three major tasks relating to it including skills and competencies, digitisation processes, and secondment practices.

Task 3.1, digitisation Skills and Competencies

- There were extensive surveys looking at what was in that space already.
- A blueprint for a tool was developed to help institutions evaluate their digital capabilities and readiness. The build for that tool is linked to T3.1 and T7.3.
- The core task of 3.1 is complete.

Task 3.2 Best Practices in Data Mobilisation

- This task is split into three key parts, one of which, digitisation processes, has been the focus of the most attention. There's a nice set of workflows amassed from different institutions for this on DiSSCO Github at <https://diSSCO.github.io>. These are important because they've been standardised and a common approach to the processes has achieved the right balance between detail and approachability so that the workflow can be applied to your own particular institutional circumstances.
- This task is largely complete. A MS is being drafted for one remaining element of the task (extract, transform and load procedures). This is the set of procedures detailing how to extract data from digitised content and how we load, transform, and address data quality issues, and get it into tools such as the collection management system. The MS should be submitted soon and will be very useful.

Task 3.3: Capacity Enhancement

This task is primarily about secondment practices and how to improve capacity within institutions to create more digitally skilled individuals to support DiSSCo objectives. Everyone has the same problem of hiring and finding trained people who understand the domain and have the necessary digital skills. This needs to be addressed in part, by formalising more structured secondment practices with other institutions. There's been an effort to look at how it's been done in other institutions, and those findings have been integrated into the digital maturity assessment tool. This is the part that is linked with T7.3, a self assessment tool relating to DiSSCo policies.



High level design for the policy tool putting into place some of the secondment practices.

WP3 Upcoming activities



Milestones

MS3.5 complete (Digitisation SoPs), **MS3.6 (ETL) nearly complete** and being reviewed before submission on 8th April

MS3.7 pre-digitisation curation next to be worked on.

MS3.8 Digitisation Monitoring - this work will be contained within D3.2, rather than a separate output.

Deliverables

Task 3.2 deliverable due July 2022

Task 3.3 deliverable (and milestone) due Jan 2023 - work meanwhile to survey / understand distributed teamworking over the last two years; as well as continuing to monitor DiSSCo tool development as a pilot.

The task team is well on the way to delivering most of the tasks, milestones and deliverables. Most MSs are complete, just a few outstanding. MS3.5 is being reviewed before submission in a few days. MS3.7 is important because pre-digitisation curation tasks are often a major bottleneck in digitisation

processes. MSs for 3.2 are being wrapped up into one integrated deliverable due in July. Task 3.3, a policy tool will be delivered in Jan 2023.

Question (Niels Raes): NR observes there are four institutions involved in the digitisation of herbarium sheets and is wondering why Naturalis digitisation was not included?

VS: It is a reflection of who was a partner in the task, but other institutions are welcome to be added. Contact Lisa French. Each institution has its own workflows but it's crucial that other institutions submitting a workflow follow the guidelines in preparing a workflow, so there is standardised language and form used to develop the workflows to ensure connectivity between all the workflows present on the site.

Comments(Wouter Addink)

- Regarding the digital maturity tool 2.3: There were some recommendations made for digital maturity in WP1 (1.3?) so it may be good to have a look at those.
- Regarding ETL tooling: we're currently working on ETL processes for the infrastructure to support WP6, demonstrator development, so it would be good to align with this as well. On Thursday there will be a presentation on that by Sam Leeflang in the WP6 session.

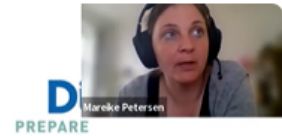
VS: Acknowledges the benefit and shares the link to the [ETL draft milestone](#).

c. WP5, Common Resources and Standards, Mareike Petersen, MfN

MP: There are four tasks in WP5.

Task 5.1, DiSSCo Knowledgebase

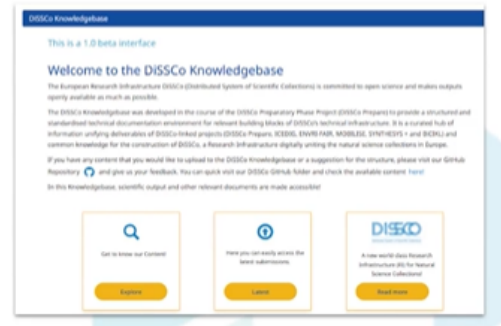
WP5 - Common Resources & Standards Achievements made



Task 5.1 DiSSCo Knowledgebase (concluded Jan. 2022)

DiSSCo Knowledgebase pilot implementation <https://know.dissco.eu/>
(see D5.1)

- MS5.2 Implementation of concepts for sustainability of services, CMS, and overall TRL - **completed**
- MS5.5 Compilation of relevant data standards - **completed**
- MS5.3 Documentation of PIDs relevant for DiSSCo technical infrastructure - **completed**
- MS5.1 Functional technical implementation of DiSSCo Knowledgebase and documentation of most relevant building blocks - **completed**



The first task is development of the DiSSCo Knowledgebase which is a curated, trusted, central hub of information. The task was finished at the end of Jan 2022 and the pilot implementation is available at <https://know.dissco.eu/>. One of the milestones for this task, MS5.2 Implementation of concepts for sustainability of services, CMS, and overall TRL, is a living document so there may be more contributions. All the milestones are available in the KB.

Task 5.2, DiSSCo Modelling Framework, BGBM

WP5 - Common Resources & Standards Achievements made



Task 5.2 DiSSCo Modelling Framework

- D5.2 DiSSCo Modelling Framework - **completed**
- MS5.6 A functional prototype of DiSSCo Modelling Framework - **completed**
- MS5.7 Compilation of data standards forming the basis for the initial version of the DiSSCo Digital Specimen Object Specification - **submitted**

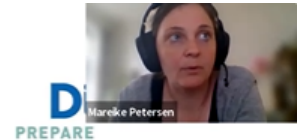


- The first deliverable D5.2 was completed at the end of last year (2021).

- The modelling framework is available under the DiSSCo infrastructure and there is ongoing work together with Task 6.2, the digital specimen object specification. There was a milestone submitted two weeks ago currently under review by the Executive Board, but there will be ongoing work.

Task 5.3 Semantic Enhancement

WP5 - Common Resources & Standards Achievements made



Task 5.3 Semantic enhancement and interoperability (concluded in Jan. 2021)

- D5.4 A best practice guide for semantic enhancement and improvement of semantic interoperability - **completed**
- Concluded in Jan 2021
- Delivered a best practice guide for semantic enhancement and interoperability that is available in the KB.

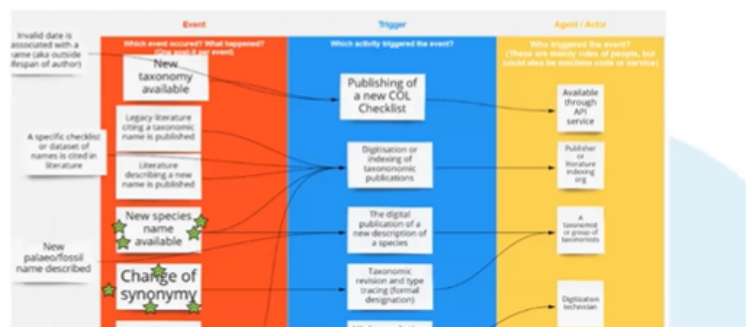
Task 5.4 Modernising technical infrastructure for science data mobilisation and publication

WP5 - Common Resources & Standards Achievements made



Task 5.4 Modernising technical infrastructure for science data mobilisation and publication

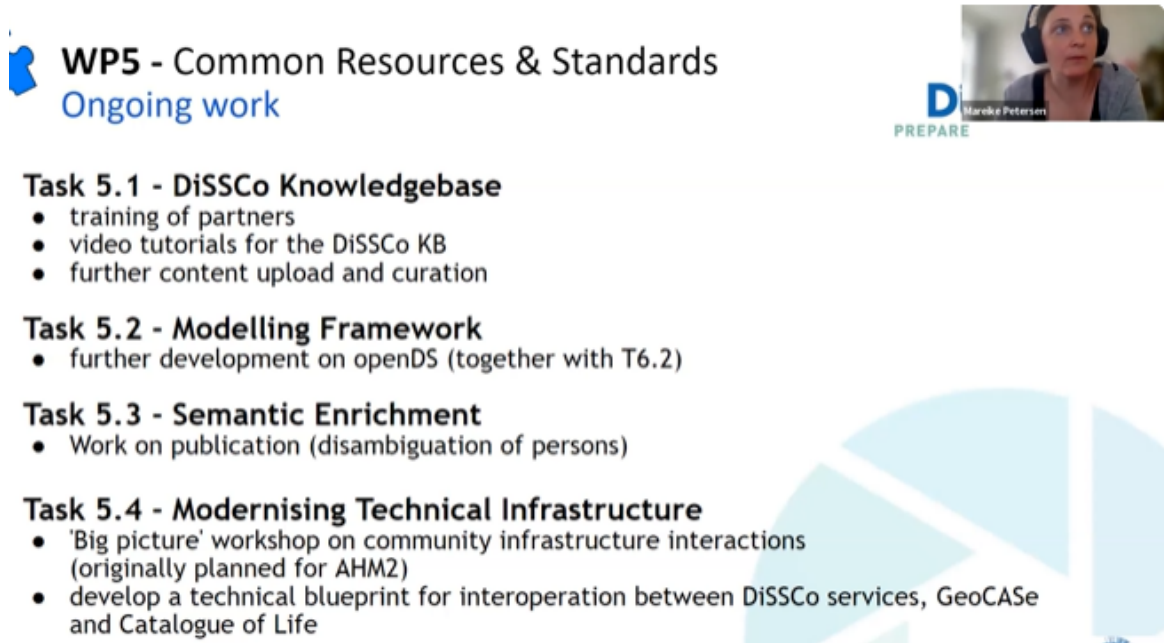
- Event storming workshop (35 participants, Jan. 2022) to identify key events of GeoCASE, Catalogue of Life and DiSSCo services
- exploratory analysis of GeoCASE and CoL API



- No milestone yet.
- The team led by NHM London had a successful event storming workshop at the beginning of 2022 to identify key events of GeoCASE, CoL and other DiSSCo services. It was to identify the kind of reaction expected in other

DiSSCo services when triggered by an event in one of these services. They also made an analysis of GeoCASE and CoL APIs.

WP5, Ongoing work



WP5 - Common Resources & Standards
Ongoing work

Task 5.1 - DiSSCo Knowledgebase

- training of partners
- video tutorials for the DiSSCo KB
- further content upload and curation

Task 5.2 - Modelling Framework

- further development on openDS (together with T6.2)

Task 5.3 - Semantic Enrichment

- Work on publication (disambiguation of persons)

Task 5.4 - Modernising Technical Infrastructure

- 'Big picture' workshop on community infrastructure interactions (originally planned for AHM2)
- develop a technical blueprint for interoperability between DiSSCo services, GeoCASE and Catalogue of Life

- Although two of the tasks are already completed there's also ongoing work in those.
- Task 5.1 DiSSCo Knowledgebase: There is additional training and tutorials on how to use and upload content. Further exchange with other WPs to identify how to make use of the KB, and how to integrate it into the overall DiSSCo architecture.
- Task 5.2 Modelling Framework: There is further development going on with Task 6.2
- Task 5.3 Semantic Enrichment: The team is working in close collaboration with a TDWG Task Group on a publication on disambiguation of persons.
- Task 5.4 Modernising Technical Infrastructure: There was a big picture workshop originally planned for AHM2 to consider the interaction of other big RIs with DiSSCo services but it has been postponed. The team is planning to develop a technical blueprint for cooperation between DiSSCo services, GeoCASE and CoL.
- All tasks will be completed by the end of the year. There's two more deliverables in Task 5.2 and 5.4.
- The DiSSCo KB team is still available and will give a presentation at SPNCH this year to reach out to a wider community for the usage of the KB.

Question (Wouter Addink): It would be good to create a plan or service level agreement for the tooling created in the project, especially the KB and modelling framework. Are you planning to do further work on this?

MP: There was a request by WP4 especially regarding the costing of the different tools, what we expect. This will be done in the course of this year.

d. WP6, Technical Architecture and Service Provision, Claus Weiland, SGN



Task 6.1 CMS systems interoperability and harmonisation (MfN)


- Deliverable 6.1 *Harmonization and migration plan for the integration of CMSs into the coherent DiSSCo Research Infrastructure* finalized
- DiSSCo Event Storming Workshop (+60 participants) involving a multitude of stakeholder groups like CMS developers/vendors, curators, data federations and researchers
- openRefine based prototype to link local collection data to the DiSSCo Digital Specimen architecture (part Milestone 6.1)



Task 6.1 CMS Systems Interoperability and Harmonisation (MfN)

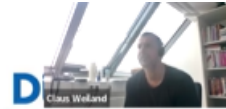
- This is a comprehensive deliverable on the harmonisation and migration of CMSs into the core DiSSCo architecture called DS arch and is finalised already. This is based on preliminary work in an Event Storming Workshop involving 60+ participants representing many stakeholders (CMS developers, vendors, researchers, curators, data federations and researchers).
- Now working towards the milestone which is to implement a group of prototypes of the bidirectional links to DS arch. There is already one in place, a simple file-based collection management tool based on OpenRefine which leads to Cordra. An example is shown in the lower left.
- These developments and all other prototypes mentioned in this talk are demonstrated more comprehensively in the Thursday session started at 09:00.

Task 6.3 Technical interface requirements of the end-user services (Naturalis)



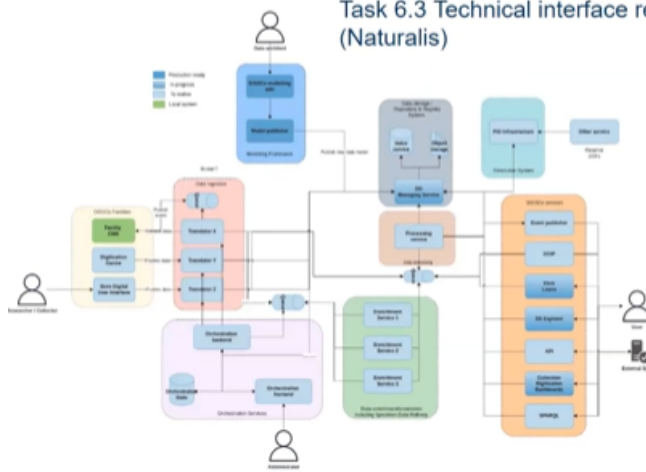
WP6 - Technical Architecture & Service Provision

Ongoing work




PREPARE
Clara Weiland

Task 6.3 Technical interface requirements of the end-user services (Naturalis)



© 2023 / Clava & Tarhuvinnu Stream

- Major update of the design of DS arch and the embedded service ecosystem (lead S. Leeflang, W. Addink & S. Islam)
- Developed fundamental distributed event- and stream-processing infrastructure (DS infra) based on Apache Kafka.



- This is a major update of the design of the Digital Specimen architecture and the embedded service ecosystem led by Sam Leeflang who will give a keynote on Thursday together with Wouter Addink and Sharif Islam.
- The new layout is shown on the left. We have a complex circuit now based on event- and stream-processing infrastructure called DS Infra leveraging Apache Kafka. In the session on Thursday Sam will deconstruct this complex circuit and explain how everything fits together. This is based on work done before in ICEDIG, and first half of DPP, and a publication by Alex Hardisty published in July 2021 on PIDs.

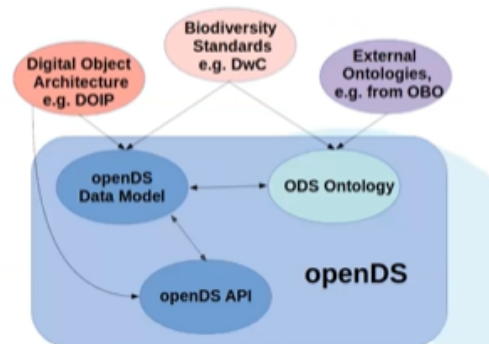
Task 6.2 Evaluation of the DiSSCo Architecture and Task 6.4 Embedding DiSSCo in the Technical Landscape

WP6 - Technical Architecture & Service Provision Ongoing work



Task 6.2 Evaluation of the DiSSCo Architecture & Task 6.4 Embedding DiSSCo in the technical landscape

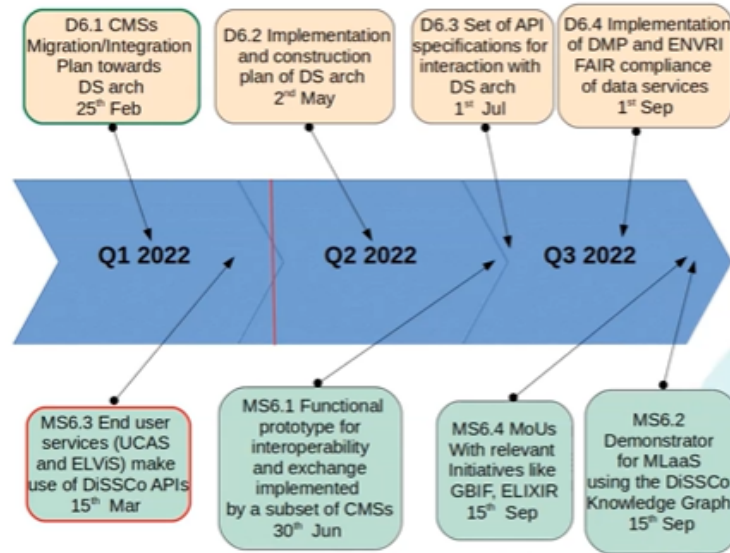
- Published prototype demonstrating the integration of Machine Learning algorithms and semantic validation in DS arch (part of M6.2)
- Approach is embedded in the wider framework of the FAIR Digital Objects Forum (FDOF, <https://fairdo.org>)
- Ongoing development (together with T5.2) of the openDS specification to implement Digital Extended Specimens and other curated objects like media objects as typed FAIR Digital Objects



- These two tasks fit well together.
- We published a prototype demonstrating the integration of Machine Learning algorithms in DS arch and semantic validation. This is also covered in a special talk on Thursday.
- The major work of this task pertains to the development of the Open DS specification, which on the one hand is a data model (T5.2), and is developed in close collaboration with David (BGBM). Open DS as a standard is based on various principles including semantic components, ontologies, biodiversity standards, digital object architecture, and DOIP. All this has been embedded into the wider framework of the FAIR Digital Objects Forum which comprises all the developers on this approach. A FAIR Digital Object is an actionable knowledge unit and a standard of the wider data model that we would like to pattern the Digital Specimen after. We are heavily involved in and would like to be a driver of this movement. This is ongoing development, further embedding the digital specimen and other curated objects like media objects and trying to align this with the FAIR Digital Object approach.

WP6 Upcoming Activities

WP6 - Technical Architecture & Service Provision Upcoming activities



- D6.1 is delivered.
- MS6.3 is currently being written, which describes the DiSSCo API interaction with end user services (ELViS, UCAS). UCAS will have a special time slot in the double session on Thursday.
- D6.2, Implementation and construction plan of DS arch, is of particular importance, which is the technical part of the masterplan due on 2 May. It is broadly covered by the new architecture framework of Sam Leeflang and will be finalised after AHM2.
- There are smaller deliverables coming including MS6.1 Functional Prototype. API specifications are covered to some extent with the general architecture. Some of the later ones clustered at the end of 2022 will require adjustments, for example, the MS6.4 covering MOUs is dependent on DiSSCo as a legal entity, so there are not formal MOUs but there is a lot of work being done to align with other initiatives. There is work being done with GBIF to align with their new data model. Linking of the digital specimen model was presented at the Elixir hackathon. Naturalis is very active in the FAIR Digital Object Forum.

WA and CW encourage everyone to go to Session 6 on Thursday to learn more about WP6 activities.

WA thanks WP leaders for sending their slides in time.

7. Open Discussion

WA proposes several topics for open discussion:

- Major concerns timewise or content-wise (potential risks affecting delivery of the expected outcomes). This is most important for WP6 that has most of its deliverables still due.
- Further needs for coordination between the WPs and WPs in the other stream, or between DPP and other DiSSCo-linked projects (time constraints, different approaches, other)
- Detected gaps in the DiSSCo Master Plan. The Master Plan discussions are just beginning and will continue on Friday.

In relation to considering these topics, WA requests Niels Raes to present slides presented in the last GA meeting covering the four pillars on which DiSSCo's strategy will be based.

a. DiSSCo Strategy, Niels Raes

Claus Weiland showed the first infrastructure design which is not entirely operational yet, but data is being mobilised through the infrastructure. So we must develop new priority areas and four have been identified:

- Implementation of a DiSSCo digitisation program with the goal to accelerate and lower the barriers for digitisation across European NSCs. (NR draws the analogy of this strategic objective being 'fuel for the engine' because if you have an infrastructure, you need data to operate the infrastructure.) This goal has four strategic objectives.
 - Develop strategies for prioritising digitisation at various levels based on community consensus.
 - Develop open digitisation workflows, training and best practices.
 - Establish and operate regional digitisation centres and centres of excellence.
 - Select and implement the use of annotation tools consistent with capabilities of the Specimen Data Refinery (SDR) and integrate with other developing technologies and resources where appropriate (AI, robotics, citizen science).

- Implement DiSSCo Access programme with the goal to create, measure and support multimodal standardised routes to access collections. This goal has three strategic objectives.
 - Enlarge the scope of ELViS together with a robust access policy and institutional policies.
 - Establish an inclusive physical and remote access programme (triage physical access requests based on digital availability of collections, that is, more complete and detailed levels of digitisation will probably require fewer physical visits).
 - Attract users/requests external to our community (e.g., industry, cultural heritage).
- Implement DiSSCo Capacity Building programme with the goal for users and partners to be confidently supplying/using data through DiSSCo and making use of DiSSCo services. This goal has three strategic objectives.
 - Partners understand their level of digital maturity across a range of DiSSCo's services and have targeted areas for improvement.
 - Training availability within the DiSSCo consortium to build in-house capacity whenever needed.
 - Continue to play a leading role in refining and implementing standards to ensure that DiSSCo's data and services are FAIR and impact research and scientific/societal innovation.
- Implement DiSSCo e-Services programme with the goal to develop e-Services based on user needs defined through stakeholder engagement. This goal has four strategic objectives.
 - Facilitate a novel community curation model (UCAS) that pulls together expertise from a wider pool of researchers and taxonomists.
 - Achieve FAIRness: all data having PIDs and machine actionable metadata.
 - Automated specimen enhancement services, implementing AI technologies to increase the volume and improve the quality of specimen-linked data.
 - Make e-Services sustainable through DiSSCo's business model, ensuring human capacity and continuous service management.

b. Open Discussion, Wouter Addink

So if you think of these strategic priority areas, is there anything in the remaining part of the project in the technology stream that is missing or that we need to strengthen to ensure coverage of these areas by the end of the project?

Vince Smith: Niels' presentation is nice and clear. In considering the first objective of the first goal 'Develop strategies for prioritising digitisation at various levels based on community consensus' and of Wouter's request to think about potential risks affecting delivery, VS would like to think broader DiSSCo and not just DiSSCo Prepare. VS feels digitisation needs to be driven much harder and questions whether the wording on the first goal of the first objective regarding developing strategies for prioritising digitisation is correct? He feels that is a major risk. There should be much higher rates of digitisation among our national collections.

NR: Are you worried that consensus cannot be reached on what should be prioritised or just speeding up the process of digitisation and the financial means to speed it up?

VS: All of the above. We talk a lot about prioritising digitisation and what we should prioritise, but the reality is that we have to do it all at some point. So the question is, what is going to help at the national level to accelerate digitisation, and will that strategic objective of DiSSCo help with that? I don't have an answer but am posing the question. We have to drive a lot more digitisation and will the way that objective is described help us do that?

NR: Maybe a workshop would be better. It can't be summarised in two minutes and requires discussion.

VS: Agrees with NR on a workshop. Different nations are responding/addressing digitisation in different ways. VS would like DiSSCO CSO to support nations in their efforts to raise that national profile and what would that take?

NR: And also alignment with EC Biodiversity Strategy 2030 to see what needs to be prioritised there.

VS: That's part of it, but national priorities will be driving it because it's national government money. So how do we build on national priorities? Some are shared at the European level like the Biodiversity Strategy, but many of them are national. So how do we press the national buttons to get people

engaged? Is there commonality between the nations in terms of how we do that?

WA: I see several aspects of the discussion that we need to discuss more and so we need to plan a dedicated workshop for this.

Henrik Enghoff: This discussion is extremely relevant to WP1 especially Task 3 which is about prioritising digitisation. And this deliverable will contain recommendations to DiSSCo and we may be talking about coordinating not only at DiSSCo and national levels. Tomorrow morning (Tuesday) is a session on WP1 and we plan to give people a rough draft of D1.3 for you to give your thoughts and ideas.

Stefaan Pijls: Regarding the first goal and the third strategic objective 'establishing regional digitisation centres and centres of excellence'. SP is working on D4.4., pre-commercial procurement, how to fund development and find and apply funds. He questions if the regional centres are within the partnership of DiSSCo? That is, would some universities/institutions be delegated the task or will DiSSCO become the digitisation centre to be able to physically digitise specimens even sent in by privates?

WA: As far as I know, the vision is to have the National Nodes develop that. It would be at a national level and not as part of DiSSCo overall.

WA: We need to focus on the remainder of the project. We're generating a lot of metadata in DiSSCo and DiSSCo-linked projects, and are creating tools (dashboard) and we have a draft data management plan that says all the data should be part of the FAIR digital infrastructure and all the services that we deliver need to be developed on top of that. But now we see that all these data are disconnected from the plans towards the FAIR Digital Object infrastructure. There's a lot of isolated datasets. And the maintenance of this data over time is also an issue. So we need to spend more effort developing plans to further manage the metadata being generated. Also from WP1 we see that the biggest group of user needs has to do with collection and specimen metadata, so we need to develop plans to better take that into account. Otherwise the data we've collected will become outdated very quickly.

NR: Are we planning to use CETAF passports at the collection level?

WA: Yes

NR: Can we update that metadata there?

WA: Yes

NR: That will require regular maintenance but the infrastructure is there.

WA: There's a plan for that in WP8.5 which is outside the technology stream but in that plan, there is currently no connection between the CETAF register (institutional specialisation metadata) with the DiSSCo infrastructure. I think there should be.

There are no further comments and the Science and Technology Stream meeting is adjourned.

Science Data and Knowledge

George O. Strawn
NASEM

- *One computer and one database*
- Open Science
- Software machines: compilers/interpreters, the Internet, FAIR Digital Objects
- DiSSCo
- *Syntax machines and semantic machines*
- Knowledge, Information, and Data
- Knowledge located by Data
- Knowledge computed from Data

Open Science

- 17th Century Open Science meant publishing articles describing science results
- 21st Century Open Science means “sharing” all science results: articles, data, software, workflow, etc
- But “sharing” all science results includes planning the sharing before the experiment, not at the end of it. And sharing presumes having/developing the necessary infrastructure
- The shared outputs must be machine readable and (where possible) machine actionable
- *The old open science was a child of the printing press. The new open science is a child of the Computer and the Internet.*

Software Machines

- Computers are hardware machines
- Computer language Interpreters are software machines that can turn different computers into the *same type of computer*
- The Internet is a software machine that can turn different hardware networks into the *same network*
- Digital Object Interface Protocol (DOIP) is a software machine that can turn different databases into (almost) the *same database*

The Internet Experience

- The US Advanced Research Projects Agency created a computer network (1965-1985) that could (first) interconnect computers of all manufacturers and (then) interconnect all computer networks (ARPAnet)
- The US National Science Foundation developed the Arpanet research project into a network infrastructure for US higher education (NSFnet: 1985-1995)
- NSF privatized and commercialized the NSFnet into the Internet (1995-)

Computer1

Computer2

|

|

Network1 – Router — Network2

|

Forwarding Table

The Web and the primacy of software

- The Web was designed to share documents among people
- The http and html software determined what the documents should look like and how to transfer them between computers
- That is, the software restricts the form of the data

Computer1 — Web Client

Computer2 — Web Server

HTTP

HTTP

|

|

Network1

— Router —

Network2

|

Forwarding Table

FAIR Digital Objects: FDOs

- FAIR: Findable, Accessible, Interoperable, Reusable
- DO: Data, metadata (including type and operations), permanent ID (PID)
- Data = data+articles+software+workflows+...
- *Make data Fully AI-Ready*
- *Advancing Data from output to infrastructure*

FDOs and the primacy of data

- FDOs are self-describing and not determined by the DOIP software
- Current efforts to combine data from different sources usually requires 80% of the time for “data munging” leaving only 20% of the time for data analysis
- An immediate goal for FDOs is to swap those percentages
- The ultimate goal might be to reduce data munging to zero

Computer1 — Database1

Computer2 — Database2

DOIP

DOIP

|

|

Network1.

— Router —

Network2

|

Forwarding Table

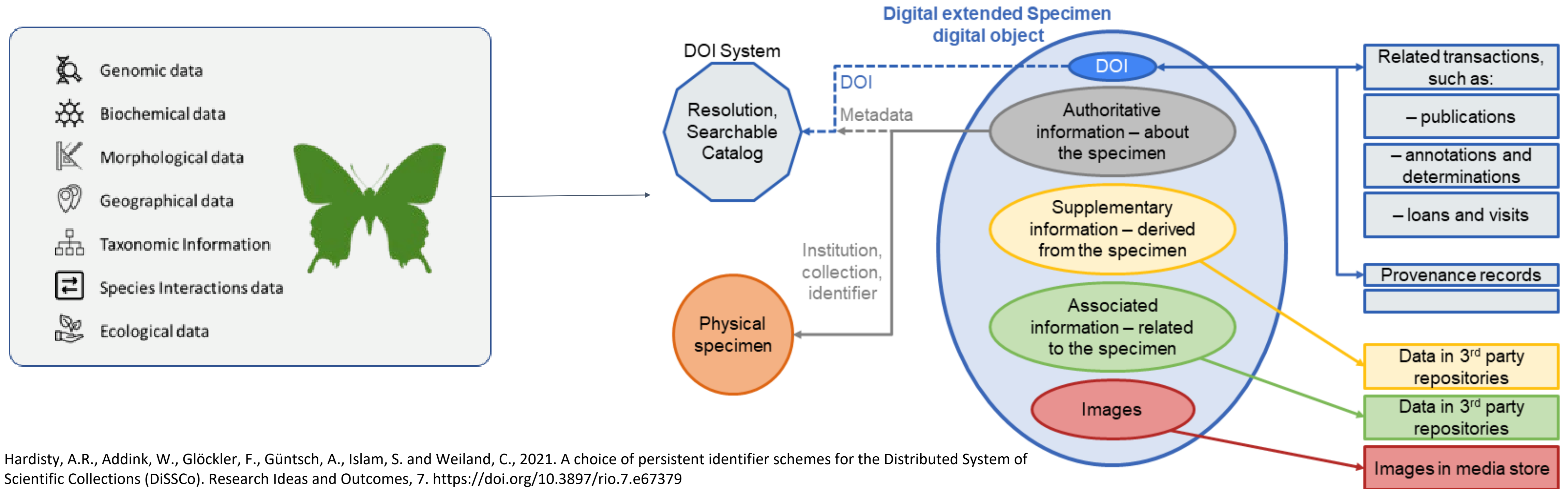
The three phases of IT

- 1950-1995. Many computers, many databases
- 1995-2030? One computer, many databases
- 2030?- One computer, one database

Science Data Infrastructure

- Clouds, Commons, or what? And when?
- Who pays?
- Where to put data less important (except for nationalistic issues) than *how to put it* (ie as FAIR data)

The Big Picture: FAIR Digital Object and Digital Specimen



Hardisty, A.R., Addink, W., Glöckler, F., Güntsch, A., Islam, S. and Weiland, C., 2021. A choice of persistent identifier schemes for the Distributed System of Scientific Collections (DiSSCo). Research Ideas and Outcomes, 7. <https://doi.org/10.3897/rio.7.e67379>

Identify

Open Digital Specimen
(a specification that is concerned with the logical structure and content of Digital Specimen)

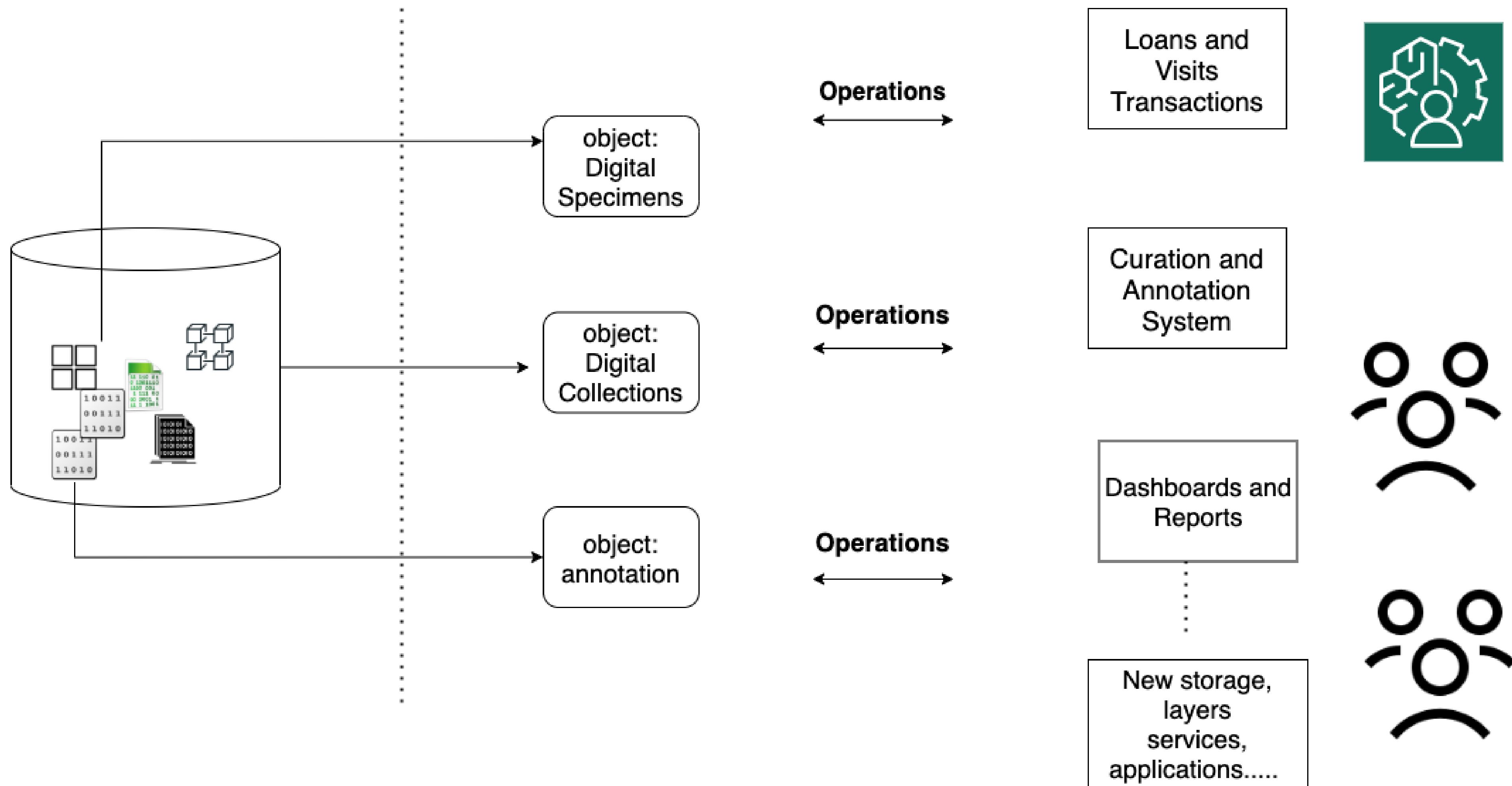
Digital Object Identifiers
Example DOI: 10.22/1AF3-WR2
10.22.01/1AF3-WR2

Describe

Semantics and Attributes

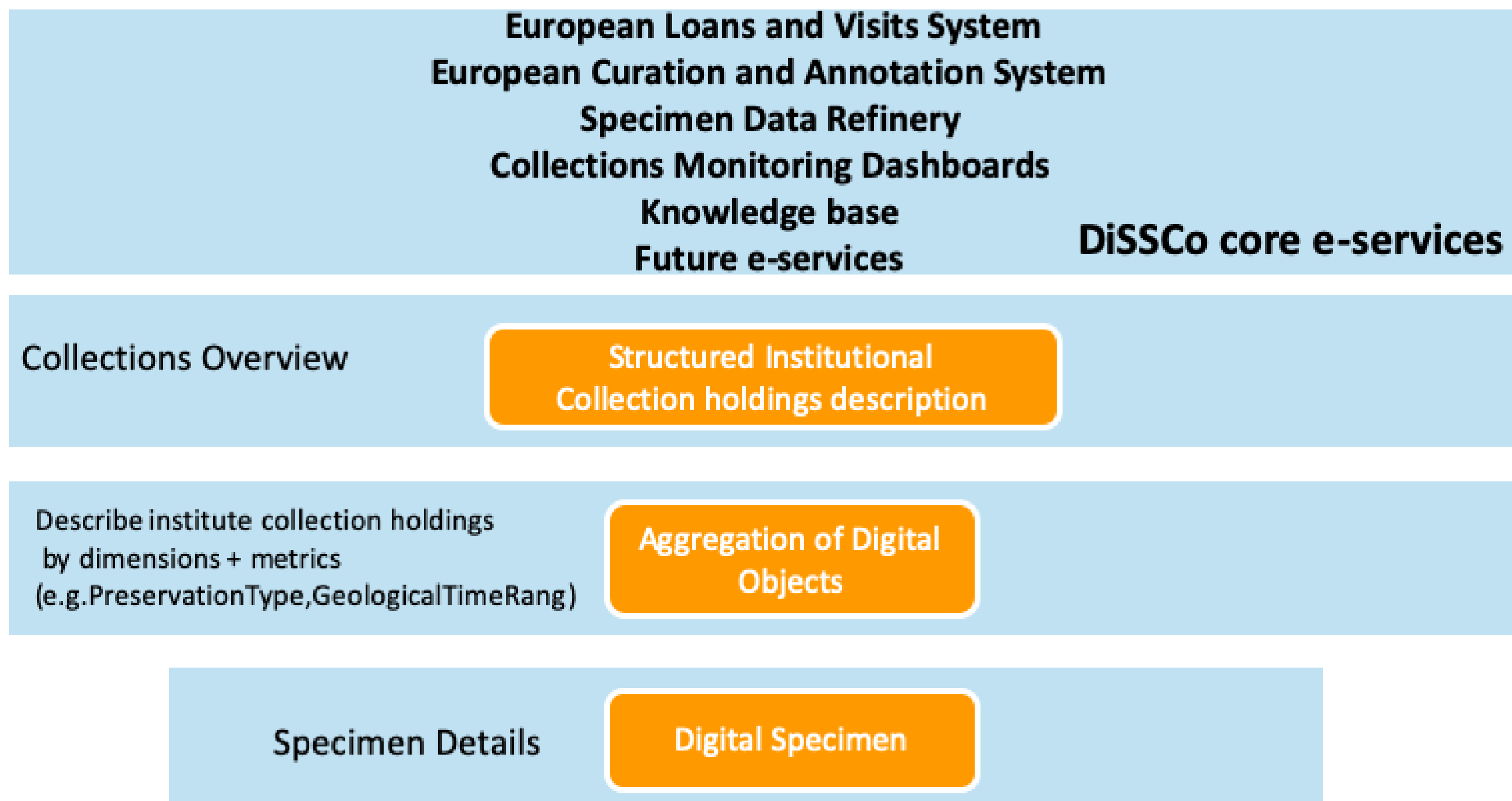
Use

Linking and Operations
(such as data enrichment, machine learning)



**A Digital Object oriented approach for Natural Science Collections data:
 Vision for an endless number of levels of abstraction**

DiSSCo Building Blocks



Science Data to Knowledge

- Humans turn information (meaningful data) into knowledge (we are semantic engines)
- Computers can turn data into knowledge (they are “only” syntactic engines)
- What are the types of knowledge?

Data and Information

- **Data** is stored, communicated, and transformed by computers
- **Information** is *meaningful* data (words, sentences, articles, etc)
- Humans (currently) are the **only** semantic engines (ie, have the ability to understand meaningful information) (see Floridi).
- Hence there is no information in computers without humans

Knowledge

- **Knowledge** is a familiarity, awareness, or understanding of someone or something, such as facts (descriptive knowledge), skills (procedural knowledge), or objects (acquaintance knowledge).
- Knowing that: eg, knowing that mosquitos transmit malaria
- Knowing how: eg, knowing how to “fold a protean”
- Knowing of: eg, knowing how to recognize a face

Compute-enabled human know-that

- The web consists of billions documents hyperlinked together (explicit knowledge)
- Web search (eg, Google) is enabled by creating a data structure that links documents and their contained words
- A semantic engine, eg, a human, specifies *meaningful* words and a search engine computes a list of documents containing those words
- The human scans the document list for *meaningful* documents
- Web search enables humans to find knowledge needles in information haystacks

More Compute-enabled know-that

- **Medline** consists of tens of millions of titles and abstracts of biomedical research articles
- **Sementic Medline** can process each abstract to find its “key sentences,” those which describe the results reported in the article
- If the key sentences are transformed to the form *subject relation object* and if those words are restricted to a *controlled vocabulary* (eg, UMLS), then the set of all key sentences is called a *knowledge base* (but not because it *contains* knowledge)
- The Semantic Medline knowledge base is an experimental example of **nanopublications**

Semantic Medline know-that example

- Aging men have decreasing testosterone and aging men have increasing sleep problems. Are these two facts related?
- Sparql Search query: *testosterone relation1 word* and *word relation2 sleep_problems*
- Search results: *testosterone inhibits cortisol* (in article1) and *cortisol causes sleep_problems* (in article2)
- A new science hypothesis has been *computed* from science literature
- The Semantic Medline search enables humans to find *distributed* knowledge needles in the Medline information haystack

Computer know-how and know-of via Deep Learning

- **Intelligence** (real and artificial): the ability to acquire and apply *knowledge*.
- **Deep learning** (aka artificial neural networks) can perform the skill-and object-types of AI
- Language translation and speech-to-text are examples of skill AI
- Protein folding: the best example yet of skill AI. “Google’s deep-learning program for determining the 3D shapes of proteins stands to transform biology, say scientists.”
- Reading X-rays: deep learning object-type AI software is more accurate than doctors

Know-how/of without know-that?

- The computer does *not* consciously *know* what I mean
- But the computer *can unconsciously do* what I want—in an increasing array of tasks that seem to require intelligence
- Will we be happy with increasing know-how and know-of without conscious know-that?
- Homo Deus by Harari

Science Data and Knowledge

- Computing applications like Google and Semantic Medline can help us *find* factual knowledge — compute-enabled human know-that
- Computing applications like Deep Learning can *create* procedural and object knowledge for us — computer know-how and know-of
- Since the second half of the 20th century, the destinies of data and knowledge have become increasingly bound together by computing.

DiSSCo

- DiSSCo could do for data what the Nsfnet did for networking
- That is, while you're implementing a solution for a specific science data application, DiSSCo might become the model that other (all?!) data applications adopt
- Thus DiSSCo could lead to the Internet of FAIR Data, aka the world of “one computer and one database”
- Or as Dimitris has put it: FDOs are like the dark matter. They will hold the universe of knowledge together.

- Open Science by Design. <https://www.nap.edu/catalog/25116/open-science-by-design-realizing-a-vision-for-21st-century>
- Digital objects. <https://cacm.acm.org/magazines/2010/12/102140-the-long-quest-for-universal-information-access/fulltext>
- Floridi. https://www.amazon.com/Fourth-Revolution-Infosphere-Reshaping-Reality-ebook/dp/B00KB1BRSM/ref=sr_1_3?dchild=1&keywords=Floridi&qid=1625848342&sr=8-3
- Knowledge Graphs. <https://cacm.acm.org/magazines/2021/3/250711-knowledge-graphs/fulltext>
- Computable Knowledge. <https://www.wolframalpha.com/docs/timeline/computable-knowledge-history-6.html>
- Semantic Medline. <https://skr3.nlm.nih.gov/SemMedDB/Rindflesch2011.pdf>
- Nanopublications. <https://www.labfolder.com/nanopublications/>
- <https://readwrite.com/2019/11/02/machine-learning-for-translation-whats-the-state-of-the-language-art/>
- Alphafold. <https://www.nature.com/articles/d41586-020-03348-4>
- Homo Deus. https://www.amazon.com/Homo-Deus-Brief-History-Tomorrow-ebook/dp/B01BBQ33VE/ref=tmm_kin_swatch_0?encoding=UTF8&qid=1626019546&sr=8-1

“<https://ec.europa.eu/research/participants/documents/downloadPublic/TkJoMnRwMm5BK2wrUSsydTV2TDFhQnlhaXRiSkZORTRYMEllaTVpc2d6NUV0eGhsKytoL1pnPT0=/attachment/VFEyQTQ4M3ptUWVyTExY YW56cmNwU01kN21INm0xZVM=> a quote here.”



Instructions for the AHM2 meeting

- The sessions will be recorded and available after the All Hands meetings;
- By default, all attendants are muted from the start;
- At the beginning of the session, the team must decide who will be the note-taker and chat moderator, if necessary;
- To save the chat, the conveners must download it before the end of the session;
- **Link to the general sessions :**
<https://us02web.zoom.us/j/89644120122?pwd=UDhtK0xTY3d1bVRubXprVUZ2T050UT09#success>
- **Agenda:**
<https://docs.google.com/spreadsheets/d/1bUiV8nG98efVlaKMpyDEMIhbErjBqjce/edit#gid=648015891>

1



Specific zoom link:

<https://us02web.zoom.us/j/84042703142?pwd=SktqTXpad3VEaEtsZUVrZjdqaWthQT09>

ALL HANDS MEETING – AHM2 Work Package 3

4 March 2022

Helen Hardy & Lisa French
**The Natural History
 Museum London**



AH1 / Business stream

2

Task 3.1 Skills & Competencies



- Task complete - Deliverable & Milestones available via the Knowledgebase and summary on Binnacle
- Not a new competency framework (though many examples considered)
- But a Digital Maturity Tool - being developed alongside 7.3 policy tool
- And a library of role profiles - being taken forward through WP2
- Also analysed various sources of skills information - consistent use of individual and institutional identifiers will be key moving forward

AHM2 / Business Stream

3

Enhancing the technical, human and process capacity
of DiSSCo institutions

COMPETENCIES,
CAPABILITIES AND
THE DIGITAL
TRANSFORMATION

Binnacle

We need your feedback

The Binnacle aims to have us all up to speed and engaged in the latest developments of DiSSCo Prepare. This makes your contribution particularly important.

Please follow ▶ [this link](#) and leave us some feedback. It will take 2 minutes of your time. Thanks!!

<https://dissco.pageflow.io/competencies-capabilities-and-the-digital->



4

Task 3.3 Secondment practices



Secondment = assignment of someone to a different external or internal team for a fixed temporary period (formal scheme or individual arrangement)

- Exchange and build knowledge and skills
- Deliver defined pieces of work
- Benefits to all participants - DiSSCo secondment would also need to further DiSSCo aims
- Various models for meeting costs

MS 3.9 just being finalised and available very soon!

AHM2 / Business Stream

5

Task 3.3 Distributed working pilot



- As well as secondment, task 3.3 covers distributed team working
- Task defined pre-pandemic - we are all much more expert at distributed working now!
- Task requires a pilot of distributed team working (outside the task - but observed and recorded within 3.3) - envisaged as part of DiSSCo Infrastructure development. Much of that happens later...
- But development of the Digital Maturity Tool and Policy Tool is a good opportunity and will be the main pilot
- We will also look out for other examples and e.g. talk to DiSSCoTech more broadly about working practices

AHM2 / Business Stream

6

Task 3.3 Distributed working pilot



T7.3

We will develop an online checklist tool which allows a DiSSCo Partner to map their institutional policies against the policy requirements of DiSSCo Services to show policy alignment, and for the DiSSCo CSO to see the overall state of policy compliance and gaps across all DiSSCo Partners.

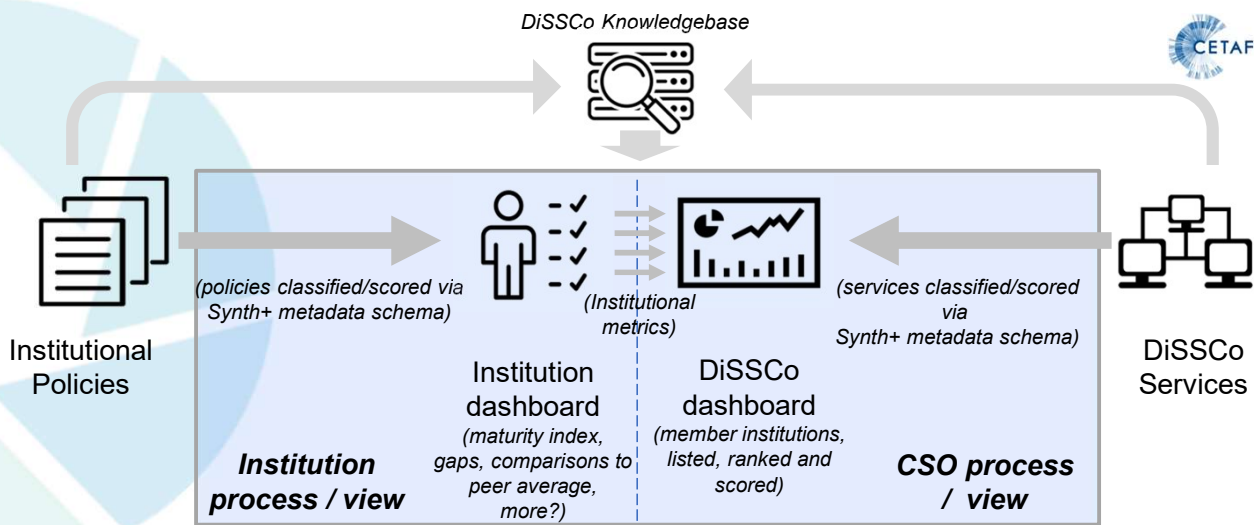
The tool will:

- Support the upload/linkage of institutional policies
- Support deposition of a list of the policy requirements from the DiSSCo CSO for the DiSSCo Services
- Contain a classification of terms (metadata schema) for these policies/services
- Provide the self-assessment interface that allows a user to apply the metadata schema and classification terms to their institutional policies, such that they can demonstrate / self certify alignment with the DiSSCo Service policy needs

AHM2 / Business Stream

7

Task 3.3 Distributed working pilot



AHM2 / Business Stream

8

Task 3.3 Distributed working pilot



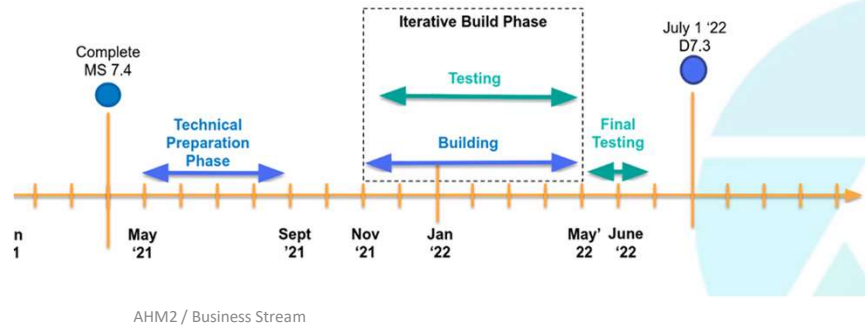
Two Phases

Phase 1:

- User Requirements
- Design Blueprint

Phase 2 Timeline

- Development
- User Testing



Task 3.3 Distributed Working Pilot



The screenshot displays a web application interface for 'Institution 1'. At the top, there is a navigation bar with the DISCO logo and a user profile icon. Below the navigation bar, the main content area is divided into several sections:

- Review Policies:** A list of five policies with status indicators: Policy 1 - incomplete (red), Policy 2 - complete (green), Policy 3 - new updates (green), Policy 4 - complete (green), and Policy 5 - incomplete (red). A 'Start a new policy review' button is located at the bottom of this section.
- Connected Institution Policies:** A table showing details for three policies (Policy A, B, and C) with columns for Name, ID, and Last updated. A 'Current policy statement' button is also present.
- Institution dashboard?:** A small bar chart showing data for five options (A, B, C, D, E).
- Applicable Policies:** A list of three policies (Policy 1, Policy 2, Policy 8) with brief descriptions and links to view details.

On the left side of the interface, there is a sidebar with a menu containing 'Dashboards', 'Policies', 'Institutions', and 'Log in / out'. Below the menu, there is a 'Policy dashboard subset?' section with a bar chart and an 'Explore dashboards' button. The bottom of the page includes the text 'AHM2 / Busine'.

Task 3.2 - Digitisation Website



Task 3.2 aims to create a **community edited digitisation manual**, which will act as a source for DiSSCo digitisation standard operating procedures and best practices.

AHM2 / Business Stream

11

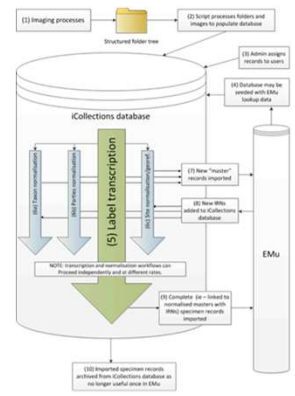
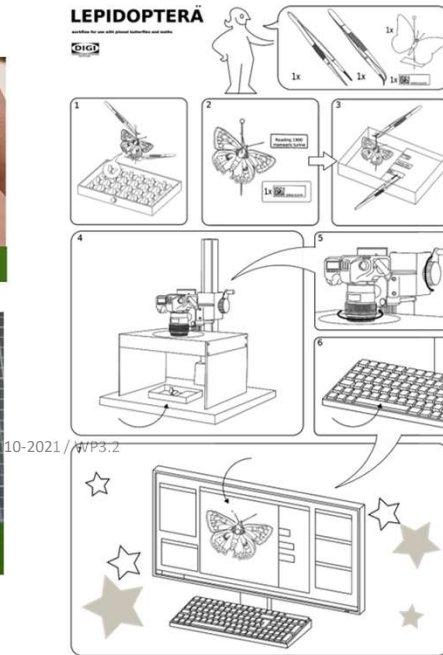
Task 3.2 - Audience



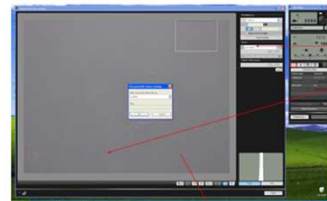
Step one: For each pinned insect specimen, the labels are carefully removed from the pin.



Step two: The specimen is placed in an imaging tray and its labels are placed on a raised stage in their original order. A label with a unique identifier encoded in a Data Matrix barcode is added.



Calibrate white balance using neutral grey card (and repeat it a few other times during the day as ring light will change intensity).



12

Task 3.2: Audience



Audience:

DiSSCo members at maturity level 1&2

National Node institutions at maturity level 1 &2

Source: Atlas of Living Australia <https://www.ala.org.au/who-we-are-3/digitisation-guidance/>

13

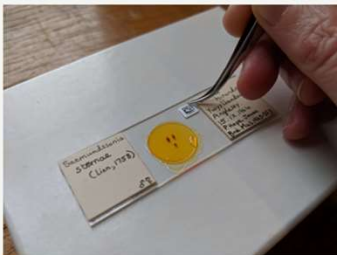
Digitisation Website - dissco.github.io



- Home
- Geological
- Microscope Slides
- Slides - Mass Digitisation
- Pinned Insects
- Vertebrates
- Pre-Digitisation Curation
- Specimen Image Capture
- Electronic Data Capture
- Contributor Guidance

Overview

This page outlines the semi-automated mass digitisation workflow used by the Natural History Museum, London, to digitise its microscope slide collection. It provides a short summary of the workflow developed as part of the ICEDIG project, with more detail to be found in the Novel Automated Mass Digitisation Workflow for Natural History Microscope Slides paper (Allan et al., 2019).



Workflow

Pre-Digitisation Curation

```

graph LR
    A[Take drawer] --> B[Generate taxon and location]
    B --> C[Take label]
    C --> D[Smart label beside relevant slide in]
    D --> E{ }
    E -- Y --> F[Inform curator]
    E -- N --> G[Return drawer]
    F --> G
    
```

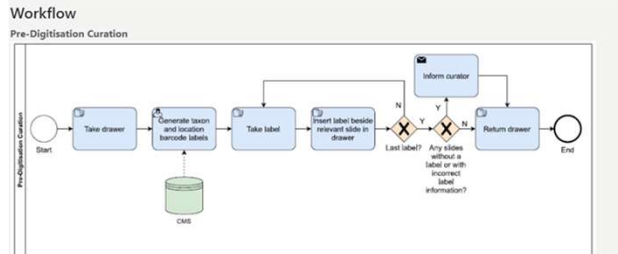
AHM2 / Business Stream

14

Task 3.2 - Guide Types



Workflow Guides: Collections based



The workflow above shows the steps taken in the pre-digitisation curation stage. Drawer location and taxon barcode labels are printed from the Museum's Collection Management System (CMS) (Figure 1a). These are then inserted into the collection (Figure 1b). If there is no label for a taxon, or the label information is incorrect, this information is passed to the curator who then updates the CMS.

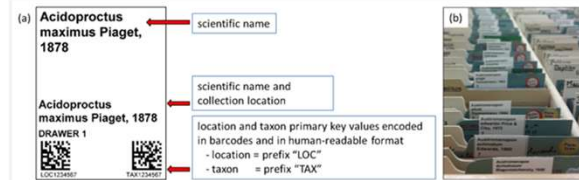


Figure 1: (a) Close-up the specimen from the barcode (b) Close-up the specimen labels inserted into the collection.

Task 3.2 - Guide Types



Best Practice Guides

Minimum Information about a Digital Specimen

The Minimum Information about a Digital Specimen (MIDS) standard will specify the minimum information that is required when providing digital access to specimens. It aims to provide clarity to digitisers about the minimum quantity and quality of information that should be published. There are several levels of digitisation, from basic to extended, with each level outlining the set of information elements that are expected to be present in published digital specimen data. This standard is still under development, and more information can be found on the Biodiversity Information Standards (TDWG) website.

Transcription Rules Example

The Natural History Museum, London digitised its botanical type collection as part of the Global Plants Initiative, which was supported by the Andrew W. Mellon Foundation. Georeferencing was not part of the initial project, and a new project was set up in to georeference the botanical Chinese type collection.

During the georeferencing process, it became clear that some of the existing transcribed information did not match the specimen label and up to 80% of the locality information originally entered was inaccurate. We published a paper in 2020 which describes our transcription methodology for the new georeferencing project (Lohonyia et al., 2020). For this project, a set of rules were agreed to transcribe the specimens, and one of the flow diagrams we used can be seen below. For more complex transcription projects, it can be helpful to formalise the methodology through flow charts to ensure that all transcribers are able to follow the same process.

AHM2 / Business Stream

BREAK - 10 Minutes



Please take a look at one of the workflow based guides on dissco.github.io if you haven't already (Link will be put into the chat)

AHM2 / Business Stream

17

Task 3.2 - Feedback



- Which sections of the guides do you find most useful?
- Which sections of the guides do you find less useful and/or difficult to understand?

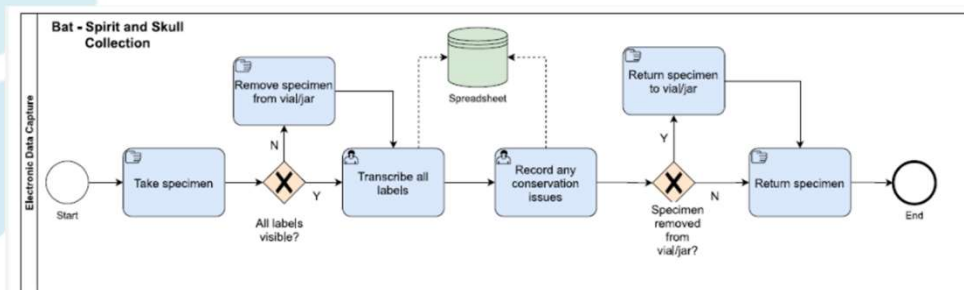
AHM2 / Business Stream

18

Task 3.2 - Feedback



- How easy or difficult is it to understand the workflow diagrams?



AHM2 / Business Stream

19

Task 3.2 - Feedback



- What guides would you like to see included on the site?

AHM2 / Business Stream

20



Discussion

AHM2 / Business Stream

DPP WP3 AHM Information and Minutes

Date: Monday 4th April, 1530 CET.

Pre-Meeting Information

List of needed participants (without which the session cannot be productive).

WP3 members and anyone interested in the digitisation guides website (digitisers who are not directly involved in the DiSSCo Prepare work packages would be welcome to attend this session)

Contributions expected from participants during the session – two sentences max. Also, in case, any homework is needed in the two weeks before the AHM2.

We would like feedback on the digitisation website (<https://dissco.github.io>). Participants can review some of the guides that interest them in advance of the meeting. During the meeting we will discuss the following questions:

- Which sections of the guides do you find most useful?
- Which sections of the guides do you find least useful and/or difficult to understand?
- How easy or difficult is it to understand the workflow diagrams?
- What guides would you like to see added to the site?

Participants will also be invited to discuss topics in the secondment practices milestone, but no reading is required in advance.

List of specific issues that need to be decided and agreements that need to be made during the session.

- T3.3: Feedback on Secondment Practices
- T3.2: Feedback on Digitisation Website (see above for specific questions)

Relevant documents and/or other inputs needed for the session. These documents should be available (communicated and uploaded in Teamwork) at least one week before the AHM. In Files>Categories>AHM2

N/A - see link above

Agenda reflecting the above.

1. Overview of outputs from T3.1: Digital Skills and Competencies
2. Update on T3.3 Secondment Practices milestone
3. Update on Distributed Working Pilots
4. Digitisation Guides Website: Overview

Digitisation Guides (<https://dissco.github.io>) discussion:

- Which sections of the guides do you find most useful?
- Which sections of the guides do you find least useful and/or difficult to understand?
- How easy or difficult is it to understand the workflow diagrams?
- What guides would you like to see added to the site?

5. Conclusions & Next Steps

Please identify a notetaker(s) for the session and inform the coordination team (info@dissco.eu): Laurence Livermore & Lisa French

Minutes

Task 3.1 & 3.3

HH: Summary of work to date

(see presentation -

https://docs.google.com/presentation/d/1DLOB8wHh8XJmFZkhRHx6ljg_qWbNkg8jqYv58H1FiXI/edit#slide=id.g11aa6baae8b_0_45)

Task 3.1 Skills & Competencies



- Task complete - Deliverable & Milestones available via the Knowledgebase and summary on Binnacle
- Not a new competency framework (though many examples considered)
- But a Digital Maturity Tool - being developed alongside 7.3 policy tool
- And a library of role profiles - being taken forward through WP2
- Also analysed various sources of skills information - consistent use of individual and institutional identifiers will be key moving forward

JA: Binnacle (T3.1)

<https://dissco.pageflow.io/competencies-capabilities-and-the-digital-transformation#316456>

Task 3.3 Secondment practices



Secondment = assignment of someone to a different external or internal team for a fixed temporary period (formal scheme or individual arrangement)

- Exchange and build knowledge and skills
- Deliver defined pieces of work
- Benefits to all participants - DiSSCo secondment would also need to further DiSSCo aims
- Various models for meeting costs

MS 3.9 just being finalised and available very soon!

VS: Federal system in the USA, quite formal. Re Secondment, here is the link to some Canadian

(<https://www.canada.ca/en/treasury-board-secretariat/services/staffing/public-service-workforce/secondments-assignments.html>), Australian

(https://nt.gov.au/_data/assets/pdf_file/0010/238717/framework-secondment.pdf) and US example (<https://iocareers.state.gov/main/content/page/federal-employees>) There may be better sources of info on the US Federal programme.

MI: European Union example:

https://diplomatie.belgium.be/fr/sur_lorganisation/travailler_aux_affaires_etrangeres/emplois_vacants/detachements

Marie Curie (funding program) could assist with knowledge transfer and funding.

<https://www.eesc.europa.eu/en/work-with-us/jobs/seconded-national-experts>

Task 3.3 Distributed working pilot



- As well as secondment, task 3.3 covers distributed team working
- Task defined pre-pandemic - we are all much more expert at distributed working now!
- Task requires a pilot of distributed team working (outside the task - but observed and recorded within 3.3) - envisaged as part of DiSSCo Infrastructure development. Much of that happens later...
- But development of the Digital Maturity Tool and Policy Tool is a good opportunity and will be the main pilot
- We will also look out for other examples and e.g. talk to DiSSCoTech more broadly about working practices

Claus Weiland: T3.3 E.g. the DiSSCo Modelling Framework enables the distributed development of the core data model and the corresponding OpenDS specification

<https://modelling.dissco.tech>

MI: <https://www.saragiotis.gr/posts/becoming-a-seconded-national-expert/>

Task 3.3 Distributed working pilot



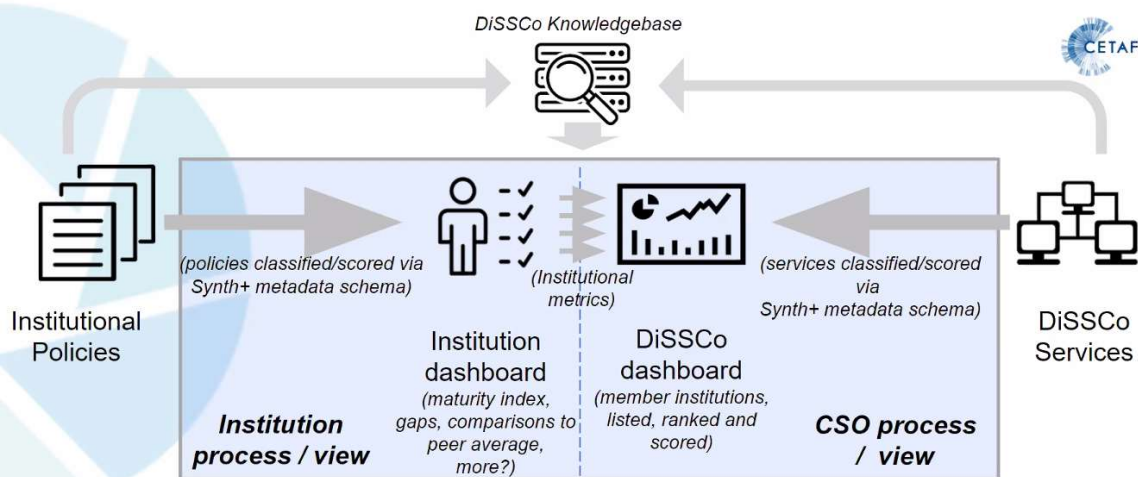
T7.3

We will develop an online checklist tool which allows a DiSSCo Partner to map their institutional policies against the policy requirements of DiSSCo Services to show policy alignment, and for the DiSSCo CSO to see the overall state of policy compliance and gaps across all DiSSCo Partners.

The tool will:

- Support the upload/linkage of institutional policies
- Support deposition of a list of the policy requirements from the DiSSCo CSO for the DiSSCo Services
- Contain a classification of terms (metadata schema) for these policies/services
- Provide the self-assessment interface that allows a user to apply the metadata schema and classification terms to their institutional policies, such that they can demonstrate / self certify alignment with the DiSSCo Service policy needs

Task 3.3 Distributed working pilot



Task 3.3 Distributed working pilot



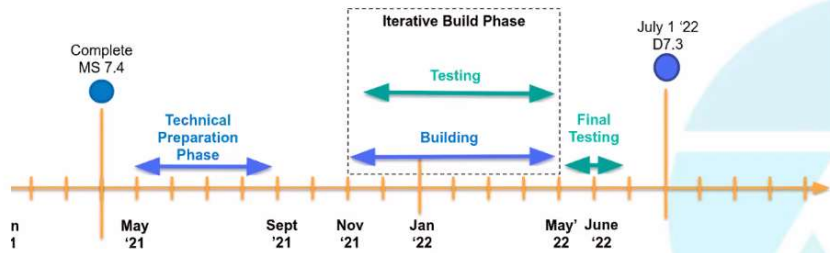
Two Phases

Phase 1:

- User Requirements
- Design Blueprint

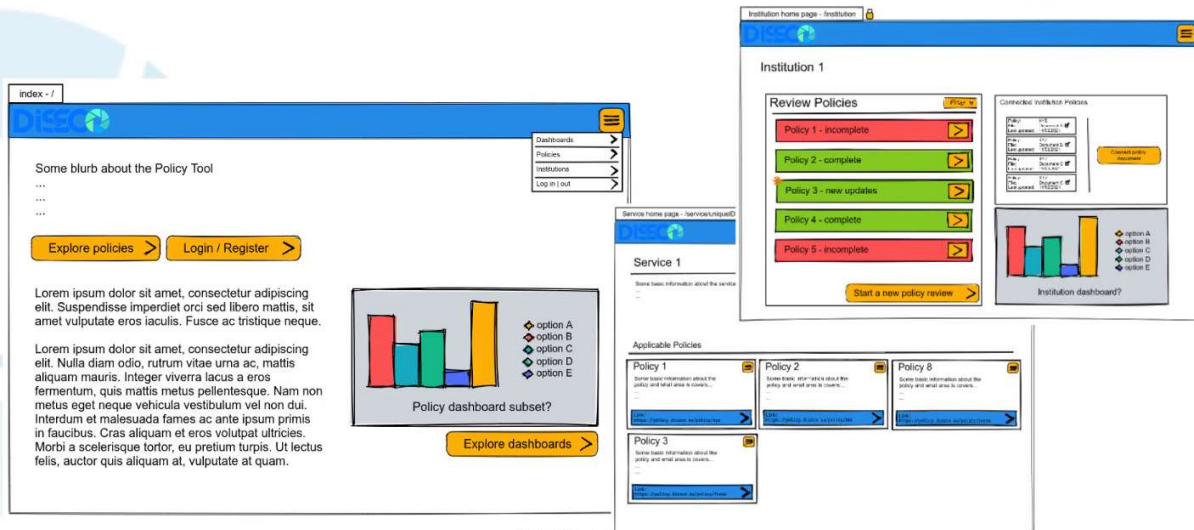
Phase 2 Timeline

- Development
- User Testing



LF: Phase 1 - Requirement gathering from people in the task and potential users, like people in charge of governance or equivalent to registrars. Keen to speak with people using the tool(s). Phase 2 - split work into groups - developers, business analysis, and user testing. Iterative build phase approach.

Task 3.3 Distributed Working Pilot



LF: Examples of wireframes ^

VS: Where are we with tools and survey assessments (Teamwork, Jira)?

LF: Using Teamwork to share updates and project communications. Clunky for sharing documents.

VS: Practical issues with implementation and use.

HH: Milestone about distributed team working will have a general review of tools, and what's effective and less effective. Will include all the ones we are using regularly.

LF: Not just the tool, but the project manager to encourage use, or understand why people are not using it.

CP: Wondering how this task will be merged with Task (2.2) in SYNTHESIS+? How will the output be visible and accessible to other users?

LF: Also using tools for digital maturity assessment. Interface could be used for other tools. Have been attending meetings about metadata schema in SYNTHESIS+. Delay means that the tasks are better aligned in terms of delivery. Metadata schema needs to be flexible and has been designed.

SL: Where is the information behind the dashboard information? Working on institutional information model.

JH: Stored in the tool in a database. Plan to have several APIs that will allow it to be built in a dynamic way. Could be stored elsewhere.

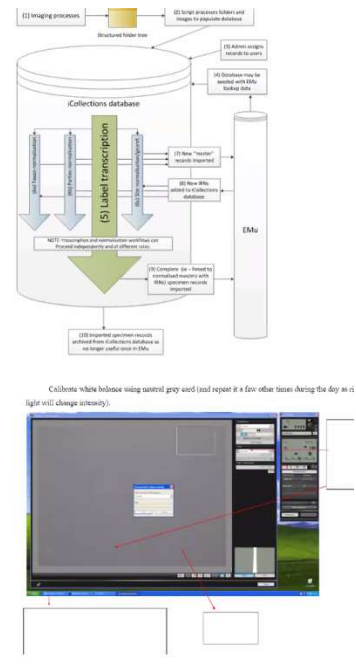
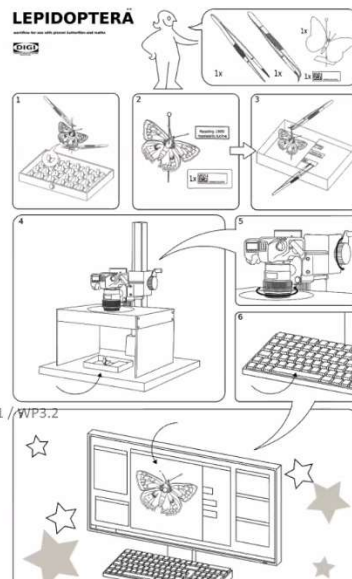
VS: Metadata schema is a tagging scheme. Can tag policies in a controlled way to understand them and know what they contain. It's a dynamic rather than static schema and needs to be adaptable.

LF: Focuses on ELVIS but will require future development.

Task 3.2 - Digitisation Website Notes

LF: A lot of work across projects (ICEDIG, SYNTH) etc to make the workflows more discoverable and accessible.

Task 3.2 - Audience



LF: Audience for SOPs and workflows - left and middle are for public facing, top right is for a scientific audience, and bottom left is used by a digitiser in training.

Task 3.2: Audience



Source: Atlas of Living Australia <https://www.ala.org.au/who-we-are-3/digitisation-guidance/>

LF: Used ALAs digitisation experience pyramid as a reference. Decided to use stage 1-2 organisations for Task 3.2. Did not go with level 0 as they likely need more than a website to get started with digitisation. Website may provide contact information. Did not go higher than level 2 as they are likely to be part of the community and accessing papers.

LF: Created a website that is accessible at <https://dissco.github.io>

LF: Used BPMN to allow people to compare workflows using a standard methodology, and chose the one that works best for them.

LF: Two types of guides: collection-based and best practice guides. Will have many collection-based workflows but only one best practices guide. Will be hard to update this once DiSSCo Prepare ends.

[Shares link for feedback <https://dissco.github.io>]

Feedback:

Tim Claerhout: I reviewed the geology thin section imaging. Most useful: requirements section; Understanding workflow diagrams: very easy with the text by your side as an extra source of information when in doubt. Extra guides: stacking photography of radioactive rocks/minerals. Thanks for the presentation!

Lorenzo Cecchi: Would like more indications of personnel and of speed/throughput of workflow (currently on Lisbon guide seems to show how many people)

LL: We can do this for NHM workflows - but useful to note that rates are variable, but we can present base rate/min/max/sd etc

Julia Pim: Likes the text search.

Claus Weiland: Workflows refer to spreadsheets, but the setups are based on a particular CMS or DB. Comprehensive link to external standards, but may be good to have some examples of spreadsheets etc. Hard to read long lines of processing steps - especially long boxes going left to right. Would be great link to link to real DiSSCo services e.g. SDR or image services. Maybe link to the OpenDS modelling framework. Could also use more colour coding to make things easier to read?

LL: Do have some examples in Virtual Access/Synthesys and from NHM of spreadsheets - if these are useful we may be able to link to some examples. In the next year or so may be able to add data training examples. And/or may be able to link courses in editing and cleaning specimen data.

LF: Want to create a high level diagram that allows you to d

Gianna Innocenti:

Which sections of the guides do you find most useful? THE METHODS

Which sections of the guides do you find least useful and/or difficult to understand? NONE

How easy or difficult is it to understand the workflow diagrams? VERY EASY

What guides would you like to see added to the site? REGARDING THE INVERTEBRATES PRESERVED IN VIALS IN LIQUID AND SPECIMENS THAT CANNOT BE EXTRACTED AND DRIED TO PHOTOGRAPH

Will share a link to a project already underway in another Museum and would like to know more. <http://szn.i.hosei.ac.jp/HTML/index.php> (search one of the liquid collections)

http://szn.i.hosei.ac.jp/HTML/prep_list.php?IdentifiedBy=Salfi

This is an "old" site - but I was wondering if it can be possible to find an easy way to digitise this kind of specimens, avoiding opening the old jar

Sabine von Mering: Please also link to the DiSSCo Knowledgebase where possible/appropriate e.g. for certain documentations (glossary, documentations, standards, etc.).

Carole Paleco: Cannot find specific information in terms of staff dedicated to each of the steps, or a range of the people required in order to process the workflow?

LF: Also links back to the competency work in DiSSCo Prepare.

Stefaan: Quality control - have similar workflows on acceptable, marginal and unacceptable quality. Easy to apply to students/volunteers. Suggestion that certain levels of resolution, or other requirements for their use.

Kari Lahti (in chat): Surely you have thought of having an introductory "chapter" as the first tab? Other than that, it is nice and simple to use. Pictures, especially flow charts should be clickable to zoom. I assume that many figures etc. are still not final because many have low resolution. Great work and gives us a nice example when we are creating guidance within our museum for staff!

LF: On the to do list to have a page to introduce the site better

NR: Many workflows are manual, rather than the larger production lines like Picturae. Do we intend to share those pipeline/conveyor workflows too?

LL: Some partners were not able to share these or not able to share indications of capital cost? We would like to include it if possible.

NR: Have a scientific paper of one that can share

<https://dl.acm.org/doi/abs/10.1145/2644822> and possibly also costs. Good for regional digitisation centres for instance.

LF: Have prioritised workflows that people can start doing, but good to have some information about whether to subcontract out.

SDS: Meise workflow in github already includes an image with Picturae permission of the conveyor

DPP All-Hands Meeting
5 April 2022
WP1 T1.3: Criteria for
Prioritization of digitization

State of D1.3:

“Report on relevant criteria for
prioritization of the digitization”
and planning further work.

Today's agenda

- Introduction; round of presentation if necessary – 10 min
- The structure of D 1.3 – Henrik Enghoff – 10 min
- Digitisation plans and criteria used by partners – Louise Isager Ahl – 5 min
- Search for additional relevant literature – Pierre-Yves Gagnier – 5 min
- A short questionnaire aimed at smaller collections – Lorenzo Cecchi – 5 min
- Online work on draft D1.3 – ALL (one group for each major subject) – 25 min
- Presentation and discussion of outcomes of group works – ALL – 15 min
- Planning next steps – Henrik Enghoff – 10 min
- AOB – 5 min

Draft Synopsis of D 1.3

- Introduction / Background
- Significant previous studies
 - ICEDIG D2.1 (2018)
 - GBIF Report “Accelerating the discovery of biocollections data” (2016)
 - Others?
- Digitisation plans and criteria used by DiSSCo Partners
- Main categories of criteria
 - Relevance
 - Data quality
 - Cost
 - Feasibility
- **Recommendations**

Timeline (deadlines)

- Questionnaire to attract more replies from DPP Partners. **2 MAY 2022**
- Search for further relevant literature. **2 MAY 2022**
- “Digestion” of previous literature, with a particular view to recommendations about prioritization. **2 MAY 2022**
- Conclusions and recommendations extracted from the “Compilation of answers” in M 1.3, including additional replies to new questionnaire. **MAY 2022**
- First draft of D 1.3. **1 JUNE 2022**
-
- Submission of D 1.3 **DECEMBER 2022**

Ongoing work

- Questionnaire to attract more replies. **UNIFI – Lorenzo Cecchi**
- Search for literature. **MNHN – Pierre-Yves Gagnier**
- “Digestion” of previous literature. **UCPH – Louise Isager Ahl/Henrik**
- Digitisation plans & criteria used by DiSSCo. **UCPH – Louise Isager Ahl**
- First draft of D 1.3. **UCPH – Louise/Henrik**

**AND NOW ALL OF
YOU!!!**

Overarching principle for D 1.3

- **KEEP IT BRIEF!**

- We want people to read it
 - not to be scared away by it

- Tables and similar  appendices

From now to submission

- Finish ongoing subtasks
 - Update draft deliverable, including **Recommendations**
 - Possibly several cycles
 - Circulate more advanced draft(s) to entire DPP group
 - Update again
 - Possibly: Make separate “guidelines” brochure / booklet
 - How to publish?
-
- Next Task group meeting: planned for 2 May – postpone?



Establish relevant criteria to identify a prioritisation model for digitisation

DiSSCO Prepare task 1.3

Outcome of Task 1.3

“... a basic model for the prioritisation of digitization of objects held in Natural Science Collections...”

Our aim is to make a useful and helpful tool for all Natural Science Collections in regard to digitisation.



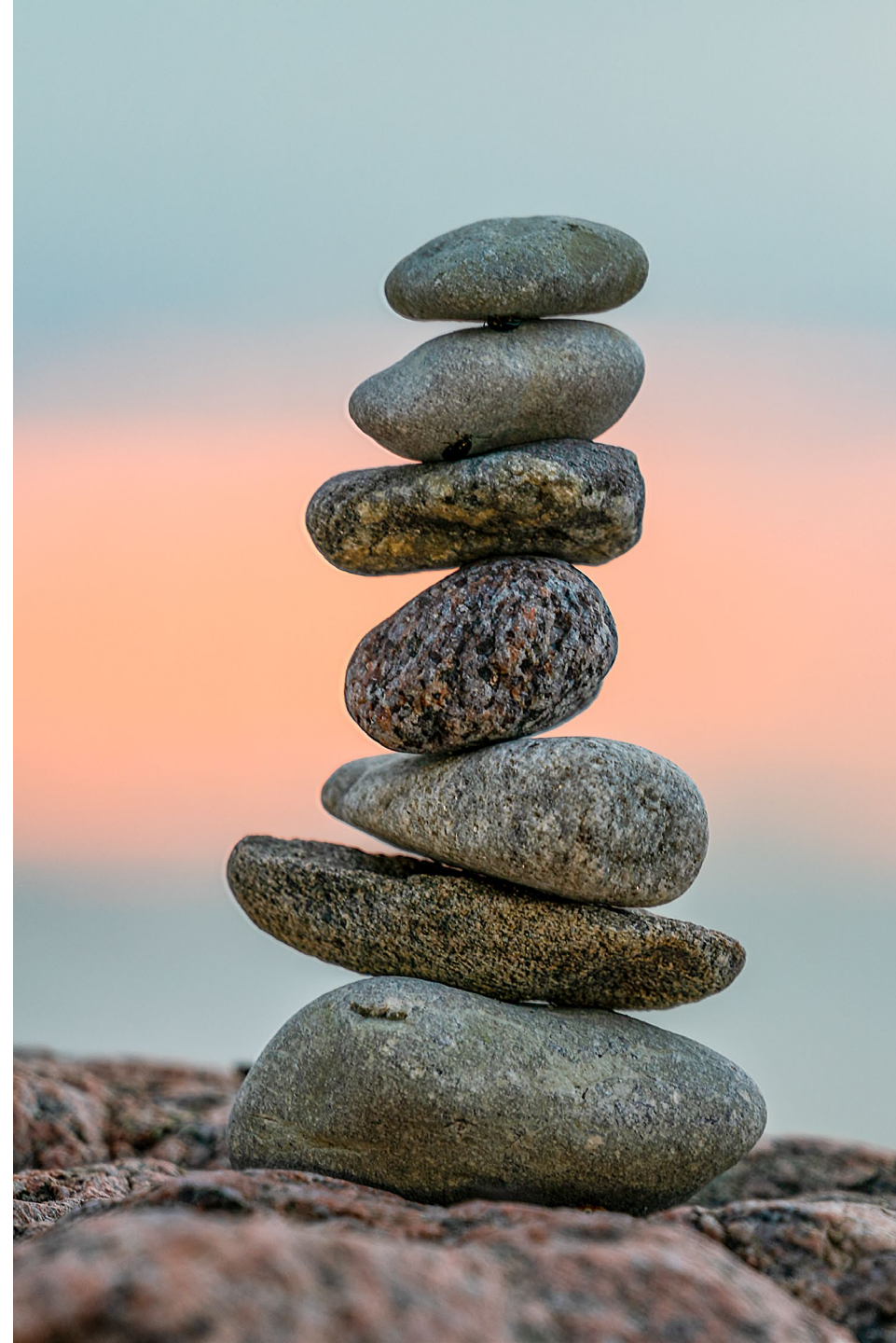
Background

- ICEDIG report
- GBIF pamphlet
- Additional literature searches



Collecting information

- Digitisation strategy of the partner institutions
- Prioritisation criteria employed for digitisation which has already been done or is in progress.
- All data has now been compiled



What have we got?

- Deadline for reply was 20th December 2021
- 24 answers representing collections in 13 European countries
- A 52-page long appendix to the final delivery



Compilation document

Compilation of Prioritisation of Digitisation answers

Table of Contents

Introduction	2
Compilation of information from DiSSCo partner institutions	3
1. Digitisation strategy of the partner institutions (if available, please provide a copy or link).	4
2. Prioritisation criteria employed for digitisation which has been done or is in progress.	7
Highlighting relevant topics	10
1. Do you have a clear overview of the digitisation status of your institution (how many specimens databased, how many imaged, by which procedural standard etc.)?	10
2. Are you monitoring it? How?	12
3. What is your digitization level: specimen level or higher collection unit level? What are your policies with respect to how much data is acquired (databasing/ transcription of specimen information and/or imaging)?	13
4. Do you have a unique management software or more than one? What kind of protocol are you using for the data digitisation (e.g., ICEDIG guidelines)?	15
5. Do you have a procedure for validating data (e.g., accuracy of identification and georeferenced)?.....	17
6. What are you planning to digitise next and what projects are planned for further down the line and why?	18
7. If you do not have a defined plan, what are the circumstances driving you to unplanned digitisation actions (e.g., specimens requested for loan, new accessions, specimens involved in an exhibition, etc.)?	20



Follow up

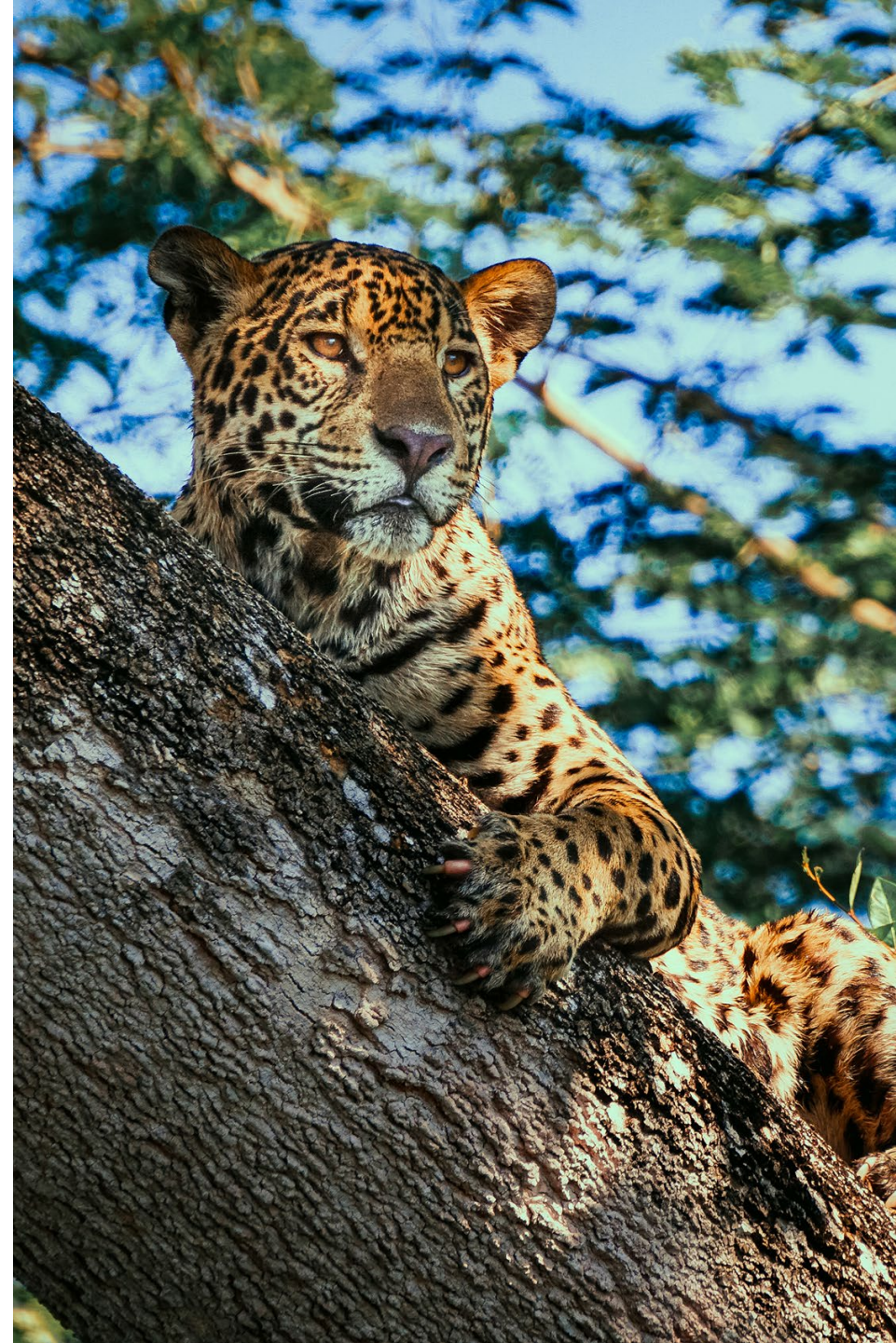
- Short multiple-choice questionnaire
- Utilise the answers to propose the best possible tool/list of recommendations on how to prioritise natural history digitisations





Thank you!

- Royal Belgian Institute of Natural Sciences
- Florence, UniFi
- Natural History Museum of Denmark
- Meise Botanic Garden
- Museum für Naturkunde, Berlin
- Naturalis
- Natural History Museum, London
- Royal Museum of Central Africa
- Estonian Museum of Natural History
- Estonian National Node
- LUOMUS
- Royal Botanic Garden Edinburgh
- Muséum National d'Histoire Naturelle, Paris
- KEW
- National Museum of Natural History, Luxembourg
- Natural History Museum of Rotterdam
- Natuur Museum Brabant
- Arctic University Museum of Norway
- MAH
- MACBH
- MAFH
- MNCN
- UCME
- Herbarium Gothenburg



Contact

At the **Natural History Museum of Denmark**

Henrik Enghoff (DPP Task 1.3 lead)

Henghoff@snm.ku.dk

Louise Isager Ahl (DPP Task 1.3 admin.)

Louise.ahl@snm.ku.dk



All Hands Meeting 2

Presentation of the search for references of interest in digitisation
prioritisation process

April 4th 2022

DiSSCo Prepare WP1 T1.3



Funded by the Horizon 2020
Framework Programme
of the European Union

AHM 2 Session WP1 – T1.3 Establish relevant criteria to
identify a prioritisation model for digitisation

Previously on IceDig :

D-2.1 Icedig inventory of criteria for prioritization of digitization of collections focussed on scientific and societal needs-compressed	20 references up to 2013
D-2.2 Prioritising scientific and societal needs for data of private collections	10 references up to 2018
D-2.3 Icedig - Design of a collection digitisation dashboard	10 references up to 2018
D-3.1 Quality Control methodology for digitisation operations	120 references up to 2019
D-3.2 Mass-imaging of microscopic and other slides	16 references up to 2018
D-3.3 State of the art and perspectives on mass imaging of skins and other vertebrate material	24 references up to 2019
D-3.4 State of the art and perspectives on mass imaging of liquid samples	13 references up to 2019
D-3.5 State of Art digitisation of pinned insects	23 references up to 2019
D-3.6 Best practise guidelines for bulk imaging of herbarium specimens	18 references up to 2019
D-3.7 Rapid 3D capture methods in biological collections and related fields	89 references up to 2019
D-4.1 Methods for automated text digitisation	37 references up to 2019
D-4.2 Data quality in transcription	42 references up to 2019
D-8.2 Costbook of the digitisation infrastructure of DiSSCo	15 references up to 2019

D-2.1 Icedig inventory of criteria for prioritization of digitization of collections focussed on scientific and societal needs-compressed	20 references up to 2013
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D-3.1 Quality Control methodology for digitisation operations	120 references up to 2019
D-3.2 Mass-imaging of microscopic and other slides	16 references up to 2018
D-3.3 State of the art and perspectives on mass imaging of skins and other vertebrate material	24 references up to 2019
D-3.4 State of the art and perspectives on mass imaging of liquid samples	13 references up to 2019
D-3.5 State of Art digitisation of pinned insects	23 references up to 2019
D-3.6 Best practise guidelines for bulk imaging of herbarium specimens	18 references up to 2019
D-3.7 Rapid 3D capture methods in biological collections and related fields	89 references up to 2019
D-4.1 Methods for automated text digitisation	37 references up to 2019
D-4.2 Data quality in transcription	42 references up to 2019
D-8.2 Costbook of the digitisation infrastructure of DiSSCo	15 references up to 2019

MS1.3 Corpus of previous studies on prioritisation of digitisation compiled

The current working model for the planned prioritisation booklet operates with four main groups of criteria to be considered:

1. **Relevance** could mean Impact of digitization for the institution

2. **Data quality** applied for Textual transcription and Imaging

3. **Cost**

4. **Feasibility** will profit from reports of Digitisation experiences and link to Criteria for digitisation prioritisation

1. Relevance or Impact of digitisation 9 references from 2018 to 2021

2. Data quality

1. **Transcription** only 1 new reference from 2020 and 37 references from IceDig D-4,2
2. **Imaging** only 1 new reference from 2020 and 120 references from IceDig D-3,1

3. Cost 1 new reference from 2020 and 7 references from IceDig D-8,2

4. Feasibility

1. **Digitization experience report** with 10 references

2. **Criteria for digitization prioritization** with 7 references

Any contribution is welcome to complete this bibliography

https://docs.google.com/document/d/1MTfITAy_pMz9R400LwWeuvnHne8ng8GGXOwvaF5UDpo/edit#heading=h.8c2qw5x44n55

ALL HANDS MEETING – AHM2

DiSSCo Governance - What's next?

Carole Paleco, Serge Scory, Eva Alonso, Wouter Addink

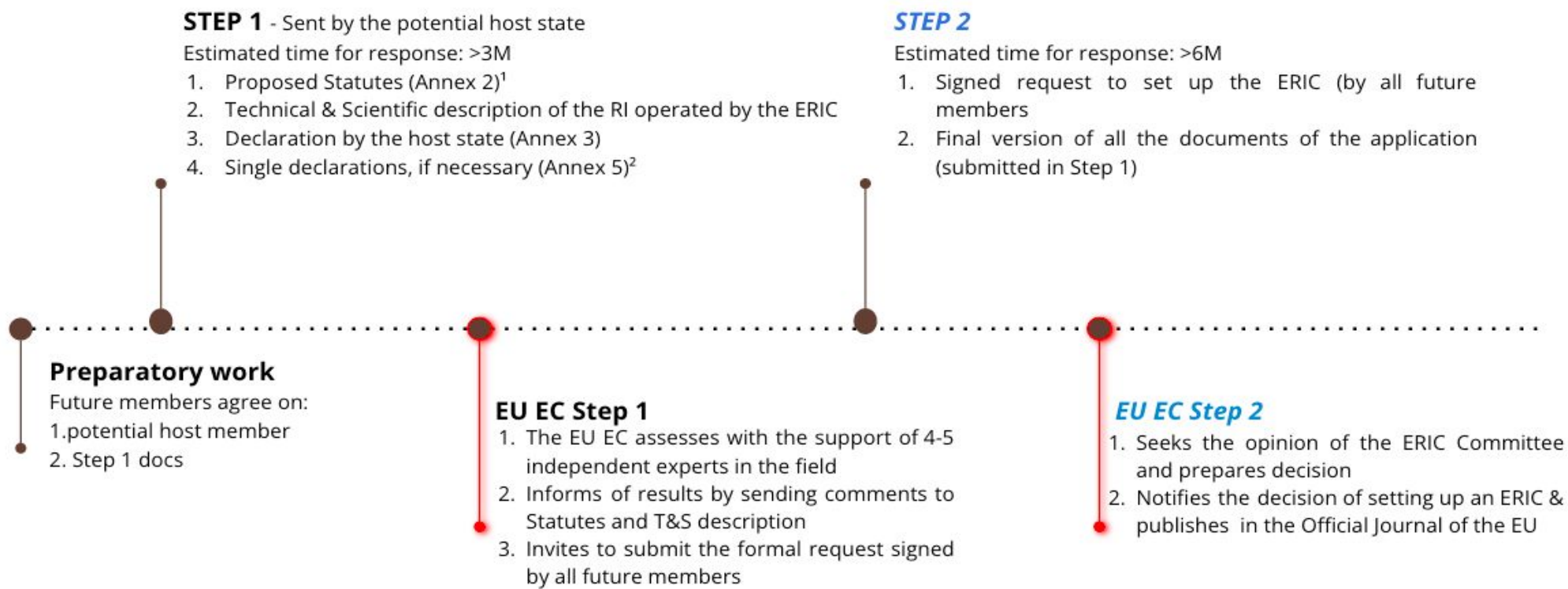


Funded by the Horizon 2020
Framework Programme
of the European Union

STEPS TOWARDS STEP 1 APPLICATION FOR DISSCO-ERIC (Actions during 2022-2023)

1. **METHODOLOGY** (Design Thinking): **Expert team > NNs > SAB/TAB > FF > iGA**
2. **ERIC PREPARATION**
 - a. ROADMAP OVERVIEW (2022-1stQ 2023)
 - b. DRAFT STATUTES (WP7, CSO)
 - i. MODEL 3
 - c. TECHNICAL & SCIENTIFIC DESCRIPTION (CSO, Tech.Team)

ERIC Process - What we have to do



1. Annex in the ERIC practical guidelines

2. If one or more members are associated countries, third countries and/or intergovernmental organisations. It applies for the UK.

Step 1 - WORK IN PROGRESS -2022

Prep to Step 1

1. Preparation of core elements to start discussing with national authorities (NA hereby):
 - Contribution model
 - Service provision and costs - 5 years
 - Scientific impact-added value
 - Governance
2. Technical reports
 - Statutes
 - Governance
 - T&S Description



Step 1- Documentation

1. [Mapping resources](#)
2. 4Q 2021: refinement of WPs core business for alignment
3. CSO/Expert teams until 4Q2022
4. Prep drafts with nat.authorities (FF)

Mapping Resources

Statutes preparation⁴

TOPIC	RESOURCE/OWNER
CHAPTER 1 — GENERAL PROVISIONS	
{Article 1 — Definitions} - optional	DPP T7.2/RBINS
Article 2 — Name, seat, location, and working language	CSO
Article 3 — Task and activities	CSO
CHAPTER 2 — MEMBERSHIP	DPP T7.2/RBINS
Article 4 — Membership and Representing Entity	DPP T7.2/RBINS
Article 5 — Conditions for becoming a member or an observer	DPP T7.2/RBINS
Article 6 — Withdrawal of a member or an observer/Termination of membership or observer status	DPP T7.2/RBINS
CHAPTER 3 — RIGHTS AND OBLIGATIONS OF MEMBERS AND OBSERVERS	DPP T7.2/RBINS
Article 7 — Members	DPP T7.2/RBINS
Article 8 — Observers	DPP T7.2/RBINS

⁴ DPP T7.2 will prepare the Statutes of the ERIC. However, that will be understood as a collaborative effort.

Statutes:

- The highest level document governing an ERIC;
- To be approved by the funding members (*i.e.* country representatives) before submission to EU COM.

Current status:

- An early draft, based of the analysis of the statutes of ~6 ERICs;
- Guiding criteria: wording should be clear, unambiguous, simple, well balanced between “general” and “detailed”
- Input still needed from several WPs/Partners.

EU COM provides a template:

Statutes of {name} ERIC

Contents

CHAPTER 1 — GENERAL PROVISIONS

- {Article 1 — Definitions}
- Article 2 — Name, seat, location and working language
- Article 3 — Task and activities

CHAPTER 2 — MEMBERSHIP

- Article 4 — Membership and representing entity
- Article 5 — Conditions for becoming a member or an observer
- Article 6 — Withdrawal of a member or an observer/Termination of membership or observer status

CHAPTER 3 — RIGHTS AND OBLIGATIONS OF MEMBERS AND OBSERVERS

- Article 7 — Members
- Article 8 — Observers
- {Article 9 — Contributions}

CHAPTER 4 — GOVERNANCE

- Article 10 — {Assembly of members}
- Article 11 — {Advisory body}
- Article 12 — {Director or board of directors}
- {Article 13 — Committee assisting the director in the implementation of his/her tasks}
- {Article 14 — Committee representing the different entities involved in the activities at national level}

CHAPTER 5 — REPORTING TO THE COMMISSION

- Article 15 — Reporting to the Commission

CHAPTER 6 — FINANCE, LIABILITY

- Article 16 — Resources
- Article 17 — Budgetary principles, accounts and audits
- Article 18 — Tax {and excise duty} exemptions
- Article 19 — Liability and insurance

CHAPTER 7 — POLICIES

- Article 20 — Access policy for users
- Article 21 — Scientific evaluation policy
- Article 22 — Dissemination policy
- Article 23 — Intellectual property rights policy
- Article 24 — Employment policy
- Article 25 — Procurement policy
- Article 26 — Data policy

CHAPTER 8 — DURATION, WINDING UP, DISPUTES, SET UP PROVISIONS

- Article 27 — Duration
- Article 28 — Winding up
- Article 29 — Applicable law
- Article 30 — Disputes
- Article 31 — Statutes updates and availability
- {Article 32 — Setting-up provisions}

ANNEX I — LIST OF MEMBERS, OBSERVERS AND THEIR REPRESENTING ENTITIES

ANNEX II — BUDGET — CONTRIBUTIONS

Our draft is in progress:

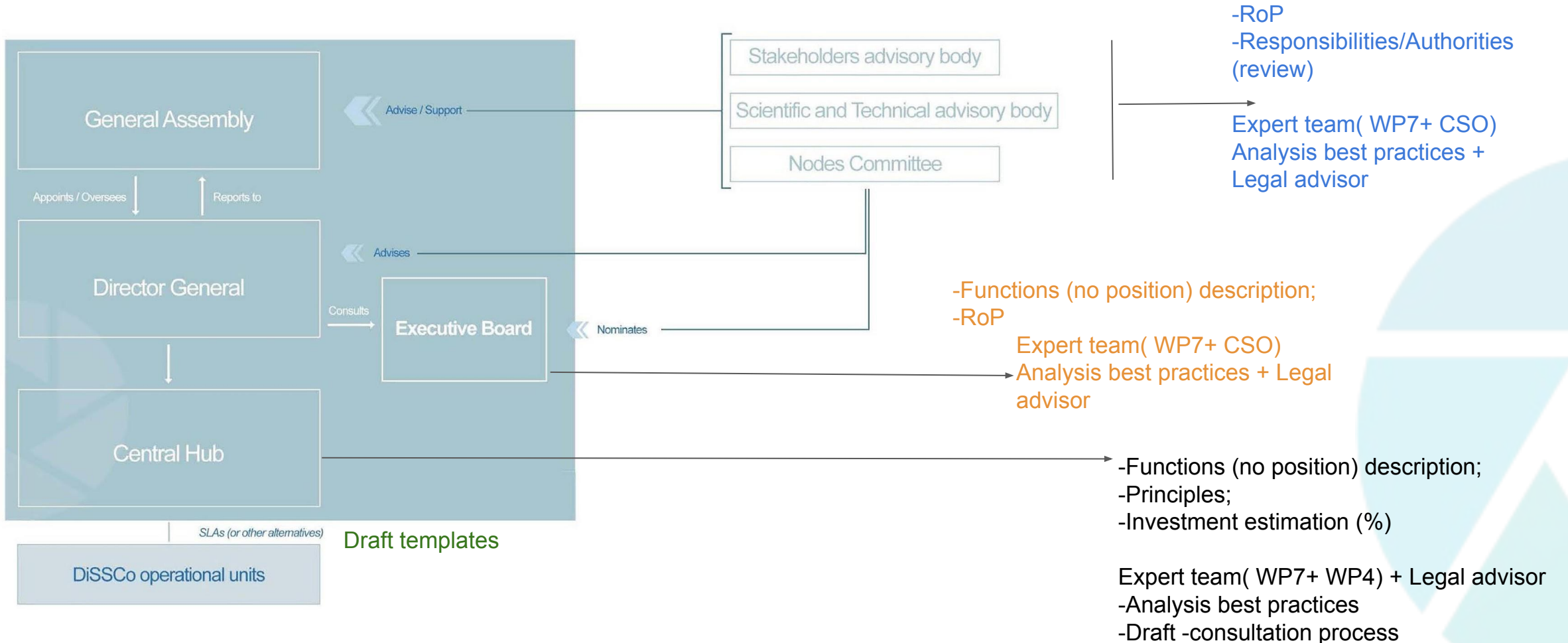
<p>6. The following decisions shall require a two-third majority of the votes cast:</p> <p>(a) To appoint or dismiss the Director General;</p> <p>(b) To appoint, suspend or dismiss the members of the advisory bodies;</p> <p>(c) to create or disband governance, management or advisory bodies not listed in Article 10;</p> <p>(d) to approve the admission of new members and observers and terminate a membership or an observer status;</p> <p>(e) to approve the annual activity report;</p> <p>(f) to approve the strategy and the strategic plan;</p> <p>(g) to approve the work programme;</p> <p>(h) to approve budgetary and financial decision including the annual budget, the framework for its kind contributions, the 5-year activity plan and the financial plan, the salary of the Director-General, and any other matters related to a change of business model or financial policy;</p> <p>7. Any other matter not defined as requiring 2/3 majority or unanimity shall be decided by simple majority of the votes cast.</p> <p>8. The General Assembly shall elect a Chair and a Vice-Chair among representatives of members by a simple majority of the votes cast. The Chair and the Vice-Chair shall be elected for a two-year term, renewable once. The meetings of the General Assembly shall be convened by the Chair. The Chair and Vice-Chair shall have no extra voting rights.</p> <p>9. An extraordinary meeting of the General Assembly may be requested by at least half of the members.</p> <p>10. A quorum of two-thirds of members shall be required for having a valid General Assembly meeting. If the quorum is not met, a second meeting shall be convened [as soon as possible] following a new invitation, with the same agenda. In the second meeting, the quorum shall be considered met if half of members are present.</p> <p>11. The General Assembly shall adopt rules on remote presence and on alternate representatives in the Implementing Rules [to be decided by the General Assembly by a simple majority with the daily written power of attorney, limited to two represented members by member present]</p>	<p>DiSSCO-ERIC-2021-001-001</p> <ul style="list-style-type: none"> Adopt the annual budget & annual activity report Review the strategic plan <p>Points on the other matter that is necessary to update the text of DiSSCO-ERIC</p> <p>Katherine WO... Our legal manager raised a ...</p> <p>Katherine WO... What, if any, relationship does ...</p> <p>Katherine WO... Is this in addition to the area ...</p> <p>Katherine WO... It could be noted here how long ...</p> <p>Katherine WO... Not detailed enough - this ...</p> <p>Katherine WO... including the use of electronic ...</p> <p>Katherine WO... Is this the same as Rules of ...</p> <p>Katherine WO... Suggestion ...</p> <p>Katherine WO... Where are these representatives ...</p>	<p>members. The Rules of Procedure of the Scientific Board shall be adopted by the General Assembly.</p> <p>Article 13 — Stakeholders Forum</p> <p>1. The Stakeholders Forum consists of representatives of DiSSCO partners, and of end user communities. [S: Correct?]</p> <p>2. The Stakeholders Forum shall:</p> <p>(a) represent the user community's needs and provide feedback on the scientific strategy and elements of the workplan [to the Director General];</p> <p>(b) advise on new services provision and joint service creation;</p> <p>(c) evaluate the level of alignment of DiSSCO services with user's needs and the new user communities;</p> <p>(d) monitor joint programs and formulate new collaboration;</p> <p>(e) advise on strategic partnership.</p> <p>3. The Stakeholders' Forum shall elaborate its own rules of procedure to be approved by the General Assembly. [S: Should maybe be more prescriptive. We don't really manage who can attend.]</p>	<p>Evaluate the scientific, technical, and ethical activities of DiSSCO-ERIC and report to the General Assembly on an annual basis</p> <p>MC: Correct for the</p> <p>MC: Should also report to General Assembly on all these issues with the annual activity report? Or less frequently, every 2nd year?</p> <p>Stakeholders Forum Composition</p> <p>Reports to:</p> <ul style="list-style-type: none"> The General Assembly <p>Responsibilities:</p> <ul style="list-style-type: none"> Represent the user community's needs and provide feedback on the scientific strategy and elements of the workplan Advise on new services provision and joint service creation Evaluate the level of alignment of DiSSCO-ERIC services with user's needs and the new user communities Monitor joint programs and formulate new collaborations Advise on strategic partnership <p>Article 14 — Director General</p> <p>1. The General Assembly shall appoint the Director General of DiSSCO-ERIC in accordance with Article 29(1) and a recruitment procedure adopted by the General Assembly. The term for the Director General shall be up to [1, 4, 5] years, renewable once.</p> <p>2. The Director General shall be the legal representative of DiSSCO-ERIC.</p> <p>3. The Director General shall be responsible for:</p> <p>(a) the implementation of the decisions assumed by the General Assembly;</p> <p>(b) consulting and seeking advice from the Executive Board;</p> <p>(c) consulting the community through the Stakeholders Forum in the process of preparing the annual work programme.</p> <p>4. The Director General shall:</p> <p>(a) carry out the day-to-day administration and management of DiSSCO-ERIC, including leading the Secretariat and appointing its staff;</p> <p>(b) elaborate the strategic plan of DiSSCO to be approved by the General Assembly, in collaboration with the Executive Board and the Committee of Noes.</p> <p>(c) submit the annual activity report to the General Assembly and to the European Commission. The report shall be drafted taking into account the activities of the Committee of Nodes and the Scientific and Technical Advisory Board.</p>	<p>Katherine WORLEY Formatted: English (United Kingdom)</p> <p>Need to add frequency of involvement / input</p> <p>Katherine WORLEY This statement has had some doubt shed on it after discussion at the FFJ. To reduce the risk of conflict the Stakeholders forum should liaise with the DG and not the AG. E.g. the SF is invited to attend a GA meeting on invitation from the DG (or BG) and not the GA.</p> <p>Katherine WORLEY Formatted: English (United Kingdom)</p> <p>Could there also be an argument for reporting to the Nodes Committee? If this third model is adopted, could the relationship between DG and Nodes Committee be a two-way relationship, not only advisory?</p> <p>Katherine WORLEY Perhaps specify here that the DG is the LEAR of the ERIC, but that the chair of the GA is responsible for signing the LEAR agreement too?</p> <p>Could also add that the DG signs official documents, such as the SAs and Rules of Procedure/Operation</p> <p>Katherine WORLEY Perhaps this should also state the annual deadline for the activity report, e.g. by the 30th March each year</p>
<p>Article 12 — Scientific & Technical Advisory Board</p> <p>1. The Scientific and Technical Advisory Board shall:</p> <p>(a) monitor the scientific, technical and ethical aspects of DiSSCO-ERIC activities;</p> <p>(b) give feedback and provide recommendations on these aspects and on scientific strategy annually to the General Assembly.</p> <p>2. The Scientific and Technical Advisory Board shall consist of independent experts selected on a worldwide basis, without a requirement to be based in a member or observer country. The number of members of the Scientific and Technical Advisory Board shall be decided by the General Assembly. This number shall not be less than [and not more than 10]. The members of the Scientific and Technical Advisory Board shall be appointed by the General Assembly for a term of 3 years. The General Assembly may reappoint them once for the same duration on proposal from the Director General. The Chair of the Scientific and Technical Advisory Board shall be elected among its</p>	<p>Scientific & Technical Advisory body in blue text of draft Milestone 7.4 incorporated in formal version (Check list)</p> <p>Composition</p> <ul style="list-style-type: none"> Independent experts selected on a worldwide basis, without a requirement to be based in a member or observer country <p>Reports to:</p> <ul style="list-style-type: none"> The General Assembly <p>Responsibilities:</p> <ul style="list-style-type: none"> Provide advice on the scientific strategy of DiSSCO Advise the General Assembly on the matters of scientific, technical, and ethical nature of the DiSSCO activities <p>Katherine WO... This seems like a relatively high</p>	<p>Article 14 — Director General</p> <p>1. The General Assembly shall appoint the Director General of DiSSCO-ERIC in accordance with Article 29(1) and a recruitment procedure adopted by the General Assembly. The term for the Director General shall be up to [1, 4, 5] years, renewable once.</p> <p>2. The Director General shall be the legal representative of DiSSCO-ERIC.</p> <p>3. The Director General shall be responsible for:</p> <p>(a) the implementation of the decisions assumed by the General Assembly;</p> <p>(b) consulting and seeking advice from the Executive Board;</p> <p>(c) consulting the community through the Stakeholders Forum in the process of preparing the annual work programme.</p> <p>4. The Director General shall:</p> <p>(a) carry out the day-to-day administration and management of DiSSCO-ERIC, including leading the Secretariat and appointing its staff;</p> <p>(b) elaborate the strategic plan of DiSSCO to be approved by the General Assembly, in collaboration with the Executive Board and the Committee of Noes.</p> <p>(c) submit the annual activity report to the General Assembly and to the European Commission. The report shall be drafted taking into account the activities of the Committee of Nodes and the Scientific and Technical Advisory Board.</p>	<p>Composition</p> <ul style="list-style-type: none"> An individual person appointed by the GA <p>Reports to:</p> <ul style="list-style-type: none"> The General Assembly <p>Responsibilities:</p> <ul style="list-style-type: none"> The legal representative of the DiSSCO-ERIC Responsible for the implementation of the decisions by the GA Responsible for consulting and seeking advice from the Executive Board Carry out the day-to-day management of the DiSSCO-ERIC following the GA's directions and decisions Submit an annual activity report to the General Assembly after consultation with the Nodes Committee Submit the annual report to the European Commission Manage the General Staff Prepare DiSSCO work and financial plan for approval by the GA Represent DiSSCO at national and international forums and other tasks as may be requested by the GA 	<p>Katherine WORLEY Formatted: English (United Kingdom)</p> <p>Could there also be an argument for reporting to the Nodes Committee? If this third model is adopted, could the relationship between DG and Nodes Committee be a two-way relationship, not only advisory?</p> <p>Katherine WORLEY Perhaps specify here that the DG is the LEAR of the ERIC, but that the chair of the GA is responsible for signing the LEAR agreement too?</p> <p>Could also add that the DG signs official documents, such as the SAs and Rules of Procedure/Operation</p> <p>Katherine WORLEY Perhaps this should also state the annual deadline for the activity report, e.g. by the 30th March each year</p>

First version sent for comments to the partners of WP7.1

Main question for today:

- How to best organize the consultation process?
- Input of partners is very important but how to make sure the resulting draft statutes will be in agreement with the views of the country representatives?

DiSSCo Governance models - Model 3



Model 3 - Further development

- Chapter 4 of DiSSCo ERIC Draft Statutes + initial RoPs
- Principles for operation
 - Transparency & equitable stewardship of resources;
 - Agile & effective decision-making process (communication cycle processes);
 - Flexible & effective implementation (scientific programmes - DiSSCo strategy);
 - Accountability;
 - Incentive continuous development of Strategic partnership at international, EU and national level;
 - Other?
- Methodology: Expert team (+ legal advice) > NNs > SAB/TAB > FF > iGA

Functions at the Central Hub	What should not be in the Central Hub?
Principles & Assumptions	What functions should be shared with Nodes?

ERIC Step 1 - Technical & Scientific description

Council regulation on the community legal framework for an ERIC
Article 4 Requirements relating to infrastructure

- it is **necessary** for the carrying-out of European research programmes and projects, including for the efficient execution of Community research, technological development and demonstration programmes;
- it represents an **added value** in the strengthening and structuring of the **European Research Area** (ERA) and a significant improvement in the relevant scientific and technological fields at international level;
- **effective access**, in accordance with the rules established in its Statutes, is granted to the European research community, composed of researchers from Member States and from associated countries;
- it contributes to the **mobility** of knowledge and/or researchers within the ERA and increases the use of intellectual potential throughout Europe; and
- it contributes to the **dissemination and optimisation** of the results of activities in Community research, technological development and demonstration.

ERIC Step 1 - Technical & Scientific description

1. Executive Summary
2. Terms
3. The current scientific landscape for Biodiversity
4. Why DiSSCo-ERIC
 - a. Mission & vision
 - b. Objectives
5. DiSSCo Community of users
 - a. Necessity
 - b. Impact
6. DiSSCo Scientific Programme
 - a. Mass digitisation
 - b. DISSCO Services

ERIC Step 1 - Technical & Scientific description

8. DiSSCo Architecture - design goals & unique added value

- a. Technical scope
- b. DES
- c. Effective Access
- d. Data management & Standards

9. Implementation of Services

- e. Strengthening the European Research Area (ERA)
- f. Interaction with existing institutions
- g. International Stakeholders
- h. DiSSCo in EOSC
- i. Risk assessment for implementation

10. Support to the training programme

11. DiSSCo policies, DMP?

12. Quality Assurance

- j. Indicators (KPIs, Socio-econ relevance)
- k. Risk mitigation

ERIC Step 1 - Technical & Scientific description

- Lead by: DiSSCo CSO - Technical Team - SAB
- Based on best practices and ERIC Council regulation
- Contributors?
- DiSSCo linked-projects developments- mapping of resources / gaps
- Main activity initiates in 2023

Who should contribute/support DiSSCo CSO?	What has to be included (missing in the summary)?
Principles & Assumptions	What has to be excluded? Why?

DPP AHM2 - Governance - What's next?

T7.1 (Governance & Strategy) & T7.2 (Statutes and bylaws)

Date: Tuesday 05 April 2022

Time: 10:45 - 12: 15 CEST

Link (Zoom):

<https://us02web.zoom.us/j/89644120122?pwd=UDhtK0xTY3d1bVRubXprVUZ2T050UT09>

Notetaker (s): team members

Notes: At the bottom of this document. Although a notetaker will be appointed, this can be collaborative. [Recording of the session might be activated.]

Summary

Activities led by RBINS and Naturalis will provide a consistent legal framework for DiSSCo-ERIC, including a first draft of the ERIC Statutes, a description of governance and further terms of reference and, finally the DiSSCo Strategy and strategic implementation.

Those activities initiated under DiSSCo Prepare, however, will need to expand in time and scope and contribute to the constitution of DiSSCo-ERIC.

Purpose of the session

The objective is to get feedback to improve the working plan in a way that facilitates the endorsement by the DiSSCo community.

The team will present the activity plan and methodology until the end of DPP and expected actions towards the organisational readiness of DiSSCo- ERIC.

Agenda

The session will dedicate time for discussions (20/10 per topic) as follows:

ERIC Step 1

1. **Prep. Statutes** (WP7, CSO, NNs) (20' + 10') - Serge Scory & Carole Paleco
 - i. What to do? Submission of DPP D71
 - ii. How to do it? Who will do it? Actions to be taken during 2023
- b. **Model 3** -Further development (20' + 10') - Eva Alonso
 - i. What to do? Central hub definition of functions and overall costs in collaboration with WP4
 - ii. BPs of similar ERICs (ECRIN, ELIXIR, BBMRI, EATRIS, JIVES, etc.)
 - iii. Information will feed WP4 analysis on national contributions.
2. Preparation of **T&S Description** (CSO, WP7, Technical Team) (20' + 10') - Wouter Addink
 - i. What to do?
 - ii. How to do it? Who will do it? Actions to be taken during 2023

Methodology (Design Thinking): Expert Team (+ legal advisor) > NNs > SAB/TAB > FF > iGA

Participants

Members of DiSSCo partners are kindly invited to the session. Contributions from members of WP4, WP7, WP8 and members of the DiSSCo Technical Team will be highly appreciated

ATTENDEES

Please, enter your name, affiliation and role in the project

Jose Alonso - CSO
Sharif Islam - CSO/Naturalis
Gianna Innocenti, NHM - UNIFI
Lorenzo Cecchi, NHM - UNIFI
Stefaan Pijls - MeiseBG
Katharine Worley (MNHN)
Mathias Dillen, MeiseBG
Sabine von Mering, MfN Berlin
Julia Pim Reis, Mfn Berlin
Michel Guiraud MNHN
Heli Fitzgerald, Luomus
Patricia Mergen (MeiseBG)
Ann Van Baelen (KU Leuven)
Sonia La Felice (CNR-IGG Italy)
Serge Scory (RBINS)
Niels Raes (Naturalis Biodiversity Center)
Carole Paleco (RBINS)
Pedro Arsénio (ULisboa)
Mareike Petersen (MfN)
Frederik Leliaert (MeiseBG)
Sam Leeflang (Naturalis)
Marko Lovric (CETAF)
Isabel Rey (MNCN)
Wouter Addink (Naturalis)
Laura Giordano (CNR-ISMAR Italy)
Luciana Ferraro (CNR-ISMAR Italy)
Ana Casino (CETAF)
Emily Veltjen (INBO)
Aino Juslén (Luomus)
Vince Smith (NHM, London)
Dimitris Koureas
Tina Loo (Naturalis)
Henrik Enghoff (UCPH)
Salomé Landel - MNHN Paris
Lisa French -NHM

1. BRAINSTORMING - CENTRAL HUB

Functions at the Central Hub

- Procurement and other joint purchases, expenses
- Coordination of the nodes (service providers in some cases) - administration of SLAs with Service Providers
- Management and administration (including DiSSCo budget)
- EU projects (networking / application to EU calls / management of EU projects - in some areas)
- Managing DiSSCo policies
- Communication and outreach
- DiSSCo Representation (in national and international forums)
- Staff to manage core DiSSCo infrastructure
- Decision process and coordination of DiSSCo services
- Staff for Outreach and dissemination
- Maintaining and establishing SLAs for DiSSCo services
- Support to NNs
- Advocacy (Leading and getting access to new country members)
- Coordination of training
- Helpdesk maintenance
- ELVIS maintenance and upgrades + other IT services
- Overview of DiSSCo history (log/timeline) for new members to catch up (+link to resources, reports etc)

What should not be in the Central Hub?

- Technical Experts
- Updating technical standards
- end-user support and training services provided already by CETAF
- Prioritise digitisation initiatives
- Local institutions services they can provide and get revenues from (DiSSCo can channel) but they should also still get income locally or fair redistribution of income if managed by Central hub
- Establishing national/regional/local hubs within the DiSSCo community
- Not take the place of institutions in EU projects
- Anything related to research
- Decisions level
- physical equipment for digitisation (cameras, scanners, robots, conveyor belts etc)

- Main entrance points to e-services, specialisations, dashboards
- collection, provision and analysis of consortium (data) status information
-
- Strategic coordination with operational units

Principles & Assumptions

- Central hub should maintain the minimum possible staff to execute its functions
- Central hub should regularly reflect with the participating nodes/institutions what kind of support/tools/materials they would benefit of, in order to maximise working towards joined goals.
- No duplication of functions, services with CETAF or GBIF
- DiSSCo hub should set targets around digitisation
- Results driven: DiSSCo Hub should have Working Plans with clear objectives and targets
- Central should have up to date view on Capability and Capacity within DiSSCo group
- Central should lead the strategy for the next 10 years, so that members don't duplicate efforts/investments
- Scientific programmes of DiSSCo should be scalable (grow as more resources become available - membership/EU funding etc)

What functions should be shared with Nodes?

- Physical & virtual access
- Large scale digitisation
- Software and data curation
- Project calls / applications
- Shared scientific initiatives
- Coordination of ABS / standards
- Coordination / ownership of some services/specialisations
- Communications with governmental institutions, and any agencies in charge of decisions
- Obtaining material / equipment to benefit DiSSCo community
- Work on partnerships at national and international level
- IT development and support

2. BRAINSTORMING TECHNICAL & SCIENTIFIC DESCRIPTION

1. [Executive Summary
2. Terms
3. The current scientific landscape for Biodiversity
4. Why DiSSCo-ERIC
 - a. Mission & vision
 - b. Objectives
5. DiSSCo Community of users
 - a. Necessity
 - b. Impact
6. DiSSCo Scientific Programme
 - a. Mass digitisation
 - b. DISSCO Services
8. DiSSCo Architecture - design goals & unique added value
 - a. Technical scope
 - b. DES
 - c. Effective Access

d. Data management & Standards

9. Implementation of Services

e. Strengthening the European Research Area (ERA)

f. Interaction with existing institutions

g. International Stakeholders

h. DiSSCo in EOSC

i. Risk assessment for implementation

10. Support to the training programme

11. DiSSCo policies, DMP?

12. Quality Assurance

j. Indicators (KPIs, Socio-econ relevance)

k. Risk mitigation

Who should contribute/support DiSSCo CSO?

- SAB & TAB
- DPP WPs (But DPP is ending relatively soon)
- Infrastructures with relevant contact zones to DiSSCo (including EOSC and International RIs)
- The Funders Forum should also be consulted (Will Funders Forum also exist when DiSSCO RI becomes real?). The FF should provide high level advice in reviewing the document. Is the document complete? Does it tick the boxes? They make sure the document is properly contextualised.
- The nodes and their institutions with their expert staff
- Policy-makers? I mean people at a governmental level (a representative of the Ministry involved in biodiversity)?

What has to be included (missing in the summary)

- Details on the operations between the institutions and e-services
- Cross-domain, interdisciplinary opportunities
- How to enable a sustainable (“green”) infrastructure
- Scientific drivers (responses given by DiSSCo)
- Digitisation on demand
- Access policies
- Social Report (in the Quality Assurance)?
- Extended DiSSCo registry of collections (CETAF passport). Will not include external services per se but our *collaboration* with external services.
- Collaboration with cognate RIs? Other collaborations?

Principles & Assumptions

- Follow the key findings in the DiSSCo Strategy (e.g. the main scientific programmes)
- Adhere to the key innovation principles that have guided DiSSCo up to day (incl. Digital Extended Specimens & collective curation model of knowledge - Digital Twins)
- Ensure sustainability (by linking to strategic national roadmaps) and improvement over time (curation model)
- Introduces and explains DiSSCo scientific mission
- Open Science, FAIR, socio-economic criteria etc.
- Underline distributed capacities and collective operation
- Inclusiveness (ref. ERA) and harmonization (international partnerships)

What has to be excluded? Why?

Depends on the scope of the doc (perhaps detailed policies?)
Should not limit DiSSCo in its scientific scope - must have room to expand and develop over time.

All Hands Meeting 2

M5 (2.1) Compilation of needs for skills/competencies

DiSSCo Prepare WP2 T2.1 **Training strategy**



Funded by the Horizon 2020
Framework Programme
of the European Union

AHM 2 Session WP2 – T2.1 Training strategy

April 5th 2022
3 – 4.30 PM CET

Objective of the task & milestone

- **To create a training strategy with**
 - Distinct channels and modes of accessing
 - Responds to identified training needs
 - Caters for data suppliers and end-users
- **M5 (2.1) contributes towards that with 2 subtasks:**
 - 1. Compilation of needs for skills/competencies**
 - 2. Identification of training providers/platforms**

Scope and background

- **Based on approach developed under S+**
 - 5 IRL categories + 29 subcategories
- **Broader in scope**
 - Larger number of institutions contacted
 - Adjusted the subcategories (services: legal, fund raising, communication, procurement)
 - Beyond collection of trainings currently offered

Methodology

- **Survey:**
 - Sent to 27 out of 30 beneficiaries
 - Included 55 questions divided in 7 sections:
 - Q1-5 Multiple choice - Interval scale
 - Q6 & Q7 on training needs: inventory
 - Particular attention to cultural and language diversity
- **Semi structured interviews with some WP leaders:**
 - Qualitative analysis and insight
- **T2.1 team as focus group:**
 - to enrich the data and findings,
 - To capture some needs at national level



Survey Respondents landscape

Responding institutions	City	Contry	Approximate staff size of the institution
University of Lisbon	Lisbon	Portugal	small (≤ 100)
University of Florence	Florence	Italy	small (≤ 100)
University of Porto	Porto	Portugal	small (≤ 100)
Luxembourg National Museum of Natural History	Luxembourg	Luxembourg	medium (≤ 250)
University of Oslo	Oslo	Norway	medium (≤ 250)
Meise Botanic Garden	Meise	Belgium	medium (≤ 250)
National Museum	Prague	Czech Republic	medium (≤ 250)
Royal Botanic Garden	Edinburgh	Scotland	medium (≤ 250)
Hungarian Natural History Museum	Budapest	Hungaria	medium (≤ 250)
Institute of Biodiversity and Ecosystem Research at the Bulgarian Academy of Sciences	Sofia	Bulgaria	medium (≤ 250)
Botanic garden and botanical museum	Berlin	Germany	medium (≤ 250)
University of Copenhagen – Natural History Museum of Denmark	Copenhagen	Denmark	large (≤ 500)
Royal Belgian Institute of Natural Sciences	Brussel	Belgium	large (≤ 500)
National Museum of Natural History	Paris	France	very large (> 500)
Senckenberg Nature Research Society	Frankfurt	Germany	very large (> 500)
Natural History Museum	Berlin	Germany	very large (> 500)

Q 1-2 &4-5 Staff and DiSSCo RI

Staff, Digitization strategy, training needs assessment :

- 11 out of 16 respondents same team for virtual and physical collection
 - Need: to adjust roles and profiles
 - Need: upgrade the skills & competences of existing staff

- 8 have a training policy, 10 a training officer/manager and 12 a training budget but mostly not results-oriented, unsystematic, red tape, lack of catalogue to choose from
 - Need: systems to assess needs regularly, more strategic & results oriented
 - Need: Create a catalogue of trainings to fill existing gaps

Overall conclusions and recommendations

- Training needs are **ongoing and evolve** due to changes in staff and also because learning is a building blocks process
 - DiSSCo should gradually build a fully fledged catalogue of trainings, using needs assessment as an indication for **prioritization**
- **Unequal distribution** of trainings and **red tape** on access to trainings
 - DiSSCo should develop a catalogue of trainings that is **financially “accessible”** to all members
 - using online or hybrid formats without or with low training fees will enable a wider audience to participate, both within and outside the DiSSCo institutions.
- Teams **dual role strategy** (virtual and physical collections) is the prevalent one
 - Capacity building courses to accompany management and speed up such adaptation processes on **human resources policies and procedures** are priority (trickle down effect)

Overall conclusions and recommendations

- “International” trainings will need to be replicated at national level via National nodes (NNs)
 - > a dedicated methodology of “step down trainings” and “training of trainers” should be developed with dedicated funds to localise and translate materials
- Need to better adjust training delivery and methodology in relation to National Nodes & expand the list of training needs
 - > Organise focus groups or dedicated sessions via NN during M6

Overall conclusions and recommendations

- Lack of international language skills (english) among staff at technical level or smaller institution at national level

---> Resources should be allocated for translation/adaptation of trainings & for step down trainings & training of trainers

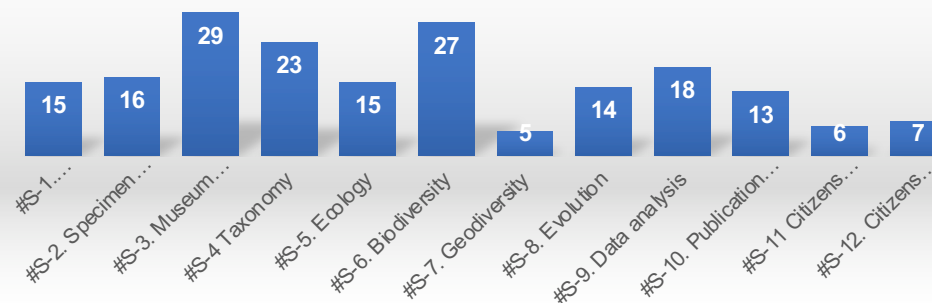
---> Language barriers can be reduced by a common lingua franca, i.e. English and, for those with less developed skills in this language, options to improve these skills.

Q 3.1 IRL SCIENCE

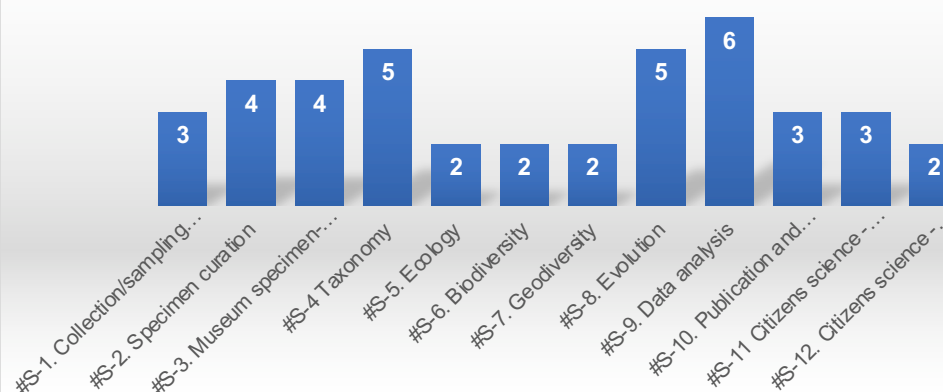
- Majority plan a **dual role for science team** for virtual and physical collection
 - Need: to adjust roles and profiles
 - Need: upgrade the skills & competences of existing staff

- Needs: open data for science, data cleaning and handling for research, citizen science, data sharing, use of collection management systems, and machine learning and artificial intelligence

IRL Science - Current training



IRL Science - Training Needs



Q 3.1 SCIENCE

Recommendations

- DiSSCo should design specific trainings that meet identified priority needs related to their readiness, namely in: data, citizen science and machine learning
- DiSSCo should take charge of **organising essential training for the entire consortium** to leverage the scientific research potential of its distributed system of scientific collections and **address the unequal distribution of training** opportunities across the network

Q 3.2 IRL DATA

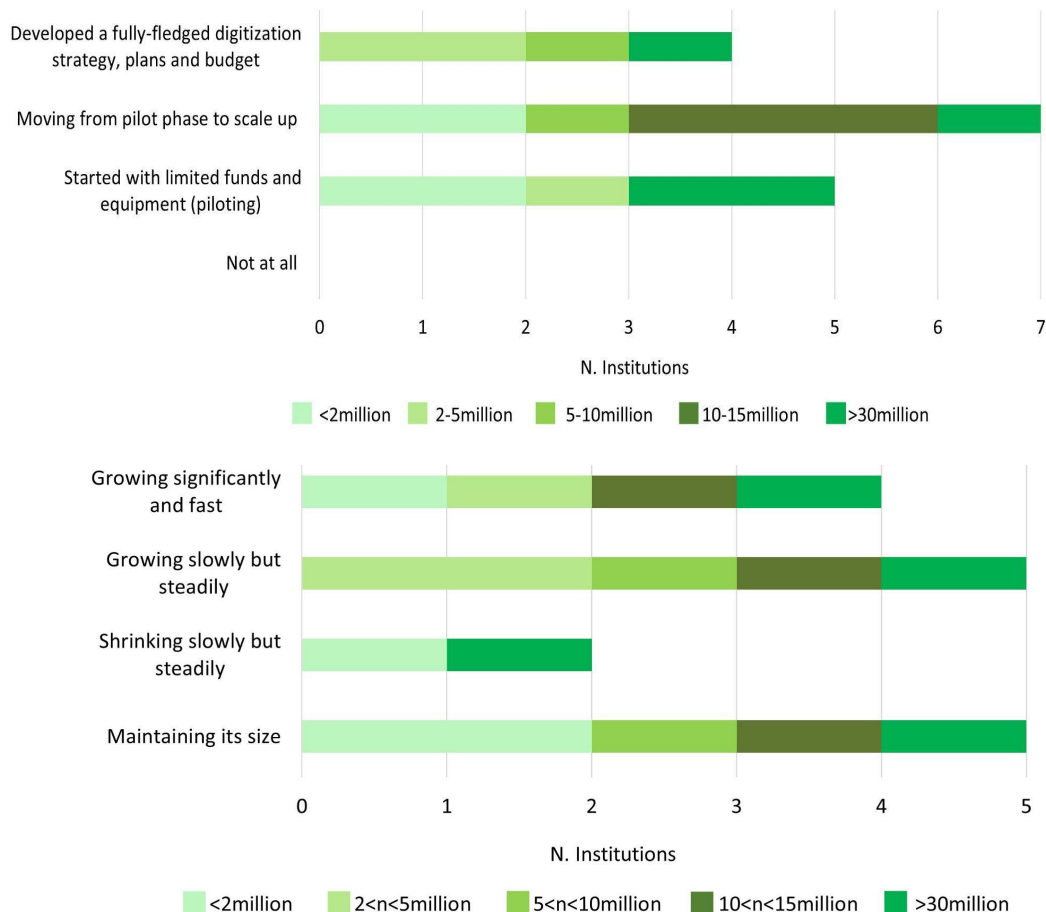
- 14 out of 16 respondents
- 7 moving from pilot to scale up of digitization
- 12 Instits: single step qualitative approach (+ve trends twds MIDS1)
- 2 Instits: multi step - quantitative approach (digit mainly @ MIDS1)
- no significant increase of digitization staff

MIDS0 - Minimum information

MIDS1 - Basic information

MIDS2 - Complete information

MIDS3 - Integrated information



Q 3.2 IRL DATA

Smaller institutions (partners involved via NN)

- Likely to currently have on-demand digitization
- Might adopt a “single-step” approach,
- BUT should prefer the quantitative (“multi-step”) one

Why?

- Wait for improvement of the mass-digitisation tools (cost-reduction) & cooperative/sharing infrastructure.
- Rely on outsourced digitisation activities (e.g., citizen-science projects),
- Requires limited investment in internal training
- Makes good use of step down training approach

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Q 3.2 IRL DATA

Recommendations

- At least **one curator per museum**, with a similar role as the Institutional Moderator for the DiSSCo NNs, **should be trained and updated about structure, principles and standards** within the DiSSCo community, linking the staff to the RI
- If hiring dedicated staff for digitization is limited by funding, available members of the **staff should be re-oriented toward this role and trained** in order to facilitate the digitisation process inspired to FAIR principles
- For institutions in pilot /early stages of digitization: to allocate time and resources to **achieve a higher percentage of specimens at MIDS1 level**,

Q 3.2 IRL DATA

Recommendations

- adopt and be trained to use a unique official data standard per kind of item (i.e., only one for geological samples, only one among DwC and ABCD for the biological ones); the alignment among different standard should be limited to the IT team activity.
- All the countries, especially those with specific internal duties or represented by a plenty of distributed SM-sized NHMs, should be prompted to develop national hubs capable to both mediate the adoption of DiSSCo standards and to structure and address the digitised data to both the DiSSCo sharing platform(s) and the national/regional/local DBs. A hierarchical structuring of training activities is recommended accordingly

Q 3.3 TECHNOLOGICAL

Trends in IT staff :

- 6 have a IT Dept, 5 small team, 4 and IT support service (Uni)
- Mostly cover their IT needs internally
- Slow but steady growth of IT staff
- rely on DiSSCO for the RI

Issues:

- Probably some lack of awareness of cybersecurity
- Plans to increase staff but lack of resources main limitation
- Competitiveness of salaries in IT an issue

Q 3.3 TECHNOLOGICAL

Recommendations :

- Provide short capacity building course on cybersecurity (non technical, peer sharing,
- Provide short capacity building course on commercially available softwares on Data Management Systems for collections digisation

Q 3.4 ORGANISATIONAL

Management and DiSSCo RI:

- 6 instits reported limited or no awareness of mgt on DiSSCo (not related to institutions' size)
- Inclusion of DiSSCO in strategic plan at discussion level in most instits
- 11 Instit: Directors and managers will have dual function (8 will reorient staff)
- 3 Instit will hire dedicated Directors and Managers for virtual collection
- 10 out of 16 have not adapted Organigramme and JDs
- 4 have systems in appraisal to assess skills and training needs

Q 3.4 ORGANISATIONAL

Support services :

- **Legal services:** 8 in house, 4 outsourcing, 2 mixed, 2 none (?)
- **Procurement:** 15 have a procurement policy
- **Fundraising:** 11 have a strategy (but 5 at draft level) and dedicated staff (8)
- **Marketing:** 9 have a strategy (but 4 at draft level) and dedicated staff (8)

Q 3.4 ORGANISATIONAL

Issues:

- 10 out of 16 have not adapted Organigramme and JDs
- 4 have systems in appraisal to assess skills and training needs

BUT:

- lack of perceived needs in the Q6 training needs inventory
- policy is the most requested one, followed by management, legal support services and fundraising



Q 3.4 ORGANISATIONAL

Recommendations:

- a **common trainings needs assessment tool for staff**, to be used at annual appraisal and feed results into a common DiSSCo training needs database
- A **common mechanism or methodology for participatory review and assessment** of organisational training needs to implement at institution's level that can feed into DiSSCo annual training planning
- **Investigate further** the IRL Organisational training needs regarding
- Leverage the added value of University museums to promote **tailor-made courses with academia**

Q 3.5 IRL FINANCIAL

Fund raising:

13 (out of 16) receive some form of project /donor funding (½ large part)

no correlation between size & significance of donor/project funding

Sources:

- 13 national
- 11 EU
- 11 Foundations

Solid familiarity of **Finance staff** on donor financial procedures and reporting

Q 3.5 IRL FINANCIAL

Recommendations :

- Self-teaching modules on introduction to **financial procedures and reporting to donors** for project funding
- **A space/Forum** for exchange of best practice among financial staff of different institutions



PREPARE

All Hands Meeting 2

Milestone 5 - Subtask 2 - Identification of training platforms and providers
(DRAFT)

DiSSCo Prepare WP2 T2.1 Training strategy



Funded by the Horizon 2020
Framework Programme
of the European Union

AHM 2 Session WP2 – T2.1 Training strategy

April 5th 2022
3 – 4.30 PM CET

Objective of the Subtask & methodology

1. Objective: to identify an eLearning platform and provider for the delivery of trainings
2. Methodology:
 - Desk research: to
 - Semi structured interviews with some partners: NHM-UoCrete and GBIF
 - An informal interview with Vlerick Business School



Prioritisation of 2 platform

- Criteria :
 - i. Presence on the market
 - ii. Availability in Europe of IT support
 - iii. Already used by key project beneficiaries
 - iv. User friendliness

What is an eLearning platform

1. A cloud-based software package
2. To deliver learning content and resources to an audience
3. Gives possibility to provide classes:
 - online, hybrid (a mix of online and offline)
 - live or recorded Accessible 24/7, easy to reproduce, possibility of self-thought courses
4. Space with:
 - Information about courses, curricula, dates, methodology, evaluation, registration and payment
 - Access to learning materials
 - Interaction (Forum, chat etc) and Collaborative learning (projects, wiki)
 - Provides tools for assess learning, certification & awards, competences mgt

Moodle vs Chamilo: overview

Course creation: The content page is a building block for creating a lesson in Moodle. You first need to create a course and then you can develop the lessons within it. Lesson creation is based on a 4 set up sections, namely general, appearance, flow control and grade.

Multimedia resources: Moodle has full integration of Microsoft Office 365, Google, virtual class (teams), video, documentary, etc.

Video Communication: Zoom, teams, etc

Collaborative tools: Forum, wiki, chat and groups.

Assessment & certification tools: Quiz, assignments, Live exams. Certificates. Gamification tools

Stats, monitoring and reporting tools: monitoring and reporting at all levels (platform, programmes and per course)

Extras: GDPR compliant, App (partial feature coverage), **Online payment plug in**

Moodle vs

Pros:

A global community: +160.000 registered organisations, 100+partners, more than 220.000 users worldwide, 1700+ open-source plug-ins developed

Market position: 60 to 95% market share, numerous IT support companies

Multi language capability: +100

Cons:

Less intuitive

Routine small updates @ 8am CET

Crowded but less sharp space

Chamilo

Pros:

Easy to use, intuitive

Easy way to repeat courses

GBIF Spain has adopted Chamilo

Chamilo developers and support system is **based in Brussels**

Cons:

Limited language capability: +30

Dependant mainly on Chamilo

Foundation for customisation and IT support



Moodle

vs

Chamilo

Cost:

- **6000 euro (one off)** customisation
- **0 euro** training session on platform use (extra trainings: 1200 euro)
- **4500 euro** annual license
- **1050 euro** (10% each invoice) Moodle fee

License includes:

Up to 1000 users
Web hosting, MCO and back up
Portal available 24/7 (99% of availability)
Help desk support for technical issues and software update

Cost:

+5500 euro per year TTC

Includes:

- Platform customisation
- A training session on platform use
- Annual license with:
 - Up to 1000 users
 - 25gb of hard disk space
 - 99% Portal available 24/7
 - Creation of up to 200 courses
 - Unlimited editions of courses
 - Help desk support (with ticket system)

Moodle

vs

Chamilo

PRICING BEST FOR RECOGNITION SCREENSHOTS FEATURES **REVIEWS** PROS & CONS DEPLOYMENT & SUPPORT

Chamilo

VISIT PROFILE

Moodle

VISIT PROFILE

+

ADD PRODUCT

REVIEWS

HIGHEST RATED

Overall ★★★★★ 4.7 (43)

Ease of Use ★ 4.6

Customer Service ★ 4.2

Features ★ 4.6

Value for Money ★ 4.8

Likelihood to Recommend ?

85.7%

[READ ALL REVIEWS](#)

Overall ★★★★★ 4.2 (1972)

Ease of Use ★ 4.0

Customer Service ★ 4.0

Features ★ 4.2

Value for Money ★ 4.4

Likelihood to Recommend ?


63.2%

[READ ALL REVIEWS](#)

PROS & CONS


+ Pro

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Learningbank

★ 4.7 (23)



Udemy Business

★ 4.7 (47)



360Learning

★ 4.6 (204)

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What is the best learning management system for you?

This Chamilo vs Moodle comparison article will work best for you if you're going to reflect on the following questions:

1. How many students do I intend to enroll?
2. Do I need a learning management system for educational purposes or commercial purposes?
3. What gamification tools do I need?
4. How do I want to engage my learners?
5. Do I have a definite list of built-in integrations?
6. How much knowledge do I have when it comes to coding and programming?

Chamilo is best for users in the academe as it has dedicated educational tools that allow for content-based gamification. It can take on an unlimited number of students and infinite integrations with third-party apps at absolutely no costs. Public schools and non-profit organizations will greatly benefit from its open-source nature.

Moodle is best for users that need a learning management system for commercial purposes. It's also ideal for users with no advanced knowledge when it comes to coding and programming because it has a paid version that allows for seamless customization and information dissemination without the need for complex scripting and programming. Businesses that need onboarding tools and creators that sell content will greatly benefit from its flexible and scalable learning toolsets.

Conclusions & recommendations

Moodle is an established player, while Chamilo is a noteworthy one

Moodle more popular but not in long term

Chamilo is more competitive pricewise

Chamilo is used by GBIF.

(and Many trainers withing DiSSCo community provide training with GBIF)

Recommended eLearning
platform:
Chamilo

BUT

Check preference with other WPs with a joint demo session of Chamilo & Moodle

Check better what tool DiSSCo trainres (not institutions) use



All Hands Meeting 2

TASK 2.1 - Training Strategy components (draft)

DiSSCo Prepare WP2 T2.1 Training strategy



Funded by the Horizon 2020
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AHM 2 Session WP2 – T2.1 Training strategy

April 5th 2022
3 – 4.30 PM CET

1. Beneficiaries of training activities

a. Target group definition

- differentiate project beneficiaries & project partners (via NNs - national community)
- differentiate data suppliers & users (particularly those outside the NHMs)
- Use the one from SYNTH+ D2.3 (?) and also DiSSCo 1.1 and 1.2 (part on user groups)

b. Needs analysis

- Use findings of 2.1 M5 Subtask 1 on training needs
- Integrate SYNTH+ D2.3 recommendations, especially on existing trainings (also to facilitate trainers' identification)
- Integrate input from national level via NN (part of M6) - focus groups or dedicated sessions
- Share IRL training objectives with WP leaders for review and enrichment
- Integrate results from T3.1 competences framework (if possible) and task 2.3 Human Resources Policy (part on M10 Portfolio on roles)

2. Training strategy framework / methodology

a. **Describing the educational mindset:**

- training for short-term task completion vs long-term career development skills

b. **Lessons learnt and best practice for training delivery**

- (use M6 Landscape analysis on best practice for training delivery)

c. **Differentiate methodologies** according to audiences/target groups and to cater for localisation and translation:

- general methodology,
- training of trainers & step down trainings



3. Identification of eLearning platform & training providers

- a. **Format:** online, offline and hybrid
- b. Recommend an **e-learning platform** (based on M5 subtask 2)
- c. Indicate **tool to identify training providers** (DiSSCo and non-DiSSCo).
 - Work with T8.1 + CETAF DofExperts to maximize synergies
- d. Identify possible **partnerships with academia**
 - Ex. university-based museums or general civil servant training service
 - To fill expertise gaps (fund raising, organizational management, HR)
- e. Ensure **training providers tool /database** is structured around:
 - Categories and Subcategories of DPP T2.1 for M5 (S+ basis)
 - Course information is structured on the basis of the DEST "training provider form"

24. Business model recommendations

- a. **Organisation**: define workflow, roles and responsibilities, human resources needs (for coordination of training programme)
- b. Training **dissemination/ promotion**
- c. Linkage to the **Knowledge base**
- d. **Cost model**, drawing on WP 4 (This should cover also thinking on the participation of trainees from outside Europe - Developing countries)
- e. **Certification**
- f. **Quality control**: develop an assessment tool to use in each training (eg evaluation form) and a participatory review and assessment tool for overall annual training planning
- g. **Diversity aspects** (language, cultural differences, resource disparity), including inclusive selection criteria for training participation.

DPP AHM - T2.1 Training Strategy session

Agenda and Notes

When: Tue 5 April 2022 @ 15h00 - 17h00 PM CET

Organizers: Mariano Iossa MI (CETAF), Maria Judite Alves MJA (MUHNAC-ULisboa);

Objectives:

- Share an update on work progress of the task team on M5 on training needs and elearning platforms
- Present a draft structure for the Training Strategy
- Provide an opportunity for Q&A, discussions and input from the broader community

Reference Documents (will be circulated before the meeting):

- DPP M5 - Recommendations on suitable training mechanisms
- DPP D2.1 Training strategy - draft structure

Agenda

Time	Topic	Lead/ Facilitator
15h00-15h10	Welcome & brief Presentation of the Task 2.1 “Training Strategy”	MJA, MUHNAC-ULisboa
15h10-15h30	Presentation: Update on Milestone 5 - Recommendations on suitable training mechanisms <ul style="list-style-type: none">● Subtask 1 - Compilation of needs for skills/competences● Subtask 2 - Identification of training platforms and providers	MI (CETAF)
15h30 - 15h50	<ul style="list-style-type: none">● Q&A, inputs, debate	MJA (MUHNAC-ULisboa)
Notes of this session	<u>About subtask 1:</u> Regarding resources to be allocated by some institutions to step up digitization, Lorenzo (UniFI, I) , shared his feeling that they might be put on the table only when the research infrastructure will be more mature and some issues clearer. Also results of the survey made him feel the still cautious approach from the institutions (especially the university museums) <u>Some institutions are waiting to be in the</u>	

DiSSCo implementation phase to step work up. Hence, in his view, demand for new courses will increase significantly in the coming years, starting from DiSSCo implementation phase. Nonetheless, this will not affect the training strategy.

Wouter (Naturalis, NL) it would be interesting to look into possibilities for the institutions to influence the national curricula in particular for training needs related to data.

Mariano (CETAF, BE) replied that it could be an interesting advocacy ask we could reflect in our advocacy strategy. Yet, such change in national curricula takes time. So, we should see it as a complementary approach, with short/medium term skills development through our training strategy but also a long term goal via advocacy on education and national curricula.

Also **Eva (Naturalis, NL)** agreed upon the importance of topic. The development of new curricula is a national priority for many of European countries, especially in the Eastern Europe. For instance, in Czech republic it was an important element to attract fans. A hybrid process in different scales, where it could be addressed by the institutions or the faculties vinculated with DiSSCo and later kept as one of the elements that DiSSCo will develop together with the national funding agency, could be interesting. It is something very attractive for national authorities.

Pedro (Ulisboa, PT) shared his perspective on the need for training in different languages. It would be nice to have national language training for small teams, but probably it's not needed in his context. He feels like offering a good glossary and dictionary for key concepts would be interesting. Maybe to have all the training material translated could be too large an effort. The use of lingua franca English would be good enough.

Ana (CETAF, BE) remarked the distinction between formal and informal training. Some member institutions can provide formal training and certifications but, within DEST, we also have informal education based on the expertise of our members. That needs to be taken into consideration in training offer.

Regarding language diversity, **Lorenzo (UNIFI, I)** said that a multistep approach to national community via training of trainers and step down trainings, with local adaptation and translation of materials cannot be avoided. We can ask support of "local" trainers to help with this. English can be the lingua franca for international trainings but we also need to consider the reality within national DiSSCo communities, because we know that there will still be people that

	<p>needing to be taught in their language. Even for people like myself with english skills, said Lorenzo, when talking about issues outside my area of expertise things get more complicated. Hence, tools should translated and adapted.</p> <p>Carole (RBINS, BE) said that they usually ask trainers to choose which the language in which they were to get trained. So, although English is prevalent, different languages are being used. She thinks that we should adopt this approach: <u>see what the practice is, see what's available and adapt.</u></p> <p>Furthermore this training could be used for what concerns the specialization plan and and how to build the map towards specialization through DISSCo</p> <p>Ana (CETAF, BE) said that <u>multilanguage courses were considered.</u> Could be translated in DEST, and some of institutions may support it</p> <p>In the end it was said that the <u>multilingual options for the training are good for reducing the language barrier</u> for the stuff that doesn't have it, but also that, while hiring new stuff, English language skills should be considered as a prerequisite to make things easier in the long run.</p> <p>About subtask 2:</p> <p>Carole (RBINS, BE) said about moodle that it was the one chosen by the EU Citize science as their platform, in support of it. https://moodle.eu-citizen.science.</p> <p>Stephan (, BE) asked wheter Helpdesk could be involved in using these platforms. (although It has its own platform)</p> <p>Nontheless, the user experience is key and maybe is good to try to keep between these training programs and helpdesk the same look so people don't get lost. User experience is key, it must be intuitive. There are always different environments and they always look different one from each other. It is diffult to get used to them every time.</p> <p>Elearning should be easy an plaform to get along with.</p>	
15h50 - 16h00	Presentation: draft structure of the Deliverable 2.1 Training strategy	MI (CETAF)
16h00 - 15h20	Q&A, inputs, debate	Lorenzo Cecchi, UniFi
Notes of	The presentation of draft structure was divided in 4 parts.	

<p>this session</p>	<p>During the first part it was outlined how to properly target the beneficiaries of the training activities and their needs were analysed. The second part focused on the actual training methodology of the strategy, highlighting the different possible scenarios according to various situations.</p> <p>In the third part it was then highlighted which struments and platforms (eLearning) will be used to implement the previous mentioned methodologies.</p> <p>Finally, the last part provided some business model recommendations</p> <p>There werent any comments or discussions more than elements already raised in the previous session</p>	
<p>16h20 - 16h30</p>	<p>Wrapping up and conclusions</p>	<p>MJA, (MUHNAC-ULisboa)</p>
<p>Notes of this session</p>	<p>Maria Judite Alves and Mariano lossa, as convenors of the session, thanked everybody for the very fruitful discussions and ensures that the issues raised will be followed up both in the finalisation of current work (MS5) and in fine tuning and carrying out future one (MS6 and D2.1)</p>	

ATTENDEES:

Jose Alonso (CSO, NL)
 Stefaan Pijls (MBG, BE)
 Lorenzo Cecchi (NHM, UNIFI, IT)
 Vanni Moggi Cecchi (NHM, UNIFI, IT)
 Marta Biaggini (NHM, UNIFI, IT)
 Gianna Innocenti (NHM, UNIFI, IT)
 Serge Scory (RBINS, BE)
 Carole Paleco (RBINS, BE)
 Niels Raes (Naturalis, CSO, NL)
 Katharine Worley (MNHN, FR)
 Salomé Landel (MNHN Paris, FR)
 Helen Hardy (NHM London, UK)
 Pedro Arsénio (ULisboa, PT)
 Julia Pim Reis (MfN -Berlin, DE)
 Emily Veltjen (INBO, BE)
 Sabine von Mering (MfN Berlin, DE)
 Laura Tilley (CETAF, BE)
 Eva Alonso (Naturalis, CSO, NL)
 Celia Santos (MNCN-CSIC, ES)
 Isabel Rey (MNCN-CSIC, ES)
 Alessandro Marchi (CETAF, BE)

Ana Casino (CETAF, BE)
Beáta Papp (HNHM-Hungary, HU)
Piotr Tykarski (UW, PL)
Paul Braun (MnhnL, LU)
Marko Lovric (CETAF, BE)
Judite Alves (ULisboa-MUHNAC, PT)
Bruno Ribeiro (ULisboa-MUHNAC, PT)
Dimitris Koureas (Naturalis, NL)
Giacomo Begala (CETAF, BE)
Wouter Addink (Naturalis, CSO, NL)
Tim Claerhout (UGent, BE)
Tina Loo (Naturalis, CSO, NL)

T4.4 Pre-Commercial Procurement

[06/04/2022]

**Steve Robertshaw - AcrossLimits
Stefaan Pijls - MBG**

DiSSCo Prepare WP4 - Task 4.4

All Hands Meeting



Funded by the Horizon 2020
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of the European Union

Agenda

- Intro: what is a PCP (and what else is there) (30 min)
- DiSSCo PCP : Survey & other insights (10 min)
- Identifying Pre Commercial Developments (10 min)
- Break outs: development, strategy and procurement (30 min)
- Wrap up and conclusions (10 min)

What is a PCP: a video

avoiding the not-invented-here syndrome:

<https://www.youtube.com/watch?v=zyetvgQicV0>

What is a PCP: Procurement of R&D services

- involving **Risk-Benefit Sharing** under market conditions (published in call for tenders)
 - providers must own (at least some of) the **IP**
 - procurers have **royalty free access** to results for own use & right to grant non-exclusive license to 3rd parties
 - call back provision
- and **Competitive Development** phases
 - solution design → prototyping → original development → validation/testing
 - reducing # providers
- with a clear **Separation from the Deployment** of commercial volumes of end products
 - no obligation to procure the results
 - possible to pursue in a Public Procurement of Innovative solutions (PPI)

What is a PCP: an example

<http://www.preforma-project.eu/>

In 2013, national archives and musea around Europe identified the need to improve the quality of digital files that preserve our cultural heritage for the long-term **as existing techniques could not solve the problem, new R&D was needed**. To achieve this goal, memory institutions from nine European countries decided to start together the PREFORMA pre-commercial procurement.

After the mandatory preliminary market consultation was completed, mid 2014, followed the **publication of the contract notice**, which detailed the problem to be solved, the main functional requirements and the typical use cases that the innovative solutions would need to be able to handle.

On 6 November 2014, **contracts were awarded** to 6 different consortia to start

By end 2017, the PCP successfully delivered **three new open-source standardised tools** that improve the curation capacity with high digitization accuracy and quality at reduced costs which resulted in worldwide adoption of the three resulting open standardised solutions

<https://digital-strategy.ec.europa.eu/en/news/towards-sustainable-ecosystem-long-term-digital-preservation-cultural-heritage>

https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=71017

PCP | PPI | Procurement differences: the Trouser Analogy



PCP: A Comparison

NB In the cases of PCP and PPI, the Public Sector is always on the demand side

	Pre-commercial Procurement	Public Procurement of Innovation	Standard Procurement
Rules	TRL 3 - 6 Laws Regulations Specific Guidelines	TRL 7 - 8 Laws Regulations Specific Guidelines	TRL 9 Laws Regulations
Opportunities	Outsource research dependencies Create innovation opportunities in the market Transfer risk BUT	Buy in innovative solutions Early adoption supports developers	Reduce overheads CapEx vs OpEx Supply-chain Management
Challenges	Managing the process Scope setting Specifications Selection Manage risk	Managing the process Match-making Seduction Transfer risk Some vs all?	Managing the process Specialised Skills Complex process Specifications

Procurement Styles



	Sole / Central Procurement	Joint Procurement
Rules	Laws Regulations	Laws Regulations Agreements
Opportunities	Reduce overheads CapEx vs OpEx Supply-chain Management	Economies of Scale Admin Costs Distribution of expertise
Challenges	Managing the process Specialised Skills Complex process Specifications	Admin Burden of group Slow decision-making Differing and shifting perspectives
	Commercial Procurement	Public Procurement
Rules	Laws Regulations Negotiated Position	Laws Regulations Rules
Opportunities	Reduce overheads CapEx vs OpEx Supply-chain Management	Buy in Novel Goods and Services unavailable within the organisation
Challenges	Managing the process Specialised Skills Complex process Specifications	Seriously Complicated Additional Rules Risk Management Process Management Specialised Skills Specifications

Agenda

- Intro: what is a PCP and what else is there
- **DiSSCo PCP : Survey & other insights**
- Identifying Pre Commercial Developments
- Break outs: development, strategy and procurement
- Wrap up and conclusions

DiSSCo PCP : Insights from the Survey



10 individuals completed the survey representing:

- task leaders of 1.2, 1.3, 1.4 - 2.2 - 3.2 - 4.2, 4.4 - 5.1, 5.2, 5.4 - 6.3 - 7.3 - 8.3 - 9.4
- WP leaders of 2, 3 and 5

2 state no new development

4 aren't sure at this point in time

4 indicate development

5 see in house development as the way forward, be it in or out of the DiSSCo scope

3 indicate a need for collaboration with external parties → Procurement

But there might be more.. please speak up

Agenda

- Intro: what is a PCP and what else is there
- DiSSCo PCP : Survey & other insights
- **Identifying Pre Commercial Developments**
- Break outs: development, strategy and procurement
- Wrap up and conclusions

Identifying PCP opportunities



From our survey, we could identify tasks where development from externals is requested and therefore, these following developments are possibly in scope of PCP (this will have to be cross referenced with the Strategy)

- Helpdesk functionality, user interface, and interoperability (~T2.2)
- mass digitisation approaches for imaging collection types other than herbarium sheets and pinned insects (~T3.2)
- Annotation and curation tools to work on DiSSCo data infrastructure (~T6.3)
- Others raised in this session

Agenda

- Intro: what is a PCP and what else is there
- DiSSCo PCP : Survey & other insights
- Identifying Pre Commercial Developments
- **Break outs: development, strategy and procurement**
- Wrap up and conclusions

Break outs :



each room should have a person with some background on the development need, a person with perspective on the strategy and a person from T4.4 and AcrossLimits to take notes and provide Procurement perspective

1. Helpdesk functionality, user interface, and interoperability (~T2.2)
1. mass digitisation approaches for imaging collection types other than herbarium sheets and pinned insects (~T3.2)
1. Annotation and curation tools to work on DiSSCo data infrastructure(~T6.3)
1. Others raised in this session

Break outs :



each room should have a person with some background on the development need, a person with perspective on the strategy and a person from T4.4 and AcrossLimits to take notes and provide Procurement perspective

1. allocate a TRL level to the topic, incl. a 2 sentences motivation
2. identify the fit with the DiSSCo strategy, if applicable, incl. a 2 sentences motivation
3. select the most appropriate procurement model, incl. a 2 sentences motivation
4. provide any additional perspective you like, propose next steps

Break outs : Room # : Development



Development Opportunity:

room#: attendance:

1. TRL level (incl. a short motivation):

1. Link with the DiSSCo strategy (incl. a short motivation):

1. Assumed procurement model (incl. a short motivation):

1. Additional perspective and/or next steps:

Agenda

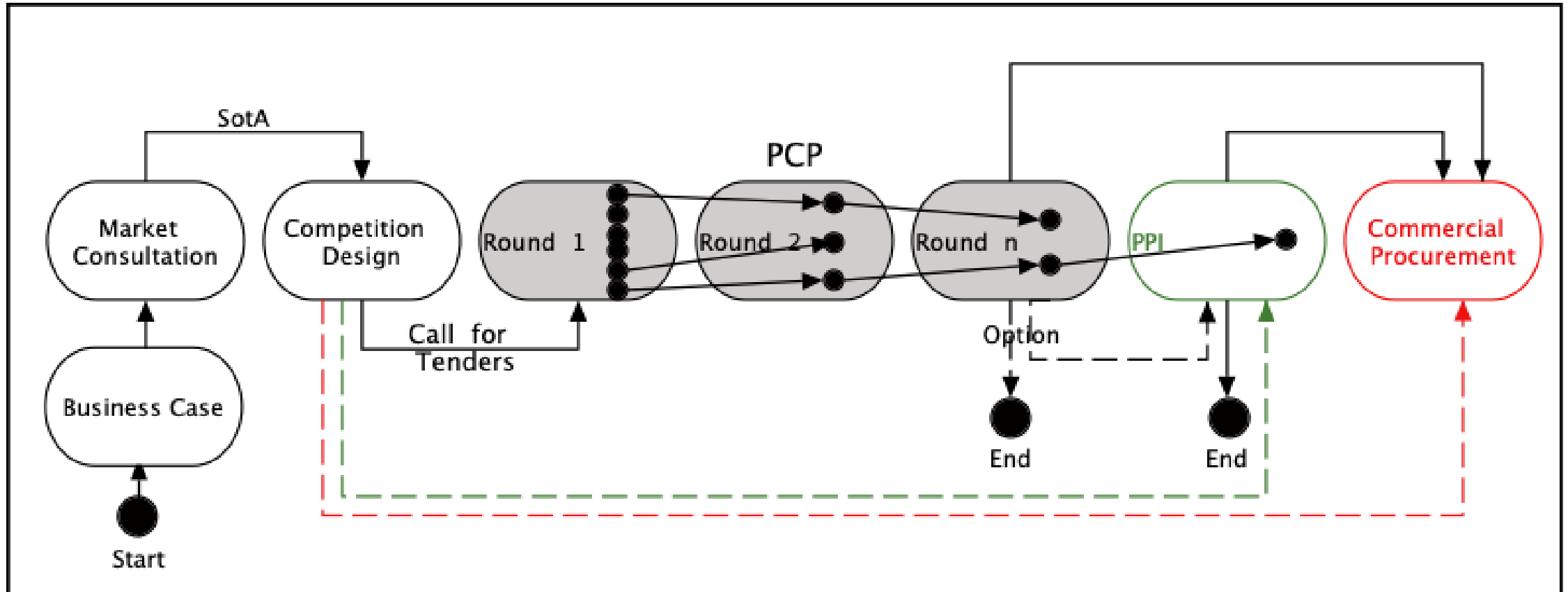
- Intro: what is a PCP and what else is there
- DiSSCo PCP : Survey & other insights
- Identifying Pre Commercial Developments
- Break outs: development, strategy and procurement
- **Wrap up and conclusions**

Plan for 2022 - MS June ; D December



1. Gathering perspective (Jan-Feb-March)
 - deeper understanding of PCP and its opportunities
 - WP & Task leaders survey to identify relevant opportunities
 - align with Future Developments Strategy
2. more insight in the PCP opportunities in DiSSCo (April)
3. Analysing data collected, verify and document (May)
4. MileStone : landscape analysis and feasibility results (June)
5. Deliverable: Final Report (Dec)

PCP and PPI in Procurement Context



WP4 – task 4.1 – The Cost book

The costing methodology

AHM2

MNHN Paris



Aims of session : start data gathering by Mid-April

- Presentation of methodology (documents circulated)
- Hands-on with the Excel file – what is needed to improve it?
- Results from MNHN
- Answer the question: achievable by 120 institutions in 21 countries?

Principles and hypotheses

- Activities and services provided by the institutions do exist and are well established
- Retroanalysis not suitable for new services
- Year of reference: stable, « average » - issue : projects or investments spanning 2 or more years
- Average means dealing with uncertainties

- **Main resource: staff. Key element is time distribution**
- Identifying coherent accounting entities = administrative unit with staff involved, at least partially, in DiSSCo services.
- Head of unit knowing how time is distributed for each member of staff.

The Tool - an Excel file for each accounting entity

- One size does fit all. The Excel file covers all financial elements and goes beyond the minimal requirement for the business model (many empty columns possible eg for IT infrastructure unit , EU program management unit)
- Designed for collections departments but versatile in order to be used for
 - Analytical facilities, digitisation unit
 - Training services
 - Other...

2 Pending issues to be addressed by governing body

- Conservation cost as indirect costs: min and max indirect costs of services
- Software collection management system serving both the institution and DiSSCo: identified as a whole, requires decision to split it between institution's own and in kind contribution to DiSSCo hub

Results from MNHN (documents circulated)

- Environment cost calculation still in progress
- 90% of costs are staff costs
- Error propagation gives confidence level on results
- Estimation of cost of services achievable
- Quantitative and qualitative assessment
 - Significant differences in services with respect to job level
 - Significant differences in collections management unit with respect to cost

Achievable for the 120 institutions?

- Gathering as many data as possible
- Using hour as accounting unit across DiSSCo
- Looking for « magic numbers »
- Looking for trends
- Looking for proxies from other institutions
- Stressing the importance of uncertainties

- How much does it cost? # how long does it take?

DPP AHM2 - The costing methodology

T4.1 (DiSSCo Cost Book)

Date: Wednesday 06 April 2022

Time: 10:45 - 12:15 CEST

Link (Zoom): <https://us02web.zoom.us/j/89644120122?pwd=UDhtK0xTY3d1bVRubXprVUZ2T050UT09>

- **List of needed participants (without which the session cannot be productive).**

The session is practical. So participants should be the persons who are likely to use the cost book method or train their staff to do it.

- **Contributions expected from participants during the session – two sentences max. Also, in case, any homework is needed in the two weeks before the AHM2.**

Homework has been given at the NN meeting with feedback expected for April 1st. Participants are expected to test the method and to help improve it so it can be deployed across DiSSCo. So participants who have not used the method yet should attend the meeting having as much information as possible on the different elements of the cost book. The method, a template and an example from the MNHN Paris are provided on Teamwork

- **List of specific issues that need to be decided and agreements that need to be made during the session.**

Agree on the definitive version of the methodology

Decide to enforce it or not as a standard for DiSSCo

ATTENDEES

Please, enter your name, affiliation and role in the project

Lorenzo Cecchi (UNIFI-NHM, Italy)
Katharine Worley (MNHN)
Henrik Enghoff (UCPH, WP1 lead) [left 11.15]
Heli Fitzgerald (Luomus)
Niels Raes (Naturalis Biodiversity Center)
Carole Paleco (RBINS)
Celia Santos (MNCN-CSIC)
Julia Pim Reis (Mfn -Berlin)
Sabine von Mering (MfN Berlin)
Marko Lovric (CETAF)
Ana Casino (CETAF)
Stefaan Pijls (MBG)
Patricia Mergen (MBG)
Frederik Leliaert (MeiseBG)
Pedro Arsénio (ULisboa)
Beáta Papp (HNHM-Hungary)
Mareike Petersen (MfN Berlin)

Number of attendees : ~27

Michel Guiraud (MG): After this session - couple of days gather data for the cost book of DiSSCo. A document has already circulated. Show how to fill-in the excel file.

You can complete the google drive and add suggestions on how the methodology could be filled. Wanted to stress whether this methodology is achievable or not. What are the cost-benefits for the institutions? People I am targeting are certainly not here.

Principles and hypothesis:

- Dealing with activities that are provided by the institutions: important to get the elements of the costs of the services provided by the institutions. The aim here is to try to estimate the costs of these services
- Possible to have an average - When you say : i'm dealing with averages = dealing with uncertainties
- Our main resources = staff = time distribution of staff is key
- structure the different elements where the entity / the staff is involved?
- Head of units should know how the work of its is distributed

How to implement it?

- An excel file was developed by Michel Guiraud. There are many columns. The excel is designed for the collection department. Will show some examples.

Question regarding the conservation costs: because institutions keep the collections what does that represent have a calculation for minus / maximum depending if you provide for all the support or not.

Anything related to e-services, if too complex to split-up this is a prototype the aim is to start gathering numbers

Presentation of the excel file and the methodology

- Thing about units
- Column for ID = no way that the information will be given up to the hub internal thing
- There are the salaries in the excel table
- All gray areas are automatically calculated
- Make the distinction between small project and large project
- Support = management of the unit
- What would be the in-kind participation of the unit to DiSSCo
- Synthesis = people in the institution that will participate in the project
- Job level: qualitative approach to know exactly the kind of expertise you need = help to monitor DiSSCo activities(from senior to junior)
- FTE = fully or partially employed
- Uncertainty = someone who knows more or less who does what? 1 = exact / 4= high uncertainty
- Salaries = go to HR with confidentiality issues / make things anonymous ++ alternative = identify different ranges of salaries within your organization ending with an estimated value and standard deviation

- Nothing to do in the “calc” tabs

Example from a very small institution:

- someone for exhibition / one for the collection + volunteers + temporary contract for someone to do the digitisation
- Show how the time of employees could be distributed
- Start to have the summary of it = have the activities + job levels
- Put here the legal number of hours + put average number of specimens digitised per year = what time per unit is done for DiSSCo?
- Michel is testing with salaries for the sections

Need to add environment cost: when you employ someone you have your legal department / HR department = cost per staff + cost per m² (building, garden) = ideally we should try to get a proper number for that = there are 2 options = one with flat rate or you put the numbers for your institution

Give the costs in euros = basically it is the data we get

Example with the botany department at the MNHN : there are different people, different job levels, whether you expect that 100% rule = you have there how it looks what you choose for environment costs + broad approach of how this staff is distributed. Data on non DiSSCo activities + number of FTEs for DiSSCo services + we have that information. In our case, non DiSSCo is high level because we are dealing with researchers. DiSSCo activities, in the botany department, most of the activities are for the maintenance of collections. After that, you get the cost with the same information. Costs of consumables and investments. You out here basically the units you are using and the specimens put in the system. Cost for the loans, same for visitors. You can report to the hub what the in-kind could represent. This is what we get from the Botany department

Once we have done all of this. We get the results for our Museum. This is done by hand: collected from the different reports that came up from the different departments. This should be automated one way or another. Trying to make it as flexible as possible.

If you change the names of categories = 2D / 3D / microscopique slides = match the organisation of your institution. If you changed your organisation, then you can change that and use it to come up with a cost of units you defined.

Regarding the limit of the file, there might be a limit, aim to test if it is ok for you or not. If you feel that it should be up to 10 services

Ana Casino: I think that is a very thorough exercise = detailed view of what our institutions are participating in the costs of our RI. Planning to share this with our institution. You know already that institutions may have different ways of recording cost elements. Due to the complexity of this exercise may incur, ways to report the cost. Have you thought of another way to estimate the costs of e-services? Maybe we will not get enough figures to have a critical mass. Do you have a simplified version?

MG: the minimum requirement: basically what is your staff doing? That is the minimum and you have a unit that is an hour there. This is the bare minimum to ask. If this bare minimum is too

complex. At the end we need a cost of services per unit, if institutions have other ways to come up with information, institutions just give the numbers and explain how they got it. We understand how these numbers came up. Want this session to have your feedback on that. Either this info is brought using a common methodology. Ask all institutions to come up with numbers. Try to get a consistency in the end

AC: these are the two ways to be used.

Stefaan Pijls: that is awesome for the one who needs help and those who are willing to benchmark. Good for transparency and the use of ranges. To what extent it is useful for forecasting and see what we expect for the development phase?

MG: come up with numbers that make sense. See the differences in the cost and do they make sense or not. Seeing that in mineralogy, takes time. Expecting to have all the numbers between the different scientific disciplines. Get through job levels. Differences between digitisation. Regarding the future. Point is to gather as much data as possible. The common unit for DiSSCo is the hour. The idea was to look for magic numbers = 90% of the cost are staff costs. Changing from how much does it cost to how long does it take. If we see significant differences.

Niels Raes: had the privilege of a bilateral meeting with Michel - overwhelming when you 1st see the sheet. Doable for Naturalis. Wouldn't it be useful to have a video tutorial cost book will be a key element for the funders forum.

MG: happy to record everything

Patricia Mergen: when filling in information we realized that simply we do not have the figures, we had to get back to individual persons. Stefaan and Frederic can help. We can adapt our accounting system to DiSSCo. Help to adapt our institution, it was worthy to fill in this figure. Motivate to do the effort to fill it in. Try to make it more efficient in the future.

Elsa Fontainha: someone asked about the future cost, assume we have to compute the future and we want to present some measures of financial evaluation of this project. Incremental value of DiSSCo inside the institutions. What kind of discount rate would be reasonable to compute? What is the discount rate from an economic and social perspective?

SP: is this not more a choice than a calculation

MG: If you look at the numbers, I am impressed by the time spent to process a loan. "oh might be better to digitize things", part of the loans will be replaced by institutions. Institutions will need staff for the loans.

AC: mentioning that this methodology cannot be applied to new services. We do not know what these new services would be. If development of methodology in terms of units. Those units can be adjustable. From different components, what you are saying is not applicable.

MG: try first before knowing how much it would cost you. If no feedback on it

PM: think it is compatible with new services. Only challenge is the price tag on it. If we have a table we can add additional lines.

SP: basis of shoot costs analysis, if new activity, will go with assumptions.

AC: despite how you calculate, if you have a reference component, here we are talking of costs. If you refer to a stable unit. Importance of having a cost book is to have a framework to identify the process for the amount of money needed. Despite the methodology of institutions, the important thing is to have the reference units.

Frederik Leliaert: Important that this cost estimation is an iterative process, institutes can learn from each other. Incorporate costs that perhaps are not relevant for DiSSCo.

MG: From now on, we are going to need numbers now, what is your feeling?

PM: Now we are 170 institutions. one of the challenges, exercise with institutions almost fully involved in collections. Universities have collections but this is not their main activity.

MG: In university, very small services dealing with collections + focus on them + no big deal, we do not have to ask the university to do everything. Maybe universities have their own values already. approaching that through what people are doing. I do not know the next steps. Following what Ana, ok now the question will it be the standard or not? Get the consistency at the beginning? Or it could be a mix. Before knowing how much it would cost, be able to say how long it would take. mid-april: come up with a number but providing how they got the figures

Chat

11:44:35 De Pedro Arsénio à Tout le monde:

Is it possible to consider costs of a contracted person that worked only a part of the year (final part of a 2,5 year contract, for instance)?

11:44:42 De stefaan à Tout le monde:

ScreenToGif - Record your screen, edit and save as a gif
...<https://www.screentogif.com>

A practical tool for such on line tutorials

11:57:58 De Dimitris Koureas à Tout le monde:

I need to switch to another meeting. Michel thank you very much.

11:58:15 De Patricia Mergen Meise Botanic Garden à Tout le monde:

We can also decide that a new expense that it fits in an existing component in the table


12:05:15 De Pedro Arsénio à Tout le monde:

Good point, Patricia! In my perspective the major challenge is not if small collections in University contexts are willing to estimate costs, but rather how to deal with the added complexity of estimating time dedicated to collections (by professors, researchers, etc)...

12:06:48 De Elsa Fontainha (ULisboa) à Tout le monde:

The Account Systems are standardized. However the nature of the institutions (e.g. public, private, mixed) the size of the RI, the main activity (education oriented or not) creates

big differences within each country and among countries. The costing books must be adapted. The works presented is "open" allows flexibility. But a lot of work will be need in future (after Prepare).




Instructions for the AHM2 meeting

- The sessions will be recorded and available after the All Hands meetings;
- By default, all attendants are muted from the start;
- At the beginning of the session, the team must decide who will be the note-taker and chat moderator, if necessary;
- To save the chat, the conveners must download it before the end of the session;

- **Link to the general sessions :**
<https://us02web.zoom.us/j/89644120122?pwd=UDhtK0xTY3d1bVRubXprVUZ2T050UT09#success>
- **Agenda:**
<https://docs.google.com/spreadsheets/d/1bUiV8nG98efVlaKMPyDEMIhbErjBqjce/edit#gid=648015891>


1



T4.2 Business Sustainability

[06/04/2022]

Angele Giuliano - AcrossLimits & Lisa French - NHM
DiSSCo Prepare WP4 - Task 4.2
All Hands Meeting



Funded by the Horizon 2020
Framework Programme
of the European Union

2

Agenda

- Introduction to T4.2 (Lisa)
- DiSSCo Business Models: Identifying Potential Income Streams (Angele)
- Business Model Survey - Preliminary Results (Angele)
- Discussion (all)



3

Introduction to T4.2

- 4.2.1: Undertake an assessment of potential external user needs of DiSSCo Services, from both the private and public sectors
- 4.2.2: Evaluation of potential income diversification opportunities
- 4.2.3: Creation of a platform to assess DiSSCo costs



4

Task 4.2.1

Undertake an assessment of potential external user needs of DiSSCo Services, from both the private and public sectors

This builds on the user stories and case studies compiled in WP1. It also links with the stakeholder analysis work from WP8.3.

We will identify users and market niches within these services. This subtask will identify the key elements where capacity building is required in order to ensure the offer matches demand.



5

Task 4.2.2

Evaluation of potential income diversification opportunities

We will evaluate the feasibility of options for charging for DiSSCo Services.

This task will include evaluation of the legal possibilities for income diversification, and what the limits might be to opening up DiSSCo to the private sector. It will also include an assessment of any potential risks.



6

Task 4.2.3



Creation of a platform to assess DiSSCo costs

This subtask will make recommendations on the minimum cost information required in order to be able to charge for services in future, and will look at what platform should be used to store cost data.

This will link closely with the WP4.1 costbook task, and will be fully scoped later in the year.

7

Status Update April 2022



- Working Group setup from AL and Task Leaders
- Regular meetings & shared folder established
- Ongoing rolling notes, actions, tasks
- Overall business angles started to be defined
- Requirement for more information (at Dissco member level and sometimes at WP Level) has been identified and are being handled
- First delivery - T4.2 April Milestone, soon after T4.4 June

8

Focus on April Milestone



1. Collection of commercialisation documents - done
2. Drafting of interview questions / survey -done
3. Launching interviews / survey - done
4. Analysing data collected and documents , in progress
5. Reporting on the above (April)

9

Why?



- Business (and income) opportunities depend on demand for DISSCO services and ancillary services that can be delivered by member entities but brokered by DISSCO
- Fragmented knowhow of what industry needs / requests need consolidation - the real demand
- Actual requirements / wish for procurement (both public normal and pre-commercial) have to be clarified - developing a “shopping list” (feeding into T4.4)

10

Identifying Income Streams



- Income Streams for DISSCO will be from a variety of sources
 - “Membership” fees from MS
 - Grants from National / EU sources
 - “Service” fees from potential clients

11

Service list for DISSCO



- Training
- Digitisation on demand/virtual access to the collection
- Physical access to the collection
- Analysis (e.g. imaging, sequencing)
- Consulting services
- Others

12

Rationale of Survey



- Requires business development expertise and mindset
- Questions are a starting point for discussion
- Checking current thoughts of partners
- Helps to identify those partners that look at business opportunities
- Open door A process that can continue iteratively

13

DiSSCo Business Model Survey v2

* 7. Please indicate which industry sectors your organisation sells training services into (select all that apply).

- | | |
|--|---|
| <input type="checkbox"/> Agriculture, forestry and fishing | <input type="checkbox"/> Finance and insurance |
| <input type="checkbox"/> Mining and quarrying | <input type="checkbox"/> Real estate activities |
| <input type="checkbox"/> Manufacturing | <input type="checkbox"/> Professional, scientific and technical |
| <input type="checkbox"/> Electricity, gas and steam | <input type="checkbox"/> Administrative and support service |
| <input type="checkbox"/> Air conditioning supply | <input type="checkbox"/> Public administration |
| <input type="checkbox"/> Water supply | <input type="checkbox"/> Defence |
| <input type="checkbox"/> Sewerage and waste mgt | <input type="checkbox"/> Social security |
| <input type="checkbox"/> Construction | <input type="checkbox"/> Education |

6 of 26 answered

14

Preliminary Survey Results



- Out of 8 respondents in total, 5 undertook the whole survey.
- Three DiSSCo partners already sell services
 - Two sell training services
 - Two sell digitisation on demand services
 - Two sell physical access to collections
 - Three sell analysis services
 - Three sell consulting services, generating by far the most income

15

Preliminary Survey Results



- All services are sold across a wide range of business sectors.
- The forecast is that the volume of business activities will grow.
- All partners are interested in collaboration to increase revenue.
- DiSSCo is perceived to be a low level of threat to its partners.

16

Focus on Questions / Discussion



- What would be the advantages (if any) of business collaboration with DiSSCo members or with DiSSCo legal entity
 - More potential income
 - More prestige for our organisation
 - More access to potential clients for our organisation from other countries
 - Giving other services that we do not currently provide to our existing clients
 - Better economies of scale (cost saving) in providing commercial services
 - Better sales & marketing positioning
 - Other Pls specify
 - Nothing, no advantages at all

17

Focus on Questions / Shared doc



Would you be willing to share some business service use cases with us? (No need for specific business names, just a short narrative or text lifted from your business brochures)

Is there any other obvious business potential that you think will exist when DiSSCo Legal entity will be formed? (apart from services already mentioned)

https://docs.google.com/document/d/1WJj6ZX9cARxdRmdjZRIFrz440M_RivJ8ldJy0KtLc/edit#

18

What's next



- Inviting more partners to answer the survey
- Having an in-depth conversation & brainstorming with the ones that answered all questions and would like to deepen collaboration
- Reporting on lessons learnt both by the individual partners and also on a joint collaboration brainstorming for more revenue for the future
- Delivering results to the strategy group for moving forward

19

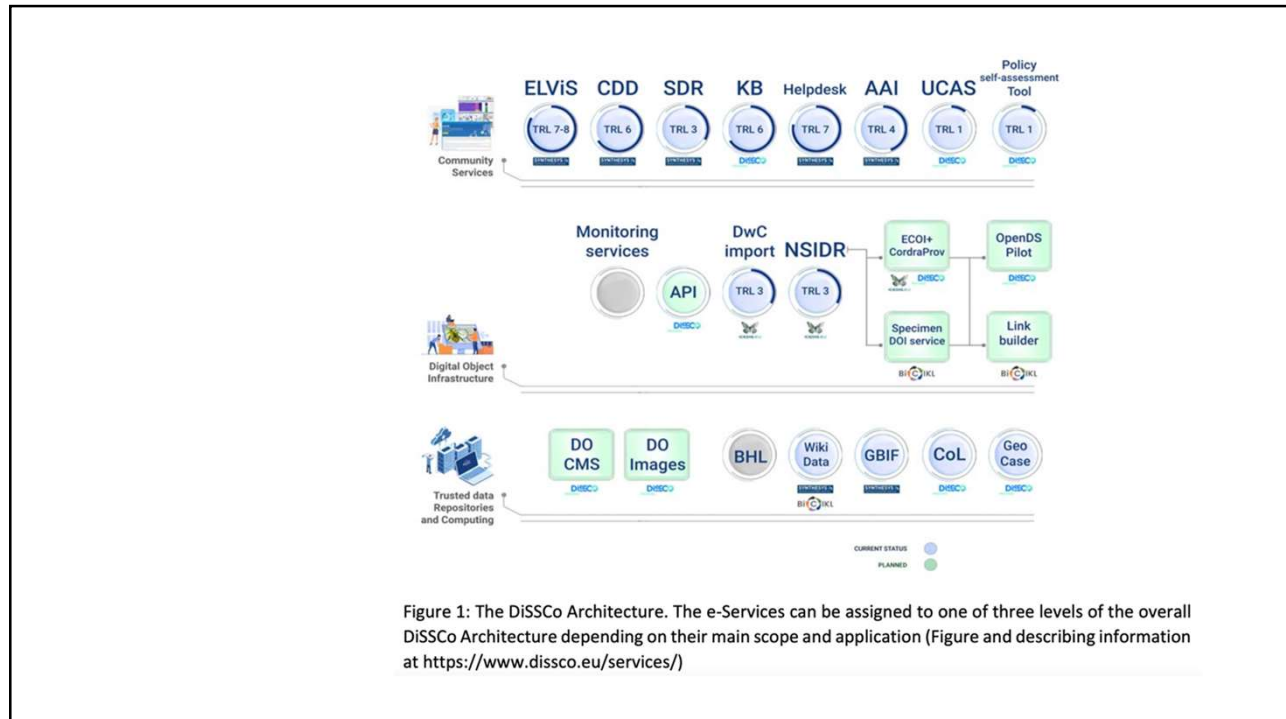
Thanks for your attention



If you want to answer the survey

<https://www.surveymonkey.co.uk/r/NXTSQ6R>

20



21

Table 1: DiSSCo e-Services currently under development. The table lists information about the e-Service, the hosting institution, URL (if available), the version and TRL (Technical Readiness Level).

e-Service	Description	Host	URL	Version	TRL
European Loans and Visits System (ELVIS)	One-stop shop for access to the collections in Europe, already used for Transnational and Virtual Access in Syn+	Naturalis, Picturae	https://elvis.dissco.eu	Version 1 developed in Synthesys+ Project	7-8
Collection Digitization Dashboard (CDD)	Dashboard visually summarises different collections KPIs across the community through visual elements.	NHM London	https://rebrand.ly/synth-cdd	Prototype developed in Synthesys+ Project	6
Specimen Data Refinery (SDR)	Supports industrial scale digitisation including approaches to extract, enhance and annotate data. See also Walton (2020).		NA	Defined & prototyped in Synthesys+ Project	3
DiSSCo Knowledgebase	Central hub to search and browse through documentation related to DiSSCo and any deliverables of DiSSCo-linked projects	MfN Berlin	https://know.dissco.eu	Pilot / Beta Version developed in DPP	7
Helpdesk	Central place for all questions related to DiSSCo e-Services and Access programmes	CETAF, Naturalis	https://jitbit.com/helpdesk	Version 1, used for ELVIS in production	7
Authorisation and Authentication Infrastructure (AAI)	Refers to a service and a procedure that enables members of different institutions to access protected information that is distributed on different web servers.	GRNET	https://synthesys.ai-dev.grnet.gr/auth/	Pilot, implemented in Synthesys+	7
Unified Curation and Annotation System (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.		-	-	1
Digital Specimen Repository (NSIDR.ORG)	Metadata repository for experimentation with Digital Extended Specimen And DiSSCo-related FAIR digital Objects	Cardiff, Naturalis, Senckenberg	https://nsidr.org/ & https://demo.nsidr.org/	Demonstrator developed in ICEDIG	3
DiSSCo Modelling Framework (DMF)	The DMF will provide modelling capabilities to define data standards used by DiSSCo, such as the Open Digital Specimen (OpenDS). (Internal service)	BGBM Berlin	https://modelling.dissco.tech/	Production Installation, developed in DPP	8

22

DiSSCo AHM 4.2 Meeting Notes

Date: 6th April 2022

Participants: Lisa French (NHM), Laurence Livermore (NHM), Angele Giuliano (Across Limits), Ana Casino (CETAF), Wouter Addink (Naturalis), Stefaan Pigls (Meise), Marko Lovric, Michel Guiraud (MNHN), Patricia Mergen (Meise), Julia Pim (MfN), Marta Biaggini, Serge Scory, Jose Alonso, Heli Fitzgerald, Katharine Worley, Salomé Landel, Sabine von Mering, Gianna Innocenti, Frederik Leliaert, Carole Paleco, Ann Van Baelen, Pip Brewer

Note taker(s): Laurence Livermore, Lisa French

Reference document: WP4.2 Questions

https://docs.google.com/document/d/1WJj6ZX9cARxdRmdjZRIFrz440M_RivJ8ldJy0KthtLc

Pre-Meeting Information

List of needed participants (without which the session cannot be productive).

AcrossLimits, WP4 partners.

Contributions expected from participants during the session – two sentences max. Also, in case, any homework is needed in the two weeks before the AHM2.

Participants will be asked to discuss potential income streams for the DiSSCo services, and feedback on preliminary results from the recent business model survey. No reading is required in advance.

List of specific issues that need to be decided and agreements that need to be made during the session.

- Discussion in potential business and income opportunities for the DiSSCo services
- Develop further understanding of industry needs through discussion with participants.

Relevant documents and/or other inputs needed for the session. These documents should be available (communicated and uploaded in Teamwork) at least one week before the AHM. In Files>Categories>AHM2

N/A

Agenda reflecting the above.

1. Introduction to T4.2
2. DiSSCo Business Model: Identifying Potential Income Streams
3. Business Model Survey - Preliminary Results
4. Discussion (all)

Please identify a notetaker(s) for the session and inform the coordination team
(info@dissco.eu)

Laurence Livermore & Lisa French

Notes

Presentation

[Introductions from LF and AG, overview of agenda]

Task 4.2.1

Undertake an assessment of potential external user needs of DiSSCo Services, from both the private and public sectors

This builds on the user stories and case studies compiled in WP1. It also links with the stakeholder analysis work from WP8.3.

We will identify users and market niches within these services. This subtask will identify the key elements where capacity building is required in order to ensure the offer matches demand.



Task 4.2.3

Creation of a platform to assess DiSSCo costs

This subtask will make recommendations on the minimum cost information required in order to be able to charge for services in future, and will look at what platform should be used to store cost data.

This will link closely with the WP4.1 costbook task, and will be fully scoped later in the year.



Status Update April 2022



- Working Group setup from AL and Task Leaders
- Regular meetings & shared folder established
- Ongoing rolling notes, actions, tasks
- Overall business angles started to be defined
- Requirement for more information (at Dissco member level and sometimes at WP Level) has been identified and are being handled
- First delivery - T4.2 April Milestone, soon after T4.4 June

AG: Understood there was little information in DISSCo about what members were doing or wanted to do in terms of external commercial service provision. Using a survey to collect data.

Focus on April Milestone



1. Collection of commercialisation documents - done
2. Drafting of interview questions / survey -done
3. Launching interviews / survey - done
4. Analysing data collected and documents , in progress
5. Reporting on the above (April)

AG: Collected information from WP1. Survey built in Survey Monkey with branching route to keep the survey short (5-6 minutes).

Why?



- Business (and income) opportunities depend on demand for DISSCO services and ancillary services that can be delivered by member entities but brokered by DISSCO
- Fragmented knowhow of what industry needs / requests need consolidation - the real demand
- Actual requirements / wish for procurement (both public normal and pre-commercial) have to be clarified - developing a “shopping list” (feeding into T4.4)

Identifying Income Streams



- Income Streams for DISSCO will be from a variety of sources
 - “Membership” fees from MS
 - Grants from National / EU sources
 - “Service” fees from potential clients

AG: First two income streams are obvious and well known to the consortium. Service fees will be the focus of this subtask. Common question is can we charge for services given our legal/financial constraints, e.g. as an ERIC? Short answer, yes, as a modest proportion of income.

Service list for DISSCO



- Training
- Digitisation on demand/virtual access to the collection
- Physical access to the collection
- Analysis (e.g. imaging, sequencing)
- Consulting services
- Others

AG: What can DiSSCo sell (see list)? Consulting services are very wide.

Rationale of Survey



- Requires business development expertise and mindset
- Questions are a starting point for discussion
- Checking current thoughts of partners
- Helps to identify those partners that look at business opportunities
- Open door A process that can continue iteratively

AG: Public institutions can still be entrepreneuring. Commercialisation is becoming more of a focus for some partners, while some are very focused on national/government funding.

AG: Initial results: three out of five sell services of some sort.

- Three DiSSCo partners already sell services
 - Two sell training services
 - Two sell digitisation on demand services
 - Two sell physical access to collections
 - Three sell analysis services
 - Three sell consulting services, generating by far the most income

AG: Some financial numbers - training, digitisation and physical access was up to €100k per partner. Analysis was up to €0.5M, consulting €1-2M per partner. No results in the “other” section.

AG: No particular business sector focus - nice cross section but different between partners. Forecast for business volume/commercial activity will grow. All partners interested to collaborate to increase revenue. DiSSCo perceived as a low threat, and that therefore see this as a value-added activity.

Questions

AC: May have some mixed understanding when considering DiSSCo partners versus institutions. Partners are member states while institutions are operational units that deploy and make the infrastructure feasible. That distinction should be made more accurate. Institutions may not see a threat as DiSSCo infrastructure gives added value. We should consider that services provided by DiSSCo should not compete/conflict with existing institutional services, or those provided by CETAF.

AG: All data comes from partners/

Frederik Leliaert: NSCs have been open repositories for centuries. Now we see Europe is pushing Universities and collections towards open science, and to one hand asking money for services. Just a general comment, and whether you have felt this friction.

AG: Yes - need to remember that we are accompanying open data with value added services on top of the data. Doing this for commercial entities which will be making money themselves.

Lisa French: Important point and need to consider in Task 4.2. Comes into the element of risks - are there reputational risks when we start selling services. We are focusing on the options, and pass the risks for DiSSCo to consider. Options include embargoes on digitisation on demand. Financial risks with not selling things - if someone wants to purchase digitisation of the collection under embargo.

Serge Scory: Surprised that collections are selling access to physical collections. Concerns about how this is done.

Discussion session

Focus on Questions / Discussion

- What would be the advantages (if any) of business collaboration with DiSSCo members or with DiSSCo legal entity
 - More potential income
 - More prestige for our organisation
 - More access to potential clients for our organisation from other countries
 - Giving other services that we do not currently provide to our existing clients
 - Better economies of scale (cost saving) in providing commercial services
 - Better sales & marketing positioning
 - Other Pls specify
 - Nothing, no advantages at all

Serge Scory: Development of services should be strategic and plenty of scope for development, we can do this without affecting FAIR/free access.

Michel G: Services have institutional costs and fees. We need to consider who covers the costs. We have a public duty to cover the costs to provide access but the question is to what extent we can cover these costs ourselves or charge for access. Companies are not “the public”. The second question is around disposal - what is worthwhile keeping and what can we make profit from? As an institution, what do you do? At the moment there is a public duty that can often mean you can dispose of collections. The question of who has to pay to access is different to using collections as an asset that can be changed, sold, enhanced or used.

Ana Casino: Confused. Would like to continue on with my previous point. Different to talk about services, a different part is the business model for DiSSCo. Business model is commercially driven and adds value to open science. Bit of a mix here, I need to look at services that the infrastructure will provide, but it's different to what the institutions will provide despite DiSSCo. When discussing services and incomes, we are not talking about training and registration fees from an institution. This seems like a mixed approach.

Angele: DiSSCo provides value added at EU level. One option is brokerage. If DiSSCo as an RI is the “one stop shop” for different corporations to find a service, then DiSSCo IR can subcontract to the operational elements for doing the work, pay them and keep a cut for itself. They are not in conflict, it's value added. You provide brand, weight, and something that is bigger than an individual institute.

Lisa French: The institutions hold the collections and that will not change. Digitisation coming through DiSSCo will still require the institution to digitise the collection. The charging/commercial model will require income to DiSSCo and the institute. How it works needs discussion. Advantages to the institution need to be clear.

Stefaan: There are different levels of increasing value, and opportunities to monetise them. We need to look at the opportunities and decide what DiSSCo wants to focus on - the levels of profit for DiSSCo are yet to be determined.

Shared Task

Focus on Questions / Shared doc



Would you be willing to share some business service use cases with us? (No need for specific business names, just a short narrative or text lifted from your business brochures)

Is there any other obvious business potential that you think will exist when DiSSCo Legal entity will be formed? (apart from services already mentioned)

https://docs.google.com/document/d/1WJj6ZX9cARxdRmdjZRIFrz440M_RivJ8ldJyOKthtLc/edit#

Angele: Information capture based on use cases from participants. Good experiences with potential. Does not need lots of detail.

Lisa: Interesting that consulting is making more money. Good to think about consulting as we need to do more research on this.

Michel: Monopoly or not monopoly? Specimens/collections are more like monopoly but knowledge services are not - knowledge more competitive?

Lisa: Once collections are digitised anyone can use it. In embargoed, cannot make money off of it. Getting balance right is important.

What's next



- Inviting more partners to answer the survey
- Having an in-depth conversation & brainstorming with the ones that answered all questions and would like to deepen collaboration
- Reporting on lessons learnt both by the individual partners and also on a joint collaboration brainstorming for more revenue for the future
- Delivering results to the strategy group for moving forward

Angele: Need more survey data! Will have follow-up focused workshop type sessions with those who have answered.

AHM2

WP1- T1.4 – Selection of SEI for DiSSCo

06-04-2022

DiSSCo Prepare WP1 – T1.4

*Develop indicators of
socioeconomic impact*



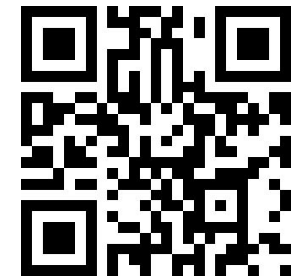
Funded by the Horizon 2020
Framework Programme
of the European Union

Agenda



- Review of mls report principal findings
 - frameworks of SEI indicators
 - areas of impact, user communities and services of DISSCO
 - list of indicators compiled
- Examples of SEI studies in the scope of DISSCO
 - NHM London - Laurence Livermore (NHM London)
 - Atlas of Living Australia - Alexandra Marçal
- Collect feedback on indicators for DISSCO
- Next steps towards a proposal of SEI framework for DISSCO
 - survey to wider DISSCO community, including NN
 - guidelines for the SEI of DISSCO

Add your name to the shared document for agenda and note taking



<https://tinyurl.com/AHM2-T1-4>

DPP MLS 1.4

Corpus of previous studies on socioeconomic impact compiled

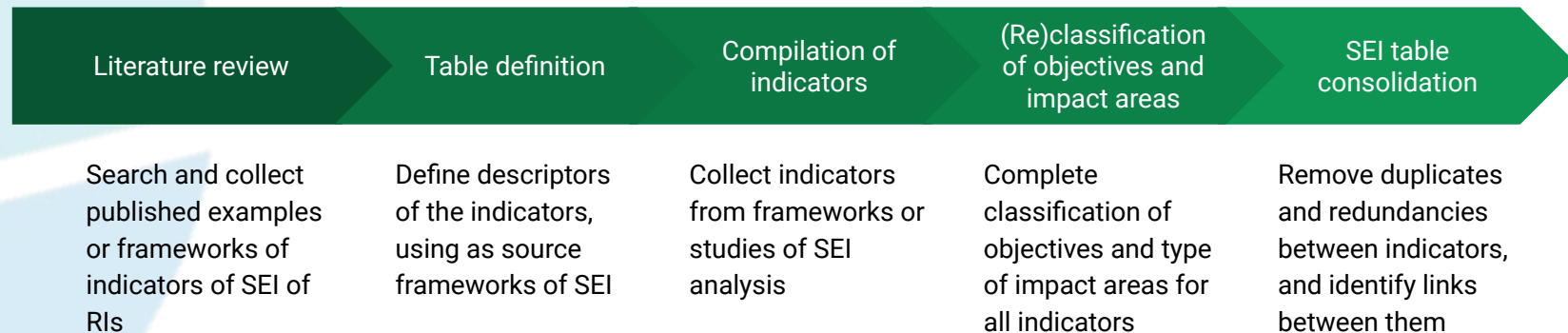
Report:

<https://tinyurl.com/DPP-mls-1-4>

List:

<https://tinyurl.com/DISSCO-SEIcompilation>

Methodology:



Review of mls report principal findings



FRAMEWORKS OF SEI INDICATORS

- ESFRI RI performance monitoring - 21 indicators
- OECD reference framework - 58 indicators
- RI-PATHS Impact assessment framework - 102 indicators
- Atlas of Living Australia's Impact and Value - 29 indicators

Objectives:

- Enabling scientific excellence
- Delivery of education and training
- Enhancing transnational collaboration in Europe
- Facilitating economic activity
- Outreach to the public
- Optimising data use
- Provision of scientific advice
- Facilitating International co-operation
- Optimising management

Impact categories:

- Scientific impact
- Technological impact
- Economic impact
- Training and education impact
- Social and societal impact

Impact areas:

- Human resources
- Economy and Innovation
- Policy
- Society

Review of mls report principal findings



Impact area	Category of SEI impact	Objective									
		Delivery of education and training	Enabling Scientific Excellence	Enhancing Collaboration in Europe	Enhancing transnational collaboration in Europe	Facilitating economic activities	Facilitating international cooperation	Optimising data use	Optimising management	Outreach to the public	Provision of scientific advice
HR	economic	1	1	0	0	7	0	0	0	0	0
	scientific	0	17	1	2	1	2	0	0	0	0
	technological	0	2	0	0	1	0	0	0	0	0
	training and education	15	0	0	0	1	1	0	0	0	0
E&I	economic	0	0	0	0	21	0	1	1	0	0
	scientific	0	1	0	0	0	0	4	0	0	0
	technological	0	2	0	0	14	0	9	4	0	0
Policy	scientific	0	0	0	0	0	0	0	1	0	0
	social and societal	0	0	0	0	0	0	0	0	1	16
Society	technological	0	0	0	0	1	0	0	0	0	1
	economic	0	0	0	0	0	0	0	0	1	0
	social and societal	0	0	0	0	0	0	0	5	15	2
	technological	0	0	0	0	1	0	2	0	0	0

Consolidated table: 155 indicators

<https://tinyurl.com/DISSCO-SEIcompilation>

Number of indicators of the consolidated table that fall into one of the classifiers of indicator type: objective, impact area and category of SEI impact. HR - Human Resources, E&I - Economy and Innovation.

Review of mls report principal findings



SCOPE OF DISSCO AND AREAS OF SOCIO-ECONOMIC IMPACT

- Areas of impact of DiSSCo
- Users of DiSSCo
- Services of DiSSCo

Users (T1.1. and T1.2)

- Research (academic, non-academic, including Citizen Science)
- Collection management
- Technical support (IT & IM)
- Policy (institutional, national & international)
- Education (academic & non-academic)
- Industry
- External (media & empowerment initiatives)

Services

- European Loans and Visits System (ELViS)
- Collection Digitisation Dashboard (CDD)
- Specimen Data Refinery (SDR)
- Knowledge Base (KB)
- Authorisation and Authentication Infrastructure (AAI)
- Unified Curation and Annotation System (UCAS)
- Digital Specimen Repository
- Self-assessment tool
- Helpdesk



THE VALUE OF DIGITISING NATURAL HISTORY COLLECTIONS

Report prepared for the Natural History Museum, London

Danail Popov, Priyanka Roychoudhury,
Helen Hardy, Laurence Livermore, Ken Norris



<https://doi.org/10.3897/rio.7.e78844>

Economic benefits of digitised collections – NHM & Frontier Economics study

Laurence Livermore & Helen Hardy
The Natural History Museum, London

**DiSSCo All Hands Meeting
6 April 2022**

Presentation DOI: [10.6084/m9.figshare.19525366](https://doi.org/10.6084/m9.figshare.19525366)

Based on: Popov D, Roychoudhury P, Hardy H, Livermore L, Norris K (2021) The Value of Digitising Natural History Collections. Research Ideas and Outcomes 7: e78844. <https://doi.org/10.3897/rio.7.e78844>

We've all been making the case for many years...

2010, Advancing Digitization of Biodiversity Collections (ADBC) in the USA - call to action:

'The knowledge derived from specimens contribute vitally to studies of invasive species, biological conservation, land management, pollination, biotic responses to climate change, spread of pathogenic organisms, and research and management activities of many kinds.'

Includes use cases about oil spills, climate change, bird strike, and zoonotic virus transfer.

Source: <https://digbiocol.wordpress.com/brochure>

A Strategic Plan for Establishing a Network Integrated Biocollections Alliance

Executive Summary

This report is a strategic plan for a 10-year effort to digitize and mobilize the scientific information associated with biological specimens held in U.S. research collections. The primary objective of the initiative is to create a national collections resource that will contribute critical information to U.S. scientific research and technology interests, and will aid in understanding the biodiversity dimensions and societal consequences of climate change, species invasions, natural disasters, the spread of disease vectors and agricultural pests and pollinators, and other environmental issues. Network Integrated Biocollections Alliance (NIBA) resources such as databases, network portals, and analytical tools will synthesize information contained in the nation's collections and place them into national service for stakeholders in government, academia, business, K-12 education, informal science education, and the public.

Biological collections across the U.S. are united by over two centuries of common purpose in research vi-

sion, curatorial methods, and field protocols. Digitizing the nation's collections represents a grand challenge that will require development of technical and human resources, such as automated workflows, a robust data publishing and error-checking infrastructure and professionals networked to support the creation of an enduring digital alliance of collections institutions. These challenges can be addressed, in partnership with federal agency and other stakeholders, in order to create an organizational structure and processes that reflect the long-standing biological collection community values of inclusiveness, scientific empowerment and open data access, while allocating credit to data owners and editors.

Digitization of biological specimens will take place within the nation's collections facilities, which will be organized into networks having shared interests in geographic scope, taxonomic research domain, or specimen preservation type. These collaborations will be supported by a national digitization hub, whose responsibility will be to assure the successful implementation of the collaborative and inclusive digitization vision. The digitization hub will: establish collaboration protocols for consensus-based decision making among

Michael A. Mares





ECONOMIC ANALYSES OF FEDERAL SCIENTIFIC COLLECTIONS

METHODS FOR DOCUMENTING COSTS AND BENEFITS

DAVID E. SCHINDEL
and the Economic Study Group
of the Interagency Working Group
on Scientific Collections



2020 Advisory Report to the U.S. Federal Interagency Working Group on Scientific Collections - discusses 5 benefit methodologies:

- Technology/Knowledge transfer (“Value chains”) R&D e.g., drug development
- Success Stories (“Winning lottery tickets”) Rare events e.g. pandemic prevented
- Option Value (“Insurance policies”) Planned mitigations e.g., understanding crop relatives
- Value added by users (“Co-investment”) e.g., users improve data quality
- Counter-factual Scenarios (“It’s a Wonderful Life”) What if there were no collections? Willingness to pay to create them?

Source: <https://iwgsc.nal.usda.gov>

A recent study showing that every 1 AUD spent on Taxonomy Australia's mission could result in benefits between 4 – 35 AUD for Australia – up to \$28bn over 25 years

The study looks at four thematic/sector areas:

- biosecurity (threat reduction)
- agricultural R&D
- biodiscovery for human health
- biodiversity conservation

(uses a mixture of the economic methods in the US Advisory Report above)

<https://www2.deloitte.com/au/en/pages/economics/article/s/cost-benefit-analysis-mission-discover-document-australia-species.html>

Deloitte.

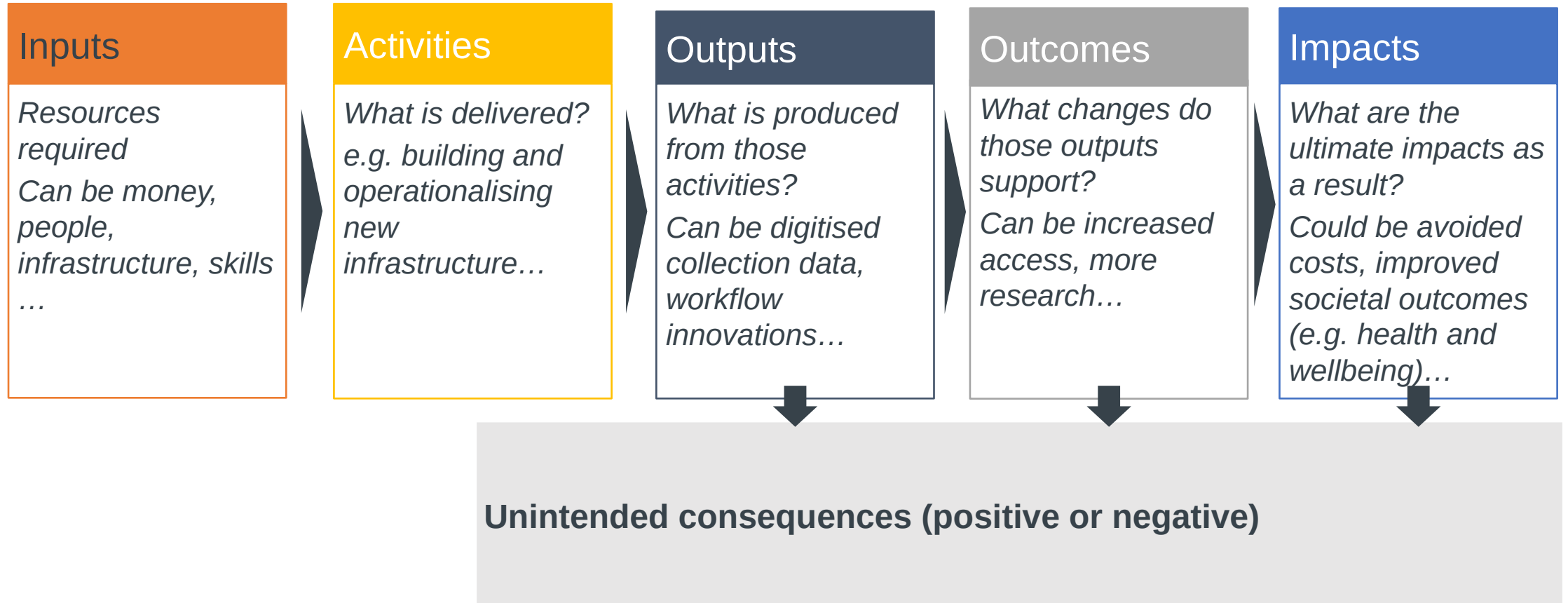


Cost benefit analysis
of a mission to discover and
document Australia's species

Prepared for the Australian Academy of Science
October 2020

Deloitte
Access **Economics**

NHM work with Frontier: 'Theory of change'



Timeline: when are elements of model expected to materialise?

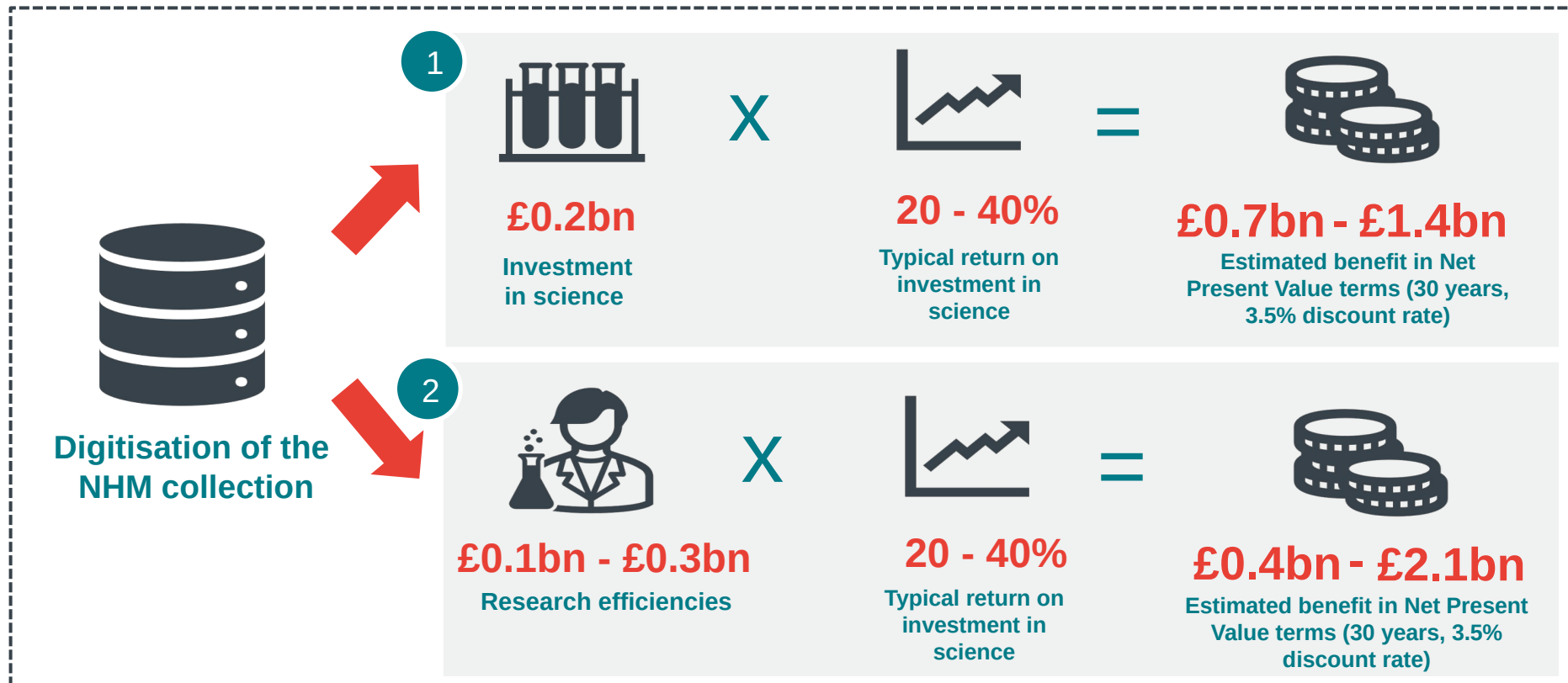
We estimated the benefits using two methods with a top-down approach; the estimated benefits range between £0.4bn - £2.1bn

1

The literature looking at the return on investment in science gives us a reasonable proxy for the value of the digitisation programme

2

An alternative approach is to quantify the efficiency benefits that digital data brings to researchers in terms of cost and time savings which then have impacts in the wider economy



We looked at five thematic impact areas which cumulatively give us at least £2.2bn in benefits in the wider economy

3

Estimating benefits in specific areas helps to show the research efficiencies in more detail. These flow into the wider economy through more and better research across multiple areas, some of which we explore below. These are not intended to be an exhaustive list.

Biodiversity conservation

£670m to £1bn

Digitisation enhances taxonomic knowledge which improves detection of threatened species. This enables conservation efforts which slow down decline in threatened species populations maintaining the ability of ecosystems to deliver vital services for humankind.



Invasive species

£690m to £1.1bn

Digitisation enhances taxonomic knowledge which improves detection of invasive species which are estimated to cost UK economy £2bn a year. Reducing the frequency of genuine threats leads to significant economic benefits.



Mineral exploration

£80m to £400mn

Digitisation can improve the accuracy of existing data and provide more geonomics data. This can accelerate the discovery process and minimise costs by de-risking it (allowing exploration industry to know when to stop).



Medicines discovery

£750m to £2.8bn

Digitisation can improve accessibility of samples and consequently the range of samples tested for the purposes of drug discovery and commercialisation. The economic value of commercialised drugs for health is huge so even if digitisation leads to a very small increase in the rate of drugs discovery the benefits are very large.



Agricultural R&D

£15m to £68mn (1 crop)

Digitisation can help in the discovery and/or improve the understanding of Crop Wild Relatives (CWR) with regards to their genetic traits. This can enhance breeding of crops which are environmental friendly, have higher yields and are disease resistance.



Conclusion and opportunities for future research

- There are **many more areas which could and would benefit from digitisation** but have not been considered in this study – e.g. climate change, discovery of new materials.
- One of the most significant benefits of digitisation, is that **it can foster blue skies research** in any number of areas which are impossible to predict and value ex-ante.
- Future research could add significant value to this work by **studying more closely the user base of the NHM digital data** and attempt to track the ultimate impacts of the data use which goes beyond academic publications and onward citations.
- This study looks at five impact pathways but not at what types or levels of digitisation are necessary to fully enable these or wider benefits (though this is touched on in the full report in considering how each impact would materialise) – **to inform prioritisation, deeper studies would be needed informed by case studies of data from particular taxa or to a particular level of data** e.g. fully geo-referenced, genetically sequenced etc.



Open access to Australia's biodiversity data



102,730,810
occurrence records




10,377
datasets

Search species, datasets, and more...

 Search



Pteraeolidia ianithina

 by Peter (CC-BY-NC)

AM Correia



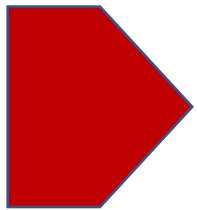
Ciências
ULisboa

April 6th 2022

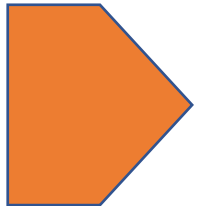


WP1 – Milestone 1.4

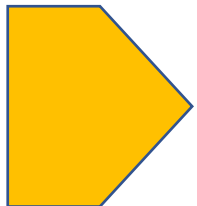
ALA - Atlas of Living Australia



ALA is a RI supported by NCRIS, an Australian Government initiative



The mission of ALA is to provide free, online access to a vast repository of information about Australia's biodiversity



ALA implemented a collaborative, digital and open infrastructure that aggregates biodiversity data from multiple sources, and focuses on making biodiversity information accessible and usable

ALA - Atlas of Living Australia




ALA 's Impact and Value

ALA 's SEI evaluation



Assessment of the key impact areas of the ALA e.g. cultural change, new products and services, productivity and efficiency gains and applications



Initial and contemporary estimate of the benefit-cost ratio for investment in ALA and contextualising this in the organisation's overall value

ALA - Atlas of Living Australia



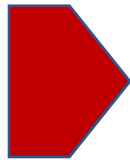
ALA
Assessment
Output &
Impact areas

Output area	# of indicators	Type of indicators
Data	1	quantitative
Tools, services and infrastructure	1	quantitative/narrative
Impact area		
Influence on Cultural Change	6	quantitative/narrative
New Products and Services	3	quantitative/narrative
Productivity and Efficiency	5	quantitative/narrative
Applications and Derivatives	4	quantitative/narrative

ALA - Atlas of Living Australia



ALA has led to a range of delivered and potential impacts



Increased open sharing of data and standards



Production of reports, papers and publications & significant efficiency gains for biodiversity data management and on-ground intervention and actions relating to biodiversity



The ALA Impact Evaluation indicated efficiency gains applied to expenditure on biodiversity and national parks to be 26.9 million AUD in 2016, with a benefit-cost ratio of 3.5:1



THANK YOU

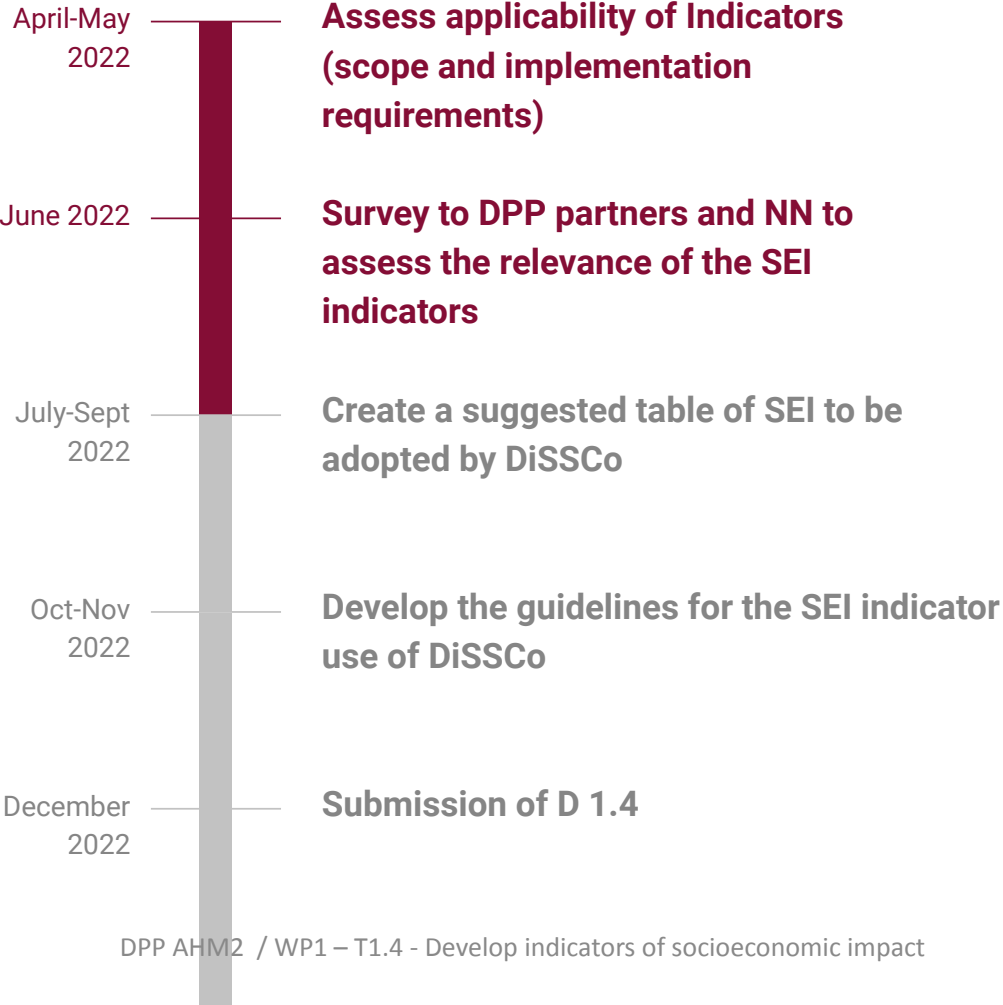


Next steps towards a proposal of SEI framework for DISSCO



- Review table of indicators - incoherences, lack of support information and gaps;
- **Assess applicability and relevance for DiSSCo:**
 - Indicators scope
 - Operationalization requirements
- Revise indicators to include specificities for DiSSCo
- **Perform a survey to DPP partners, National Nodes;**
- **Create a suggested table of SEI to be adopted by DiSSCo;**
- Identify requirements of information and data sources for indicators;
- **Provide Guidelines for the SEI of DiSSCo;**
- Provide guidance for future updates of indicators(EOSCs KPIs)

Next steps - timeline



DiSSCo Task 1.4

Develop indicators of socioeconomic impact - DPP AHM2

Date: Wednesday 06th April 2022

Time: 14:00-15:30 WEST / 15:00-16:30 CEST / 16:00 - 17:30 EEST

Location: Online (Zoom): [Link to access sessions and plenaries](#)

Links to this document:

https://docs.google.com/document/d/1sVFEPVsStlcyR_UgWbCPVX2XDTJQWM7iWepdhzXo4Jg/edit?usp=sharing

<https://tinyurl.com/AHM2-T1-4>

Notes: In the bottom of this document. Although a notetaker will be appointed, this can be collaborative

Notetaker(s): Alexandra Marçal (ULisboa), ...

Purpose of the session

The list of Socio-Economic Impact (SEI) indicators for research infrastructures was compiled for the DPP Milestone 1.4 ([report](#) and [list](#)). The next phase is to create a list of SEI indicators for DISSCO.

It is important to obtain feedback from the DISSCO community about the relevance and applicability of the indicators. We will ask participants to identify and classify the indicators they find more relevant, and to identify possible gaps of areas of SEI that are not covered by the indicators.

As background information, we will revisit the report and particularly other studies of SEI assessments to initiatives or organizations that are close to DISSCO's scope.

Background documents

DiSSCo Prepare WP1 – Milestone 1.4, Corpus of previous studies on socioeconomic impact compiled, <https://tinyurl.com/DPP-mls-1-4>

DiSSCo Prepare WP1 – Milestone 1.4, Appendix 1. Table of compiled indicators of socio-economic impact, <https://tinyurl.com/DISSCO-SEIcompilation>

Required participants

Participants representing all stakeholders of DISSCO are welcomed to the session and to following steps in the task that will be outlined. It is of special importance the participation of National Nodes contacts. The feedback about the importance and relevance of possible SEI indicators is critical to create a strong framework that can reflect the impact of DISSCO-RI.

Agenda

5 min	Aims of the meeting
15 min	Review of mls report principal findings <ul style="list-style-type: none">- frameworks of SEI indicators- areas of impact, user communities and services of DISSCO- list of indicators compiled
20 min	Examples of SEI studies on the scope of DISSCO <ul style="list-style-type: none">- NHM London - Laurence Livermore (NHM London)- Atlas of Living Australia
35 min	Collect feedback on indicators for DISSCO <ul style="list-style-type: none">- link to google forms
15 min	Next steps towards a proposal of SEI framework for DISSCO <ul style="list-style-type: none">- survey to wider DISSCO community, including NN- guidelines for the SEI of DISSCO

Attendees

name, institution

- Katharine Worley (MNHN)
- Lisa French NHMUK
- Salomé Landel (MNHN - Paris)
- Elsa Fontainha (Ulisbon)
- Heli Fitzgerald (Luomus)
- Michel Guiraud (MNHN)
- Henrik Enghoff (UCPH, WP1 lead)
- Jose Alonso (DiSSCo CSO)
- Wouter Addink (DiSSCo CSO)
- Stefaan Pijls (MBG)
- Sabine von Mering (MfN Berlin)
- Celia Santos (MNCN-CSIC)
- Ana Casino (CETAF)
- Pedro Arsénio (ULisboa)
- Serge Scory (RBINS)
- Louise Isager Ahl (UCPH)

- Pip Brewer (NHMD)
- Marta Biaggini (NHM Florence)
- Isabel Rey (MNCN-CSIC)
- Patricia Mergen (MBG)thu
- Laurence Livermore (NHMUK_
- Tina Loo (Naturalis)
- Carole Paleco (RBINS)
- Alexandra Marçal Correia (FC, ULisboa)
- Maria Judite Alves (MUHNAC, ULisboa)
- Rui Figueira (ULisboa)

(26 participants registered their name, ~30 in the zoom session)

Presentations

Rui Figueira:

<https://docs.google.com/presentation/d/1DFhtv8O9koW3WH7SPUE8at28FW-qiADLKUEDHhapIFw/edit?usp=sharing>

Laurence Livermore:

Presentation posted on 06.04.2022, 14:02 by [Laurence Livermore](#)

[Laurence Livermore](#)

, [Helen Hardy](#)

[Helen Hardy](#)

The Natural History Museum, London has been creating digital data about collections for many years, with a formal Digital Collections Programme since 2014. Efforts to monitor the outcomes and impact of this work have focused on metrics of digital access, such as download events, and on citations of digital specimens as a measure of use. Digitisation projects and resulting research have also been used as impact case studies, highlighting areas such as human health and conservation. In 2021, the Museum decided to explore the economic impacts of collections data in more depth, and commissioned Frontier Economics to undertake modelling, resulting in a report and this presentation.

Presentation:

https://figshare.com/articles/presentation/Economic_benefits_of_digitised_collections_NHM_Frontier_Economics_study/19525366/1

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938046/The_Green_Book_2020.pdf

Alexandra Marçal Correia

Presentation:

<https://docs.google.com/presentation/d/1CrTmNQFSOOzgAAii6qhrKmw6L53msnmY/edit?usp=sharing&ouid=118196560717580790407&rtpof=true&sd=true>

ALA - Atlas of Living Australia

ALA is a RI supported by NCRIS, an Australian Government initiative. The mission of ALA is to provide free, online access to a vast repository of information about Australia's biodiversity. Assessment of the key impact areas of the ALA. Initial and contemporary estimate of the benefit-cost ratio for investment in ALA and contextualizing this in the organization's overall value. ALA has led to a range of delivered and potential impacts. Increased open sharing of data and standards. The ALA Impact Evaluation indicated efficiency gains applied to expenditure on biodiversity and national parks to be 26.9 million AUD in 2016, with a benefit-cost ratio of 3.5:1.

Links:

<https://www.ala.org.au/>

<https://www.csiro.au/en/research/natural-environment/atlas-of-living-australia>

[Assessment of the Atlas of Living Australia's Impact and Value](#)

<https://www.csiro.au › Files › Impact-assessment>

Notes

- Elsa made an overview on SEI and our approach.
- Rui indicates that the full list of indicators compiled is available at <https://tinyurl.com/DISSCO-SEIcompilation>
- Rui's explanation on how to assess the proposed indicators on the online survey: <https://forms.gle/FwDTpvB7WeuvJ2cm9>
- Laurence presents the case study on the valuing the SEI of of the digitization of the NHM Lonon collections, He explains that many studies about the impact of NHC do not provide quantifications of the impact
- Elsa - There is a timelapse between the activities and the impact
- Elsa explains the purpose of the questionnaire to be responded by the participants of the session
- Participants responded to the survey.
- Feedback on the relevance of indicators of socio-economic impact. Important to evaluate DiSSCo before and after its implementation in terms of relevance of the participant institutions. General overview of the importance of each proposed indicator. Important suggestions of other indicators.
- Patricia - A recommendation is to select the indicators that best fit the outputs of the RI
- Judite - indicators at DISSCO level are different from institutional level. How to implement them in a compatible way?
- Ana - Better definition of indicators of KPI and SEI
- Next steps towards a proposal of SEI framework for DiSSCo and timeline (link ?)
- Some discussion on the SEI indicators and guidelines
- Please send out Survey in early June because summer holidays start in late June in some countries

Agenda:

Session 1: Common infrastructures for Digital Specimens

- Intro openDS (CW)
- Minimum Information about a Digital Specimen (Elspeth Haston)
- Linking DS arch to CMSs (Julia Pim Reis/Falko Glöckler)
- DiSSCo Modelling Framework (David Fichtmüller)
- ELViS & wider scope (Sharif Islam)
- Keynote: DISSCo Technical Architecture Overview (Sam Leeflang)

Session 2: Discussion Framework and requirements for distributed annotation tools

- OpenRefine/Image Pilot (Jonas Grieb)
- Specimen Data Refinery (Laurence Livermore)
- UCAS 1 (Sharif)
- UCAS 2 (Wouter Addink)
- Discussion on UCAS/Annotations

ALL HANDS MEETING – AHM2

Digital Specimens as FDO Types

7 April 2022

Claus Weiland

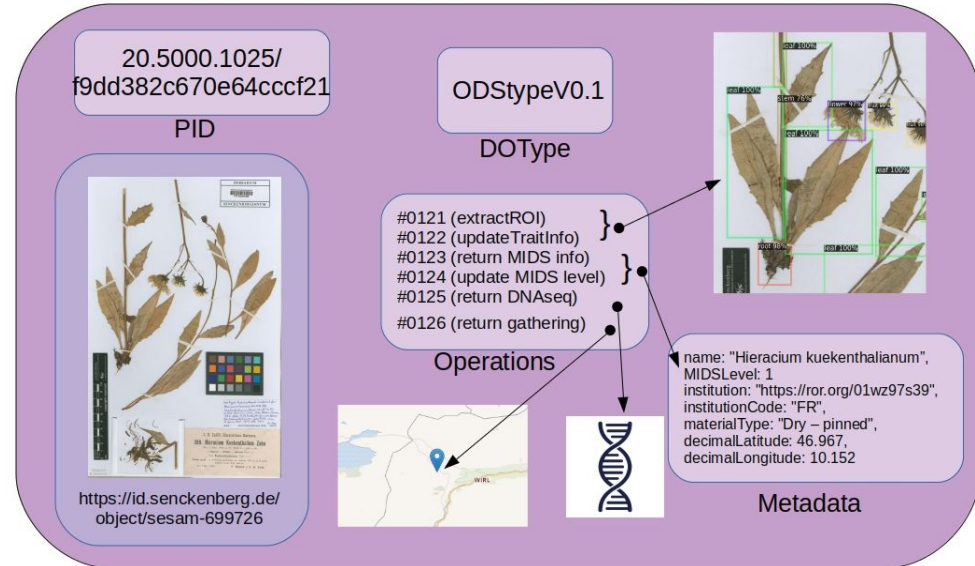
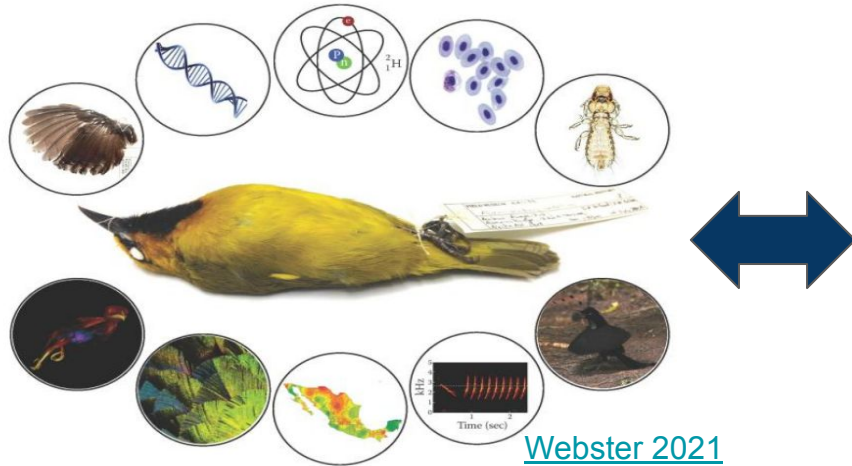
DiSSCo Prepare WP 6

Senckenberg



Funded by the Horizon 2020
Framework Programme
of the European Union

Again briefly: DiSSCo's Digital Specimen



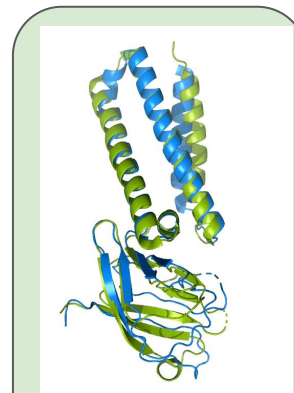
- **Biodiversity Digital Twin** of a physical specimen in cyberspace
- Encapsulates and persistently links to information artifacts, **which are about** the physical specimen
- **Abstraction**; data objects with a logical structure of a particular kind: **FAIR Digital Objects** detailed by the openDS specification.

The vision: Towards one virtual data collection

- Wittenburg & Strawn (2021): [...] **We see the possibility to speak about “one virtual computer and one virtual data collection”** ([doi: 10.3390/info12110472](https://doi.org/10.3390/info12110472))
- Wilkinson et al (2016) *“This necessitates machines to be capable of **autonomously and appropriately acting** when faced with the wide range of types, formats, and access-mechanisms/protocols that will be encountered during their **self-guided exploration of the global data ecosystem.**”* ([doi:10.1038/sdata.2016.18](https://doi.org/10.1038/sdata.2016.18))



ods:type: ODStypeV0.1
ods:curatedObjectID:
id.senckenberg.de/object/sesam-
176856
dwc:typeStatus: holotype of
Rhinolophus maendeleo [...] 2000



AlphaFold
SARS-CoV-2
ORF3a protein
(prediction blue)

<https://www.deepmind.com/open-source/computational-predictions-of-protein-structures-associated-with-covid-19>

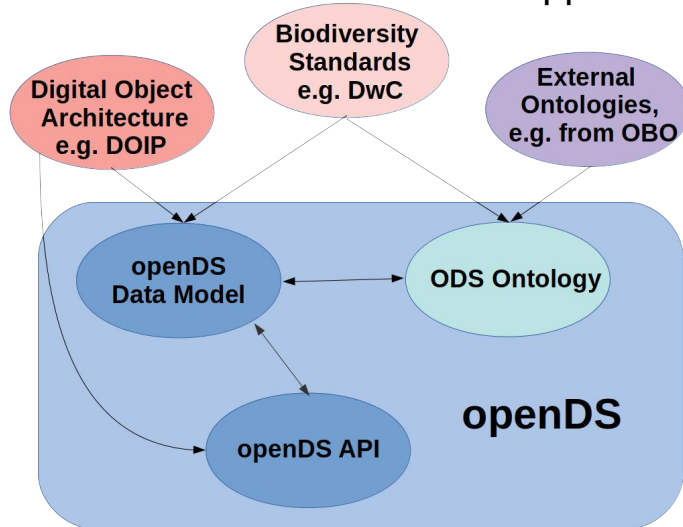
Essential concepts: Types & Machine-Actionability



- **Machine-Actionability:** Enable self-contained acting of machines on digital objects based on decision from a set of alternative operations in a given context
- Lannom (FDO Forum Working Draft 10 March 2022) “[FDOs] *promote machine-actionability by requiring that each digital object be characterized **using signals that will clearly hint at the potential processing steps** any machine accessing it may perform. **We call those signals types ...**”*
- FDO types will be described in an agreed syntax (FDO type definition), definitions are themselves FDOs.
- Set of operations for types is not defined or determined, but (context dependent) conditions and constraints for the applicability of operations are provide

The Open Digital Specimen Spec (openDS)

- openDS: technical specification for the implementation of DES and other curated objects (e.g. media objects) as FDO types
- Integrates standards and best practices from i.a. TDWG (Biodiversity Information Standards), RDA and FDO Forum
- Reconciles both the DO as well as the LD approach



DATA SCIENCE JOURNAL

Reading: Incorporating RDA Outputs in the Design of a European Research Infrastructure for Natural Sc...
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Special Collection: Research Data Alliance Results

Practice Papers

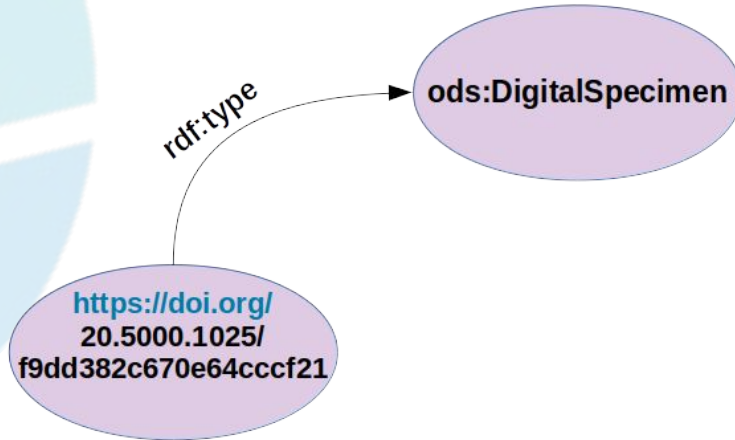
Incorporating RDA Outputs in the Design of a European Research Infrastructure for Natural Science Collections

Authors: Sharif Islam ✉, Alex Hardisty, Wouter Addink, Claus Weiland, Falko Glöckler

<http://doi.org/10.5334/dsj-2020-050>

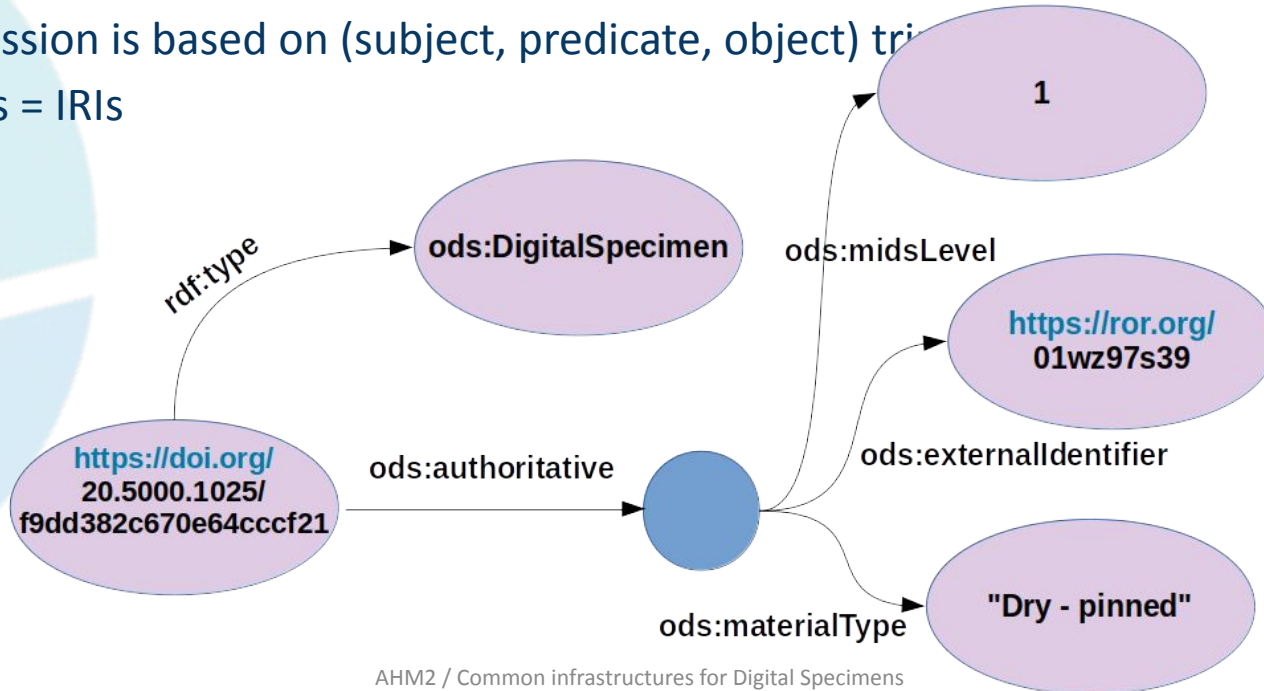
How to achieve this: Implement FDOs based on RDF

- RDF Resource Description Framework
- Standard (W3C) data model of the Semantic Web
- Any expression is based on (subject, predicate, object) triples



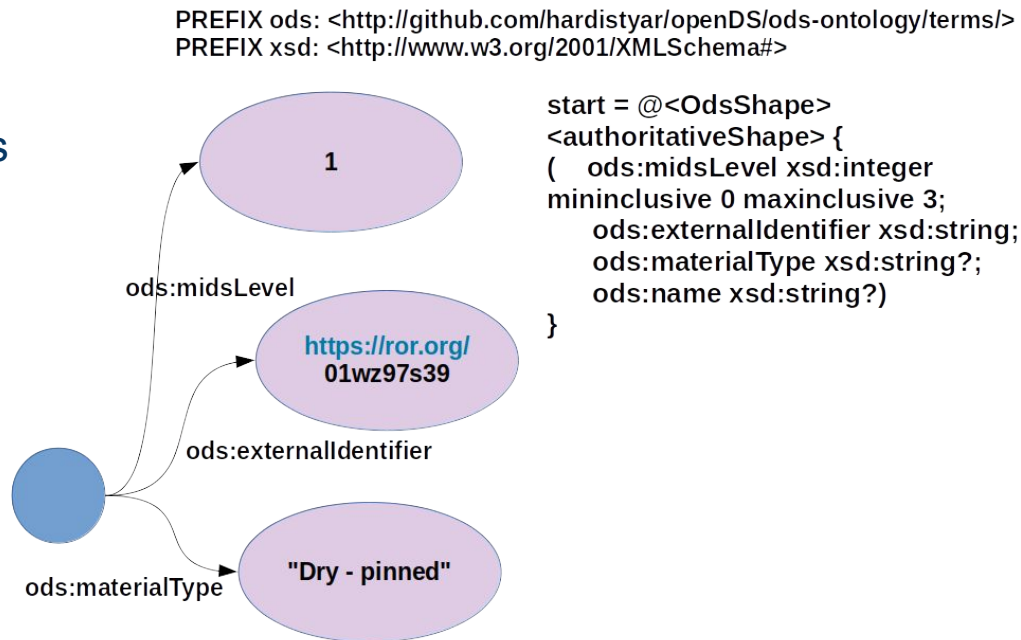
How to achieve this: Implement FDOs based on RDF

- RDF Resource Description Framework
- Standard (W3C) data model of the Semantic Web
- Any expression is based on (subject, predicate, object) triplets
- predicates = IRIs

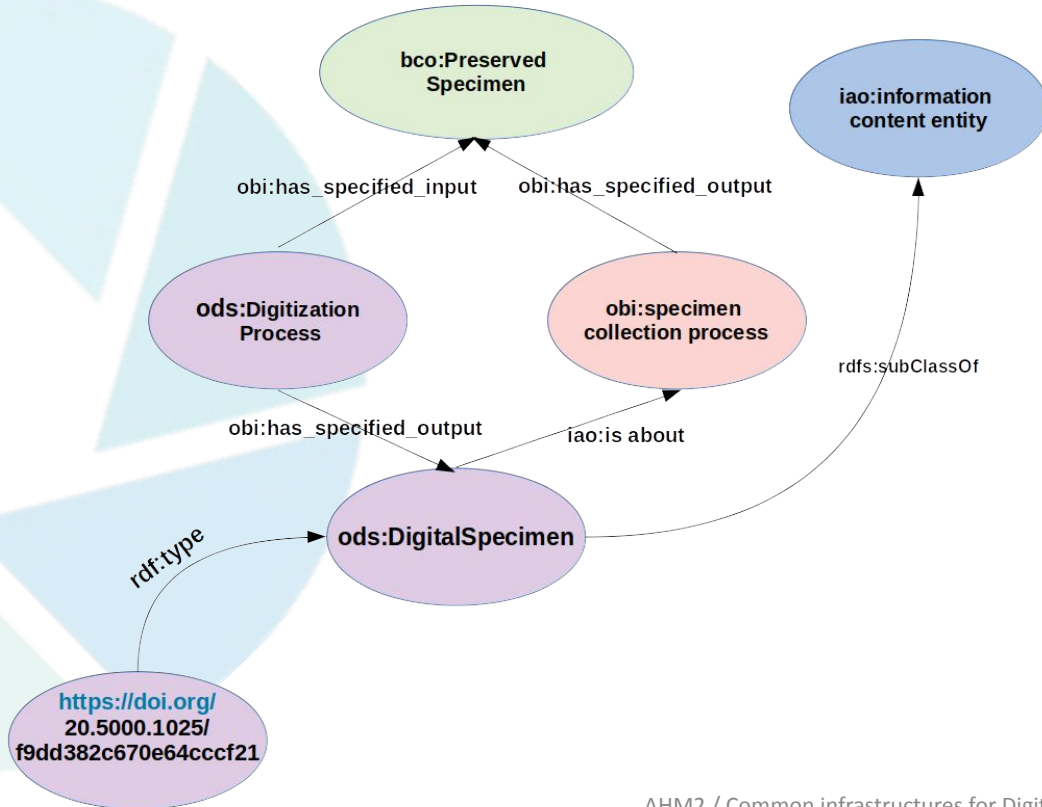


Validation based on Shape Expressions (ShEx)

- We use Shape Nodes to validate serialized RDF (JSONLD)
- Aim: Declaration for humans (what is the data about) & parsable by machines
- ShEx describes incoming/outgoing edges from a node
- Checks values of these edges
- Both schemas & digital objects are stored as serialized RDF in the DS repo



Outlook: Ontological framework for OpenDS?

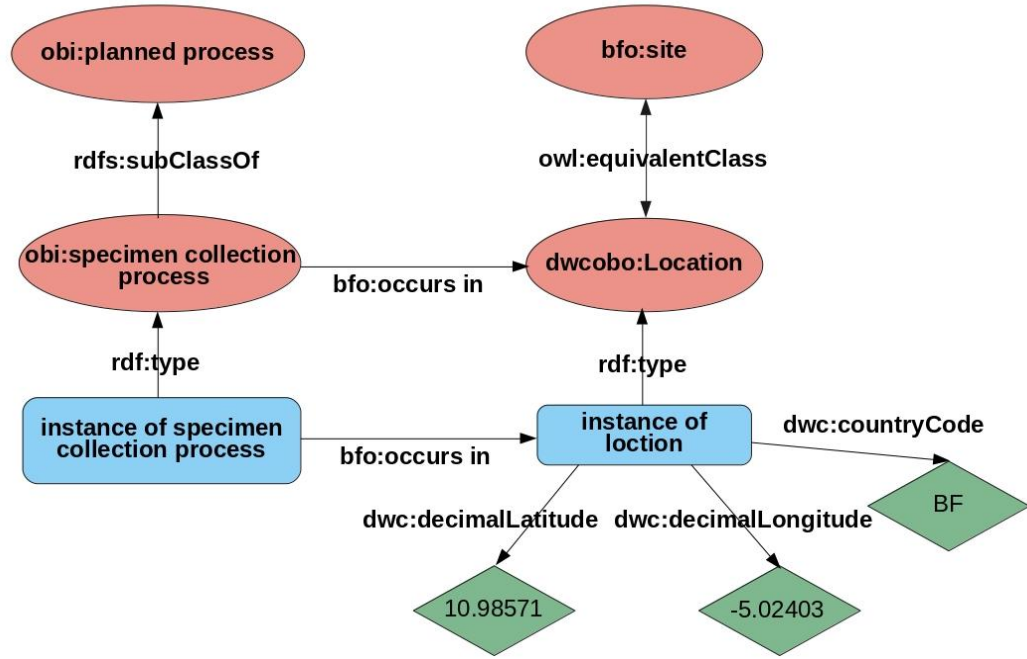


- Model operates currently on RDF graph features, no higher level semantics like reasoning (insert new triples)
- Constraints within OBO framework due to consistency of well-integrated ontologies
- Modular approach based on an upper ontology, the Basic Formal Ontology (BFO)
- Required: **Qualified crossrefs** ([GO FAIR I3](#)) to semantically cross-link resources, ShEX fails for mappings.

Semantic Mappings for Geobiodiversity Data

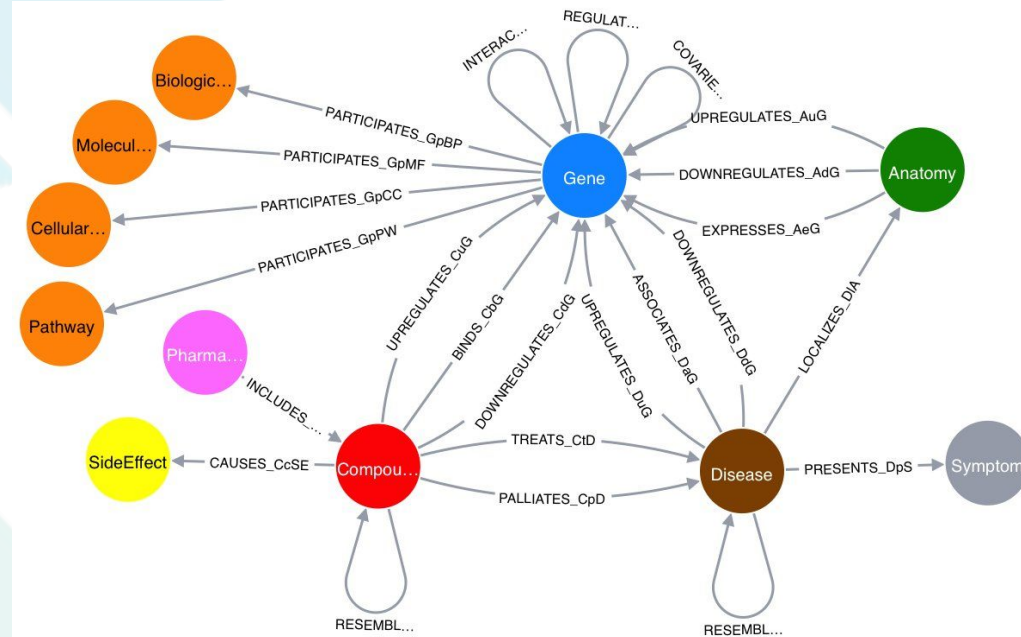
Map DwC Location to OBO ontologies (BCO)

- Consistency problem if adding an axiom to BCO that `dwc:Location` is equivalent to `bfo:site`
- Try to provide specification of Location as domain of geospatial DwC properties enabling usage from the OBO framework, here `obi:specimen collection process` ([Deck 2015](#))
- How to realize OBO-adjacent mappings to DWC ?



Modified Figure from Deck et al (2015) [doi:10.1186/s40793-015-0014-0](https://doi.org/10.1186/s40793-015-0014-0)

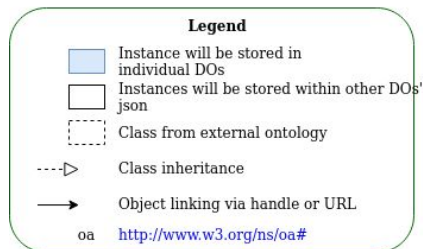
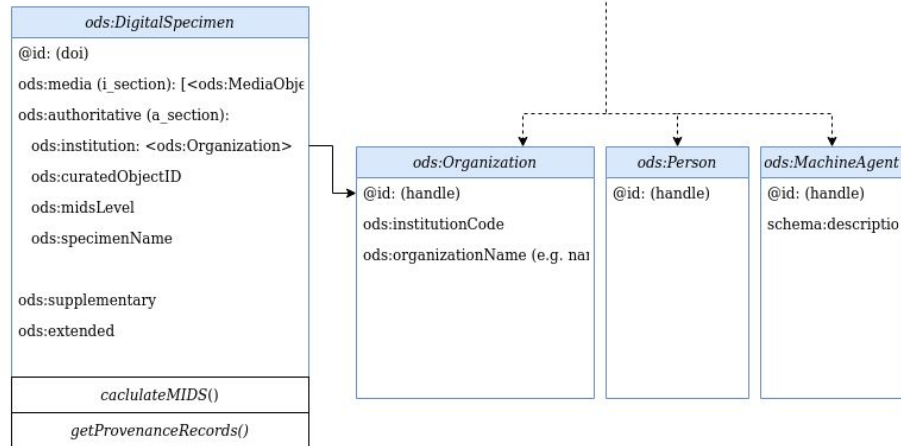
Employ Knowledge Graphs instead of Ontology?



- Chris Mungall OBO Call May 2021: *Limits of ontologies: How should databases be represented in OBO?* [OBO Call May 2]
- KG support looser semantics
- Not all relations have to be symbolic (e.g. stochastic -> disease to phenotype),
- “flexible” edges enable sub-symbolic associations (graph machine learning / relational learning)

<https://douroucoulis.wordpress.com/2019/03/14/biological-knowledge-graph-modeling-design-patterns/>

Current state of openDS:



Thanks!


Minutes:

Thursday 7th April				
9:00-10:30	WP6.2/WP6.3	Common infrastructures for Digital Specimens	Series of (not too) technical talks on DS arch detailing achievements and outlook	Claus Weiland/Wouter Addink
<i>Break 15'</i>				
10:45 -12:15	WP6.2/WP6.3	Framework and requirements for distributed annotation tools	Discussion on requirements for and interfaces to UCAS and other (local) annotation tools	Wouter Addink/Claus Weiland

Session 1: Common infrastructures for Digital Specimens

- Intro opensDS (CW)
 - Later you will get a detailed view of the last (large) image “Current state of opensDS”.
- Minimum Information about a Digital Specimen (Elsbeth Haston)
 - Slides:
https://docs.google.com/presentation/d/1E4zxVr7ne-Pwo-rRPYZmXjKVzPUpKxC3EdHOjj24b-8/edit#slide=id.g1238742b19e_3_0
 - Next steps: finalise MIDS1, define and finalise MIDS-2, define and finalise MIDS-3
 - Sharif: In OpenDS, we are also thinking about image as a separate Digital Object with a PID and metadata profile
- Linking DS arch to CMSs (Julia Pim Reis/Falko Glöckler)
- DiSSCo Modelling Framework (David Fichtmüller)

- https://modelling.dissco.tech/wiki/Main_Page
- Deliverable 5.2: <https://doi.org/10.34960/e3nv-zh69>
- Slides:
https://docs.google.com/presentation/d/1E4zxVr7ne-Pwo-rRPYZmXjKVzPUpKxC3EdHOjj24b-8/edit#slide=id.g1238742b19e_0_0

- ELViS & wider scope (Sharif Islam)
- Keynote: DISSCo Technical Architecture Overview (Sam Leeflang)
 - Slides:  AHM2-session-WP6.2.pptx
 -

Session 2: Discussion Framework and requirements for distributed annotation tools

- OpenRefine/Image Pilot (Jonas Grieb)
- Specimen Data Refinery (Laurence Livermore)
 - <https://doi.org/10.6084/m9.figshare.19529572.v2>
 - <https://github.com/DiSSCo/SDR>
- UCAS 1 (Sharif)
- UCAS 2 (Wouter Addink)
- Discussion on UCAS/Annotations

List of Attendees:

Sharif Islam, Naturalis

Eva Alonso (Naturalis, CSO)

Jose Alonso (DiSSCo CSO)

 Stefaan Pijls (MeiseBG)

Mariano Iossa (CETAF)

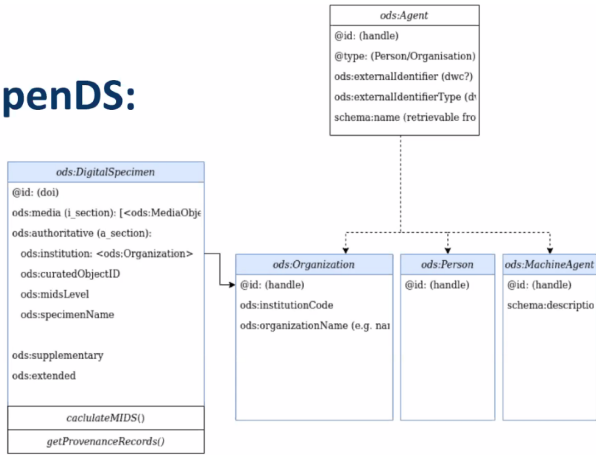
Henrik Enghoff (UCPH, WP1 lead)
Ann Van Baelen (KU Leuven)
Sam Leeflang (Naturalis)
Robert Cubey (RBGE)
Niels Raes (Naturalis Biodiversity Center)
Philip Fischer (NHMW)
Anne Koivunen (Luomus)
Mathias Dillen (MeiseBG)
Patricia Mergen (MeiseBG)
Celia Santos (MNCN-CSIC)
Louise Isager Ahl (UHP)
Wouter Addink (DiSSCo CSO)
Laurence Livermore (NHMUK)
Sabine von Mering (MfN Berlin)
Paul Braun (MnhnL)
Dag Endresen (UiO)
Pedro Arsénio (ULisboa)
Michel Guiraud (MNHN)
Wesley Tack (MeiseBG)
Salomé Landel (MNHN)
Matt Woodburn (NHM London)
Judite Alves (MUHNAC, ULisboa)
Piotr Tykarski (UW)
Borislav Gueorguiev (NMNHS-BAS)
Katharine Worley (MNHN)
Alexander Wolodkin (SGN)
Anniina Kuusijärvi (FMNH Luomus)
Jonas Grieb (SGN)
Emily Veltjen (INBO)
Tim Claerhout (UGent)

Heimo Rainer (NHMW)
Dominik Röpert (FUB-BGBM, Germany)
Carole Paleco (RBINS)
Josh Humphries (NHMUK)
Gianna Innocenti (UNIFI-NHM, Italy)
Lorenzo Cecchi (UNIFI-NHM, Italy)
Luca Bellucci (UNIFI-NGM, Italy)
Pierre-Yves Gagnier (MNHN, Paris)
Julia Pim Reis (Mfn /Berlin)
Tom Dijkema (Naturalis)
Jonathan Blettery (MNHN)
Isabel Rey (MNCN-CSIC)
Laura Giordano (CNR-ISMAR, Italy)
Anton Güntsch (FUB-BGBM, Germany)
Philippe Loret (MNHN, Paris)
Elspeth Haston (RBGE)
Ilaria Conese (CNR-ISMAR, Italy)
Luciana Ferraro (CNR - ISMAR, Italy)
Pip Brewer (NHMD, Denmark)
Vanni Moggi Cecchi (UNIFI-NHM, Italy)
Isabel Calabuig (NHMD, UCPH, Denmark)
David Fichtmueller (BGBM Berlin, Germany)
Lutz Suhrbier (FUB-BGBM, Germany)

Notes:

opens : <https://github.com/DiSSCo/openDS/wiki>
Validation: https://github.com/DiSSCo/ODS_rdf_validator
Shape Expressions (ShEx): <https://shex.io/shex-primer/>
<https://json-ld.org/>

Current state of openDS:



Legend

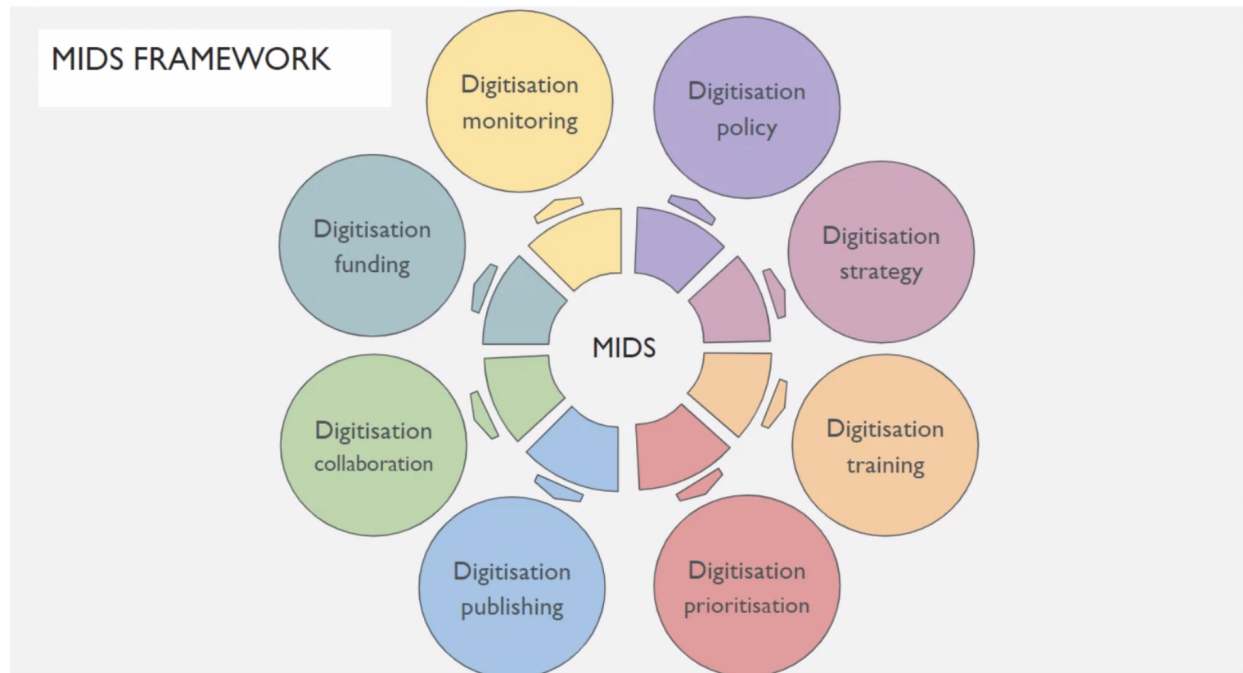
- Instance will be stored in individual DOs
- Instances will be stored within other DOs
- Class from external ontology
- Class inheritance
- Object linking via handle or URL

oa <http://www.w3.org/ns/oa#>

Thanks!

MIDS

<https://www.tdwg.org/community/cd/mids/>



Sharif/Wouter/UCAS Discussion:

- Outcomes of annotation discussion during DES [Global Consultation](#)
 - Concept of trust for information provided
- DiSSCo's [user stories](#)
 - Distributed curation
 - Visit collection and annotate
- Current initiatives (exemplarily)
 - Integrating and extending current data source: A botanical demonstration of the potential of linking data using unique identifiers for people: Güntsch et al; 2021
<https://doi.org/10.1371/journal.pone.0261130>
 - Pensoft Annotator – a tool for text annotation with ontologies
<https://annotator.pensoft.net/>
 - Geo-referencing tool (example
<https://github.com/aescobarr/mcnb-alibey>)
 - BHL Transcription services:

<https://blog.biodiversitylibrary.org/2019/07/bhl-adds-crowdsourced-transcriptions.html>

- AnnoSys—implementation of a generic annotation system for schema-based data using the example of biodiversity collection data <https://doi.org/10.1093/database/bax018>
 - Wikidata: Wikidata as a linked-data hub for Biodiversity data <https://doi.org/10.3897/biss.3.35206>
 - Bionomia (Leveraging Wikidata, ORCID, DOI)
 - Machine Learning/AI: Specimen Data Refinery; Grieb et al (2021): <https://doi.org/10.3897/biss.5.75634>; Machine Learning as a Service for DiSSCo's Digital Specimen Architecture
 - Existing tools from other domains: <https://hypothes.is/>, IIF annotation tools
-
- What are the urgent use cases? Images? Specimen Data? Sequences? Publications? Archival Materials?
 - Stand Alone tools or integration with local systems (like CMS)?
 - Who is authorized to annotate? Experts? Community Members? How to validate?
 - Individual annotations vs large scale (automated text and image recognition)
 - Is Data enrichment same as annotation?
 - What skills and mind set change we need for community and distributed data curation and annotation practices?
 - Measuring success (how do we measure the success of the curated and annotated digital specimens?)
 - How do we make the services scalable? Millions of objects, thousands of users, hundreds of institutions.
 - Who is authorized?
 - Policies and governance

- Transparency and communication
- Q:PIP What about Citation annotations /metrics of usage

Wouter:

- How Ukraine is fighting on the digital battlefield lessons to learn from UCAS
- Crowd sourcing: 300000 IT volunteers + 300 popular bloggers
- Use existing platforms for maximum reach
- System actionability (use of bots)
- Good relations with hyper scalers (Meta, starlink, google)
- Collection annotation from survey
- Niels: presented more citizen science tools, what are cs/expert tools?
- Wouter: not necessarily the same tools

ALL HANDS MEETING – AHM2

DiSSCo Thematic Specialisation Plan

Carole Paleco, Patrick Semal, Ana Casino, Serge Scory



Funded by the Horizon 2020
Framework Programme
of the European Union



H2020-INFRADEV-2019-2
Grant Agreement No 871043

DiSSCo Prepare WP8 – T8.1

Thematic Specialisation Plan

Task Leader: RBINS

Authors: Carole Paleco, Patrick Semal, Serge Scory (RBINS), Katharine Worley, François Dusoulier (MNHN), Ana Casino (CETAF), Aino Juslen, Kari Lahti, Heli Fitzgerald (LUOMUS), Eva Alonso, Niels Raes (Naturalis), Isabel Rey, Celia Santos (CSIC), Lorenzo Cecchi, Gianna Innocenti (Unifi), Maria Joao Fonseca (MHNC)

Thematic Specialisation Plan - T8.1 & Session Objectives

Carole Paleco
RBINS



Funded by the Horizon 2020
Framework Programme
of the European Union

Time CET	Description	Speaker
13h00 – 13h40	Welcome & Presentation of the task and session	Carole Paleco (RBINS)
13h40 – 14h10	Presentation of the methodology used for data collection <ul style="list-style-type: none"> - Cetaf registry - Categories - First results 	Ana Casino (CETAF) Patrick Semal (RBINS)
14h10-14h30	Discussion on the way to collect these data from more NN	All
14h30 – 15h00	Break	
15h00 – 15h30	Example of outputs to be integrated in the Specialisation Plan : <ul style="list-style-type: none"> - WP2 Training Strategy - WP6 e-services 	Mariano Iossa (CETAF) Jonas Grieb (Senckenberg)
15h30 – 16h20	Hands-on with the Specialisation tool - Participants'feedback	Patrick Semal (RBINS), All
16h20 – 16h30	Next steps	Carole Paleco (RBINS)

WP8 Task 8.1 : DiSSCo national nodes engagement

- National Smart Specialisation and institution-level strategies inform prioritisation objectives in each DiSSCo member country.
- Gathering the state-of-the-art nationally will **provide the basis for the construction of an overall strategic map that is necessary for DiSSCo activities distribution and operation.**
- Equally important will be to **establish a follow up mechanism** to ensure alignment and harmonisation with national RI roadmap processes and relevant foreseen developments (e.g. national contributions/nodes for EOSC, participation in cluster services development, etc.).
- **This means** close relations with all national nodes to channel the engagement of governments (whichever the level might be for each country). Out of these activities, **a granular thematic specialisation plan ranging from national to institutional levels** is being produced.

Milestone MS8.5: Initial findings for the specialization Plan - Delivered March 1st 2022

<https://dissco.teamwork.com/#/files/11043139>

Deliverable D8.2 Thematic Specialisation Plan - due M32 Sept 2022

Common understanding and definition of the Thematic Specialisation Plan

Definition of the Specialisation Plan :

The organizations contributing to DiSSCo form a very rich but diverse network. Consequently, many assets are unevenly distributed amongst these organizations. In order to **document, promote and optimize the assets, and possibly to identify gaps**, we will develop a tool to collect all relevant information and enable the assessment of the institutions specificities.

The specialization plan will come out from the information in the tool, the gaps identified or SWOT analyses made.

Milestone MS8.5: Initial findings for the specialization Plan

<https://dissco.teamwork.com/#/files/11043139>

Specialisation Plan sources

- Previous instrumental projects for DiSSCo preparation like the **ICEDIG project in its deliverable D2.3 “Design of a Collection digitisation Dashboard”** ^[1] which delivered the design to make NHC visible and discoverable.
[1]https://icedig.eu/sites/default/files/deliverable_d2.3_icedig_-_design_of_a_collection_digitisation_dashboard_v1.0.pdf
- According to the Smart Specialisation Platform developed by the JRC the definition^[1] of a “Smart Specialisation” is *“Conceived within the reformed Cohesion policy of the European Commission, Smart Specialisation is a **place-based approach** characterised by the identification of **strategic areas** for intervention based both on the **analysis of the strengths and potential** of the economy and on an Entrepreneurial Discovery Process (EDP) with **wide stakeholder involvement**. It is outward-looking and embraces a broad view of innovation including but certainly not limited to technology-driven approaches, supported by **effective monitoring mechanisms**.”*

[1] <https://s3platform.jrc.ec.europa.eu/what-we-do>

“Specialisation Plan” definition and examples

Data collection process

- Methodology
- Data collection tools and links with existing dashboards
- Visualisation and usability
- Definitions

Outcomes achieved

- First results - use of collection tool ; data collected and initial findings

Next steps

- Refinement of tool & broader NN involvement
- Matching with DiSSCo objectives

Methodology - Cetaf Registry

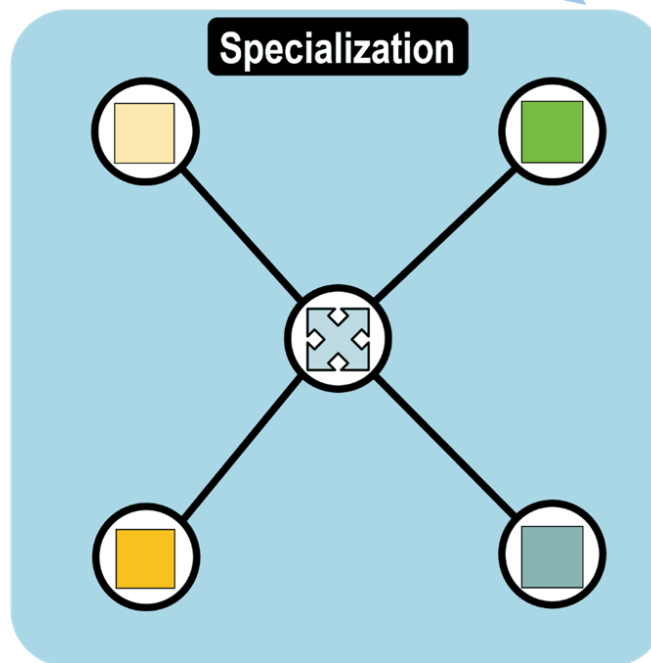
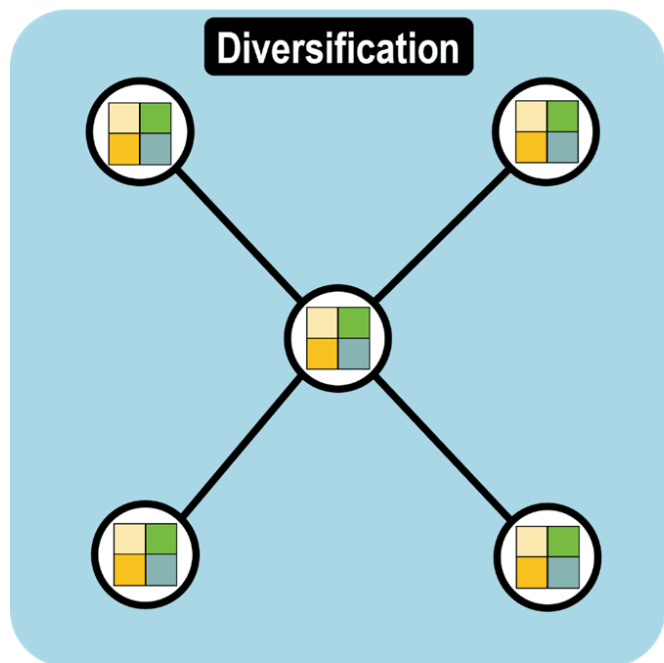
Ana Casino CETAF



Funded by the Horizon 2020
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SPECIALIZATION PLAN

Why specialization matters?



distributed

- unbalanced

diverse levels of maturity

- staff competences
- organizational readiness

variety of assets

- collections
- facilities
- technologies

different strategies / priorities

- institutional/national
- funding mechanisms

SPECIALIZATION PLAN

- **Thematic** (categories: research field, assets, etc)
- **Scalable** (across institutions / countries / RI)
- **Adaptable** (to changing parameters / evolving conditions)
- **Driver for strategic prioritization**
- **Assessment tool** (internally / externally)
- **Leveraging on existing tools**

SPECIALIZATION PLAN

Anchored on the CETAF / DiSSCo Registry of Collections

- unique consolidated registry
- (semi) automatized update by individuals at institutional collections level (ORCID / [ROR](#))
- sustainable (via CETAF)
- integrated into DiSSCo developments /service (via ELViS)

Linked to other self-assessment tools

- Digital maturity (T3.2)
- Policies compliance (T7.3)

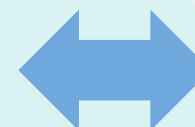
SPECIALIZATION PLAN

towards the smart specialization

a combination of organizational, technological, scientific, data and financial dimensions that once translated into features and criteria will help to **identify and select** a limited number of priority areas for **knowledge-based investments**, focusing on their strengths and comparative advantages

DiSSCo Specialization Plan will facilitate

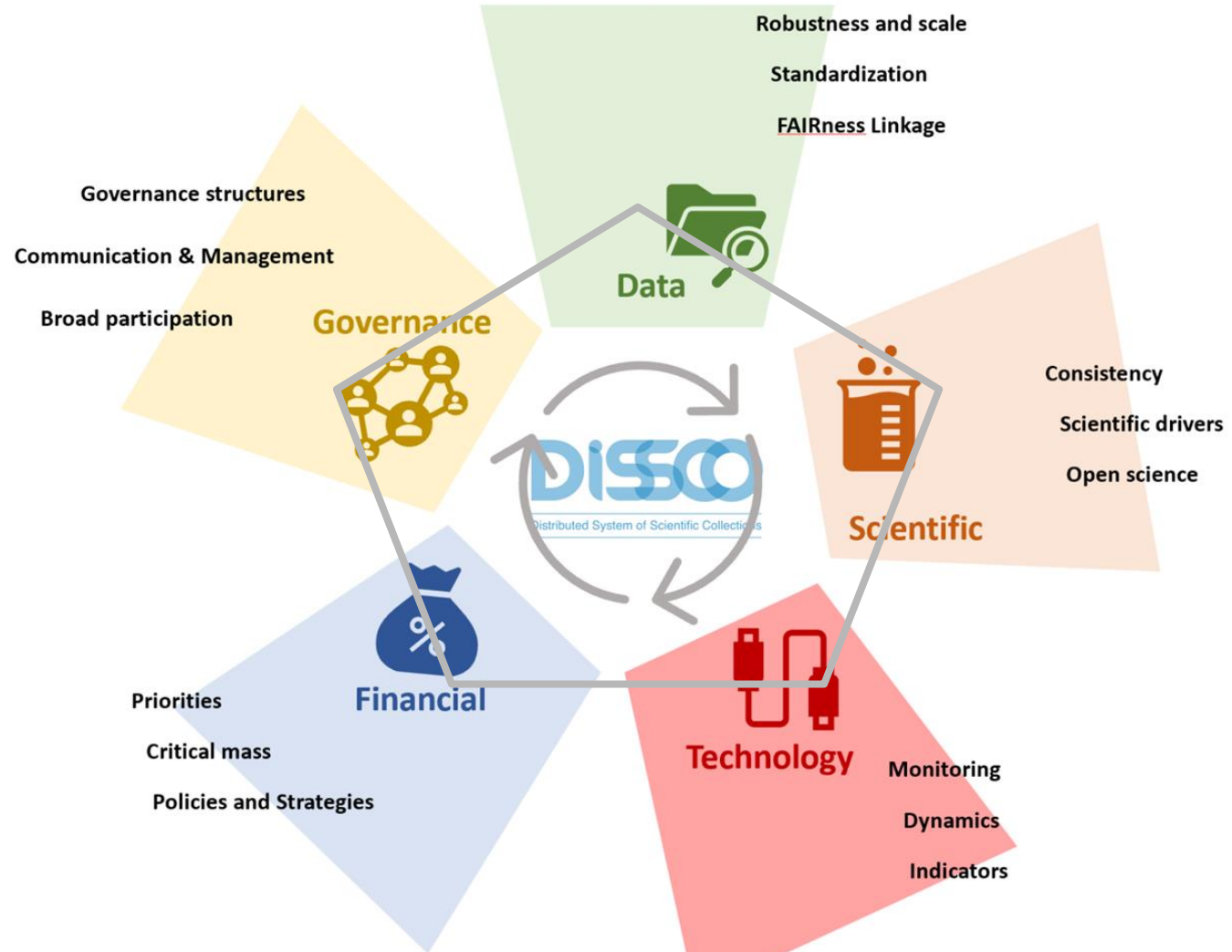
- operation of centers of excellence
- coordinated effort from distributed operational units
- implementation of strategic policies



support
+
training

SPECIALIZATION PLAN

DiSSCo Specialization Plan will showcase how to improve current IRLs



Methodology - DiSSCo Specialisation tool

Patrick Semal

RBINS



Funded by the Horizon 2020
Framework Programme
of the European Union

EXPLORING AND DOCUMENTING DIVERSITY IN NATURE

Royal Belgian Institute of Natural Sciences

IDENTIFICATION	EARTH SCIENCES (Geology, Mineralogy, Palaeontology,...)															
DIRECTOR AND PERSONNEL	<table border="1"> <thead> <tr> <th>Typology</th> <th>Primary types</th> <th>Individual specimens/objects</th> <th>% registered cards</th> <th>% recorded cards in database</th> </tr> </thead> <tbody> <tr> <td>1.1Palaeontology</td> <td>40000</td> <td></td> <td></td> <td>22</td> </tr> <tr> <td>1.2Mineralogy</td> <td>3</td> <td></td> <td></td> <td>100</td> </tr> </tbody> </table>	Typology	Primary types	Individual specimens/objects	% registered cards	% recorded cards in database	1.1Palaeontology	40000			22	1.2Mineralogy	3			100
Typology	Primary types	Individual specimens/objects	% registered cards	% recorded cards in database												
1.1Palaeontology	40000			22												
1.2Mineralogy	3			100												
FACILITIES	LIFE SCIENCES (Zoology, Biology, Botany, Mycology,...)															
RESEARCH	<table border="1"> <thead> <tr> <th>Typology</th> <th>Primary types</th> <th>Individual specimens/objects</th> <th>% registered cards</th> <th>% recorded cards in database</th> </tr> </thead> <tbody> <tr> <td>2.1Zoology</td> <td>200000</td> <td>30650000</td> <td></td> <td>15</td> </tr> </tbody> </table>	Typology	Primary types	Individual specimens/objects	% registered cards	% recorded cards in database	2.1Zoology	200000	30650000		15					
Typology	Primary types	Individual specimens/objects	% registered cards	% recorded cards in database												
2.1Zoology	200000	30650000		15												
COLLECTIONS	Total specimens (all collections) 30,650,000															
TAXONOMIC EXPERTISE	Heritage sciences (art, manuscripts, maps, photographs...) scientific books: 300 000 titles journals 450 000 volumes															
PUBLIC RELATIONS AND COMMUNICATIONS	GENETIC REPOSITORIES															
EDUCATION AND TRAINING	Does your institution have a DNA bank? No															
CURRENT AND FUTURE INTERESTS	Does your institution have a seed bank? No															
	COLLECTION'S RELATED INFORMATION															
	Number of outgoing loans (parcels / specimens) per year 2013 = 304 loans (scientific and exhibitions)															
	Number of scientific visitors per year 1488															

Last update 09.25.19

News

SYNTHEsys+ Workshop on Training Needs

DISCO Rising - the Digital Transformation of Natural Science Collections

CETAF E-SCORE Award for Excellence in Research Based on Natural Science Collections - First Edition 2020

Call for Applications – DISCO General Assembly Membership

CETAF at Strategic Workshop for Biodiversity Partnership

March

M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

You are here: Home

Welcome

CETAF's 33 members represent 59 institutions that hold over half the world's biological collections and work in over 100 collaborative projects. Our Members explore and document the natural world focusing on studying the species and their evolutionary history. In doing so, they contribute in the advancement of research in a multitude of disciplines.

Discover the [profile of CETAF's members](#) or navigate by topic.

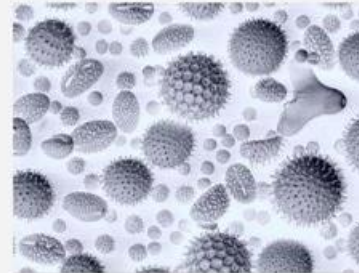
Organisation



Facilities



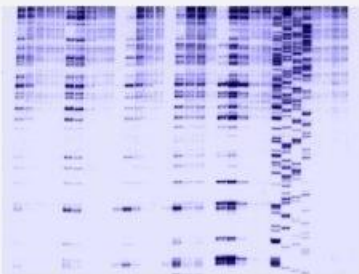
Research



Collections



Taxonomic expertise



Public relations



Education and training



Current and future interests



Collection Registry: 12 main collections and 68 sub-collections

Anthropology



Algae, Fungi, Plants



Invertebrates



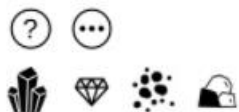
Vertebrates



Palaeontology



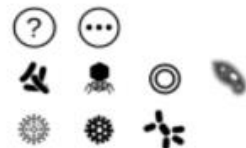
Geology



Extraterrestrial



Microbiology



Biobank(s)



Mixed Collections

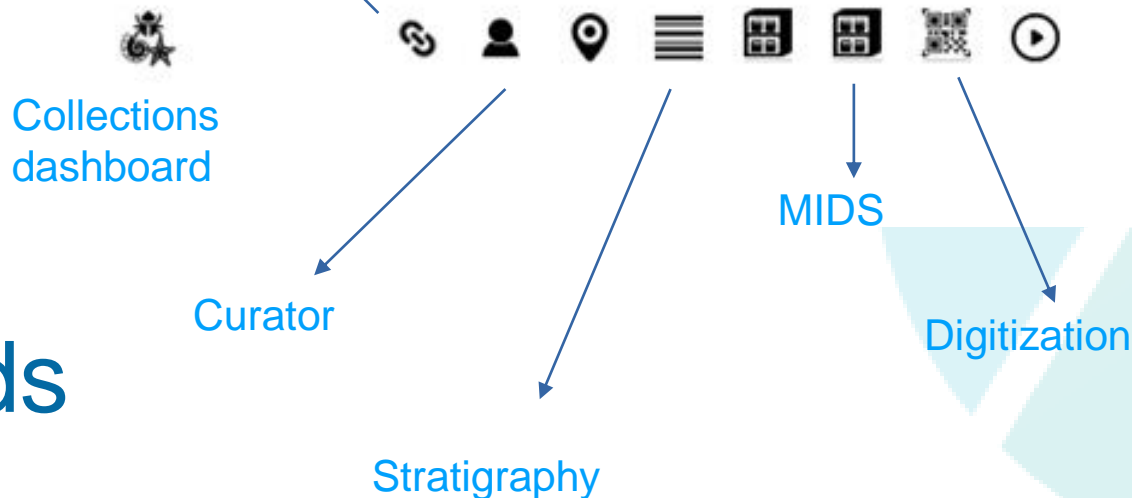
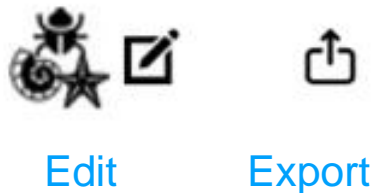


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BE-RBINS VZ

by [Patrick Semal Admin](#) — last modified Aug 31, 2020 11:21 AM — [History](#)

Zoology Vertebrates



9 information units / 760 fields



The information will be used according the GDPR rules.

This specialisation passport is a tool developed in the framework of DISCO Prepare and Synthesis + to fill the information about DISCO members and CETAF non DISCO members. The information will be then imported in the CETAF/DISCO Institution passport and used as reference authority for the DISCO services and the CETAF website. The different sections are:

Research: Research fields and individual expertises



[Research Field](#)



[Individual Expertise](#)

Facilities: Facilities, scientific instruments and services



[Facilities](#)



[Scientific instruments](#)

Museum: Galleries and exhibitions



[Galleries](#)



[Exhibitions](#)

Education: Trainings



[Training](#)

Specialisation Forms

Research Field

This e-mail address will be used to send you a link to (re)edit your form and to send you a copy of your form.

sspwpd.rbins@gmail.com [Switch accounts](#)

The name and photo associated with your Google Account will be recorded when you upload files and submit this form. Only the email address you enter is part of your response.

***Required**

Email *

Your email address



Distributed System of Scientific Collections

Next

Page 1 of 34

Clear form

V1: Institution choice in 1 step and one survey: multiple choice with > 150 options

Research Field

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The name and photo associated with your Google Account will be recorded when you upload files and submit this form. Only the email address you enter is part of your response.

DiSSCo Members and NN Identification

Parent Institution (ISO-INST)

Provide the parent institution: e.g. BE-RBINS for the Royal Belgian Institute of Natural Sciences

NL-Naturalis


(-) Very long selection

Institutions represented by NN answer or select in the list. Choose the name of the 'country NN' if you answer as National node.

- BE-MBG Meise Botanic Garden
- BE-RBINS Royal Belgian Institute of Natural Sciences
- BE-EMCA Royal Museum for Central Africa
- DE-INSO Research Institute for Nature and Forest
- BE-KDMA Royal Zoological Society of Antwerp
- BE-UNAMUR University of Namur
- BE-VLIZ Flanders Marine Institute
- BU-BERBAS Institute of Biodiversity and Ecosystem Research - Bulgarian Academy of Sciences
- BU-NMNH5 National Museum of Natural History
- CZ-FV8-CAS Institute of Vertebrate Biology, The Czech Academy of Sciences
- CZ-MU Masaryk University
- CZ-NCA Nature Conservation Agency of the Czech Republic
- DK-SM-KU Natural History Museum of Denmark
- DK-AAU The Science Museums, Aarhus University
- DK-NH-MA Natural History Museum Aarhus
- EE-EMU-ULS Estonian University of Life Sciences
- EE-NHM Estonian Museum of Natural History
- EE-TTU Institute of Geology, Tallin University of Technology
- EE-UT University of Tartu, Natural History Museum and Botanic Garden
- FI-FMNH Finnish Museum of Natural History
- FI-BU-UIO University of Oulu, Biodiversity Unit
- FI-KLM Kuopio Museum of Natural History
- FI-OISC-UJ University of Jyväskylä, Open Science Centre/Museum
- FR-MNH-N National Museum of Natural History, Paris
- FR-CBNA National Alpine Botanical Conservatory
- FR-CINES National Computer Center for Higher Education
- FR-CIRAD French Agricultural Research Centre for International Development
- FR-IRD Institute of Research for the Development
- FR-BL Le Jardin Botanique de la Ville de Lyon
- FR-MAN Muséum-Aquarium de Nancy
- FR-MHNPT Musée d'histoire naturelle Philadelphe Thomas
- FR-MHNR Musée d'histoire naturelle de La Rochelle
- FR-SNENC Societe nationale des sciences naturelles et mathematiques de Clermont
- FR-SU Sorbonne University
- FR-TB Teis Botanica
- FR-UB University of Burgundy
- FR-UCA University of Clermont Auvergne
- FR-UCBL Claude Bernard University Lyon 1
- FR-UDL University of Lille
- FR-UDS University of Strasbourg
- FR-UM University of Montpellier
- FR-UR1 University of Rennes 1
- FR-UTPS Université de Toulouse III Paul Sabatier
- DE-CENAK Centre of Natural History Hamburg
- DE-EMM German Oceanographic Museum
- DE-FNM Senckenberg Society for Nature Research
- DE-LMNH State Museum of Nature and Man Oldenburg
- DE-MFN Berlin Natural History Museum
- DE-MNU Museum of Nature and Environment Lübeck
- GR-GD-UP Geological Department of the University of Patras
- GR-GNHM Goulandris Natural History Museum
- GR-MAICH Mediterranean Agronomic Institute of Chania
- GR-MGP-AUT Museum of Geology Palaeontology Palaeoanthropology, Aristotle University of Thessaloniki School of Geology
- GR-MPM-NKUA Mineralogy and Petrology Museum of the National and Kapodistrian University of Athens
- GR-MZ-AUT Museum of Zoology of the Aristotle University of Thessaloniki
- GR-MZ-NKUA Museum of Zoology of the National and Kapodistrian of Athens
- GR-NHM-LPF Natural History Museum of the Lesvos Petrified Forest
- GR-ZM-UP Zoological Museum of the University of Patras
- HU-MTTM Hungarian Natural History Museum
- IT-MCSN-GD Natural History Museum of Genova - Giacomo Doria
- IT-MSN-UNIFI Natural History Museum - Florence University Museum System
- IT-ANIE National Academy of Entomology
- IT-ANMS Italian Association of Scientific Museums
- IT-CNR National Research Council (Italy)
- IT-SBI Italian Botanical Society
- IT-SGI Italian Geological Society
- IT-SIB Italian Society of Biogeography
- IT-SPI Italian Paleontological Society
- IT-XL National Academy of Sciences (Italy)
- NL-Naturalis Naturalis Biodiversity Center
- NL-BIF Netherlands Biodiversity Information Facility
- NL-DMF De Museum Fabriek
- NL-MDB Museum De Bastel
- NL-MUSEON Museon
- NL-NHM Natural History Museum of Maastricht
- NL-NIOZ Royal Netherlands Institute for Sea Research
- NL-NMB Natuurmuseum Brabant
- NL-NMF Natuurmuseum Fryslân
- NL-NMR The Natural History Museum Rotterdam
- NL-TMH Teylers Museum Haarlem
- NL-UMU The University Museum Utrecht
- NL-UVA University of Amsterdam
- NL-WI Westerdijk Fungal Biodiversity Institute
- NO-NHM-UIO Natural History Museum - University of Oslo
- NO-TUM Tromsø University Museum
- NO-UM NTNU NTNU University Museum
- NO-UMB University Museum of Bergen
- PO-MZ-PAN Museum And Institute of Zoology - Polish Academy of Sciences
- PO-UW University of Warsaw
- PT-BG-UC Botanic Garden of the University of Coimbra
- PT-COI-UC Coimbra Herbarium
- PT-MHNC-UP Natural History and Science Museum, University of Porto
- PT-MS-UC Museum of Science of the University of Coimbra
- PT-MNHNS-LISBOA National Museum of Natural History and Science, University of Lisbon
- ES-MNCN-CSIC National Museum of Natural Sciences
- ES-RJB-CSIC Royal Botanic Garden of Madrid
- ES-MZ-UNAV Museum of Zoology
- ES-PAMP-UNAV PAMP-Herbarium
- ES-HGME-CSIC Geomorphology Museum
- ES-FB-UCM UCM Faculty of Biology
- ES-FG-UCM UCM Faculty of Geology
- ES-FF-UCM UCM Faculty of Pharmacy
- ES-FM-UCM UCM Faculty of Medicine
- ES-FGH-UCM UCM Faculty of Geography and History
- ES-MuseuHN-UV UV Natural History Museum
- ES-JBUV UV Botanic Garden of the University of Coimbra
- SE-88G-RSAS Bergius Botanic Garden
- SE-EM-LU Lund University Biological Museum
- SE-EMG-UMEA Umeå University, Department of Ecology and Environmental Sciences
- SE-ME-UU Uppsala University, Museum of Evolution

V2: Institution choice in 2 steps and one survey

Research Field

sspwpdp.rbins@gmail.com [Switch accounts](#) 

The name and photo associated with your Google Account will be recorded when you upload files and submit this form. Only the email address you enter is part of your response.

DiSSCo Members and NN Identification

Parent Institution (ISO-INST)
Provide the parent institution: e.g. BE-RBINS for the Royal Belgian Institute of Natural Sciences

NL-Naturalis

Country
Or select first the country. Choose after your institution in the list, or several institutions if you answer as National Node.

Netherlands ▼

Back
Next
Clear form

Complex form with a lot of technical fields

Netherlands

Institution(s) *
Select the institution in the list or choose several institutions if you answer as National node.

- NL-Naturalis Naturalis Biodiversity Center
- NL-BIF Netherlands Biodiversity Information Facility
- NL-DMF De Museum Fabriek
- NL-MDB Museum De Bastei
- NL-MUSEON Museon
- NL-NHMM Natural History Museum of Maastricht
- NL-NIOZ Royal Netherlands Institute for Sea Research
- NL-NMB Natuurmuseum Brabant
- NL-NMF Natuurmuseum Fryslân
- NL-NMR The Natural History Museum Rotterdam
- NL-TMH Teylers Museum Haarlem
- NL-UMU The University Museum Utrecht
- NL-UVA University of Amsterdam
- NL-WI Westerdijk Fungal Biodiversity Institute
- Other

Institution choice in 1 step but one survey by country

Belgium

Institution(s) *

Select the institution in the list or choose several institutions if you answer as National node.

- BE-MBG Meise Botanic Garden
- BE-RBINS Royal Belgian Institute of Natural Sciences
- BE-RMCA Royal Museum for Central Africa
- BE-INBO Research Institute for Nature and Forest
- BE-KDMA Royal Zoological Society of Antwerp
- BE-UNAMUR University of Namur
- BE-VLIZ Flanders Marine Institute
- Other

If "Other", provide the list of institutions represented by the NN answer

[↑ Add File](#)

[Back](#) [Next](#) [Clear form](#)

- (-) Multiplication of forms
- (+) management by NN
 - Better access rules
- (+) analysis by country
 - National road map

Contact

Please use just the ORCID-ID to identify a contact person information already filled in an other form

ORCID-ID
e.g. <https://orcid.org/0000-0002-4048-7728>

Your answer _____

Title(s)

Choose ▾

First Name(s)

Your answer _____

Last Name(s)

Your answer _____

Position in the Institution

Your answer _____

Position in the Institution

Your answer _____

Phone

Your answer _____

Email

Your answer _____

Field / Discipline

Choose ▾

Discipline if other

Your answer _____



Contact personal data

Do you want to complete the personal data in this form

- No, I want to use the ORCID Public API
- No, I already filled the personal information in an other form of the specialization exercise
- Yes, I want to complete the personal data section

[Back](#) [Next](#) [Clear form](#)

ORCID-ID

ORCID-ID
Please just fill the ORCID-ID to identify the contact person, e.g. <https://orcid.org/0000-0002-4048-7728>

Your answer _____

Personal data agreement

Who I'm *

- I'm the person of contact
- I'm the coordinator at the institution level and I have the authorization of the contact person to fill the information
- I'm the coordinator at the institution level and I don't have the authorization of the contact person
- Other: _____

Agreement *

- The personal data can be used for anonymized statistics and reports
- The personal data can be used for specialized nominative lists of contacts
- The personal data can not be used for any purpose(s)

[Back](#) [Next](#) [Clear form](#)

Form completion

The form state is *

Draft

Complete

Complete and validated. It can be exported to the central repository

A copy of your responses will be emailed to the address that you provided.

[Back](#) [Submit](#) [Clear form](#)

Re-edition is possible:
If Complete and validate status

- Can be used for analysis

Form Completion and XLS upload

Identification

Title (in English) *
Title of the Research field

test NN Belgium

Original Title
Title of the Research field in local language

Your answer

Summary (in English)
Short description to be displayed in results search table

Your answer

XLS File upload. *
1. Download the xls template available here: 2.Fill the requested information and 3. Upload the completed file using this File upload field.

[Add File](#)

My Drive > ... > by Countries > BE-Belgium ▾ 👤

Name ↑

👤 BE-Belgium responses

👤 Collections

👤 e-services

👤 Exhibitions

👤 Facilities

👤 Galleries

👤 Individual Expertises

👤 Research fields

👤 Scientific Instruments

👤 Services

👤 Trainings

📄 BE-Belgium 👤

- (+) management by NN
 - Better access rules
 - National road map

👤+ Share with people and groups ⚙️

Add people and groups

🐶 **Patrick Semal (you)** Owner
sspwdp.rbins@gmail.com

F **Franck T** Commenter ▾
franck.theeten@africamuseum.be

P **Patrick Semal** Editor ▾
patrick.semал@gmail.com

P **Patrick Semal** Viewer ▾
cetaf.dissco.specialisation@gmail.com

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Specialisation Menu for NN

Belgium Specialisation Menu



	Topic	Add Form	XLS Form	XLS Template	View Folder	Analysis Results
1	Research Field	Link	Link	Link	Link	Link
2	Individual Expertise	Link			Link	Link
3	Facilities	Link	Link	Link	Link	Link
4	Scientific Instrument	Link	Link	Link	Link	Link
5	Galleries	Link	Link	Link	Link	Link
6	Exhibitions	Link	Link	Link	Link	Link
7	Trainings	Link	Link	Link	Link	Link

Links :

Research Field:

Add Form: <https://forms.gle/eJjL4v3eXMHQVQXs8>

XLS Form: <https://forms.gle/rb72jrX4NGc3SR4D6>

XLS Template:

https://docs.google.com/spreadsheets/d/1eEI5IjUETYS3H2_AqX6vmYhud_o1RDe/e/dit?usp=sharing&ouid=114615369313833039955&rtpof=true&sd=true

View folder:

<https://drive.google.com/drive/folders/1H12iWtKcY6sq2poUthYeiVTXX6LoxKwX?usp=sharing>

Analysis results:

<https://docs.google.com/spreadsheets/d/1QBTTWCWY5Paag7oC2j8C3VWVWsmtp6-Xtf06QcvCtVf4/edit?usp=sharing>

Individual Expertise:

Add Form: <https://forms.gle/JmAXVjkAx7fUczFY7>

XLS Form:

XLS Template:

View folder:

<https://drive.google.com/drive/folders/14y4LpKZJILYbxYQf51biGhefyHFnxrSk?usp=sharing>

Analysis results:

Facilities:

Add Form: <https://forms.gle/bvTCAsRYjGzrjBAV9>

XLS Form: <https://forms.gle/6GvxBGFKfQADooYs8>

XLS Template:

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View folder:

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Analysis results:


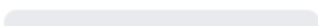

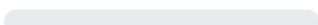


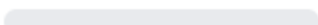


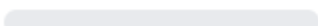


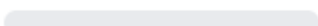


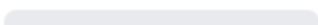


Sign in

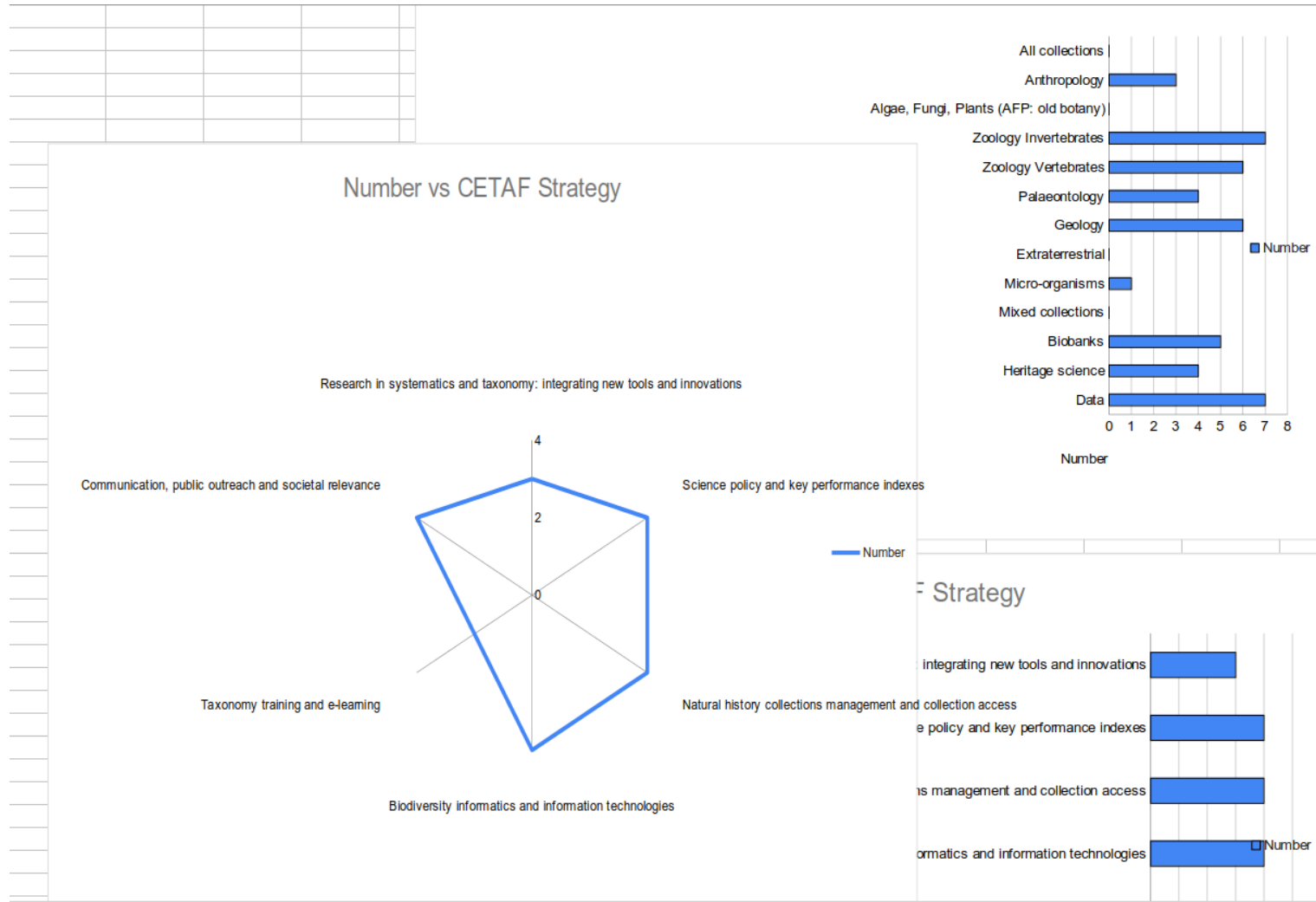
Research fields

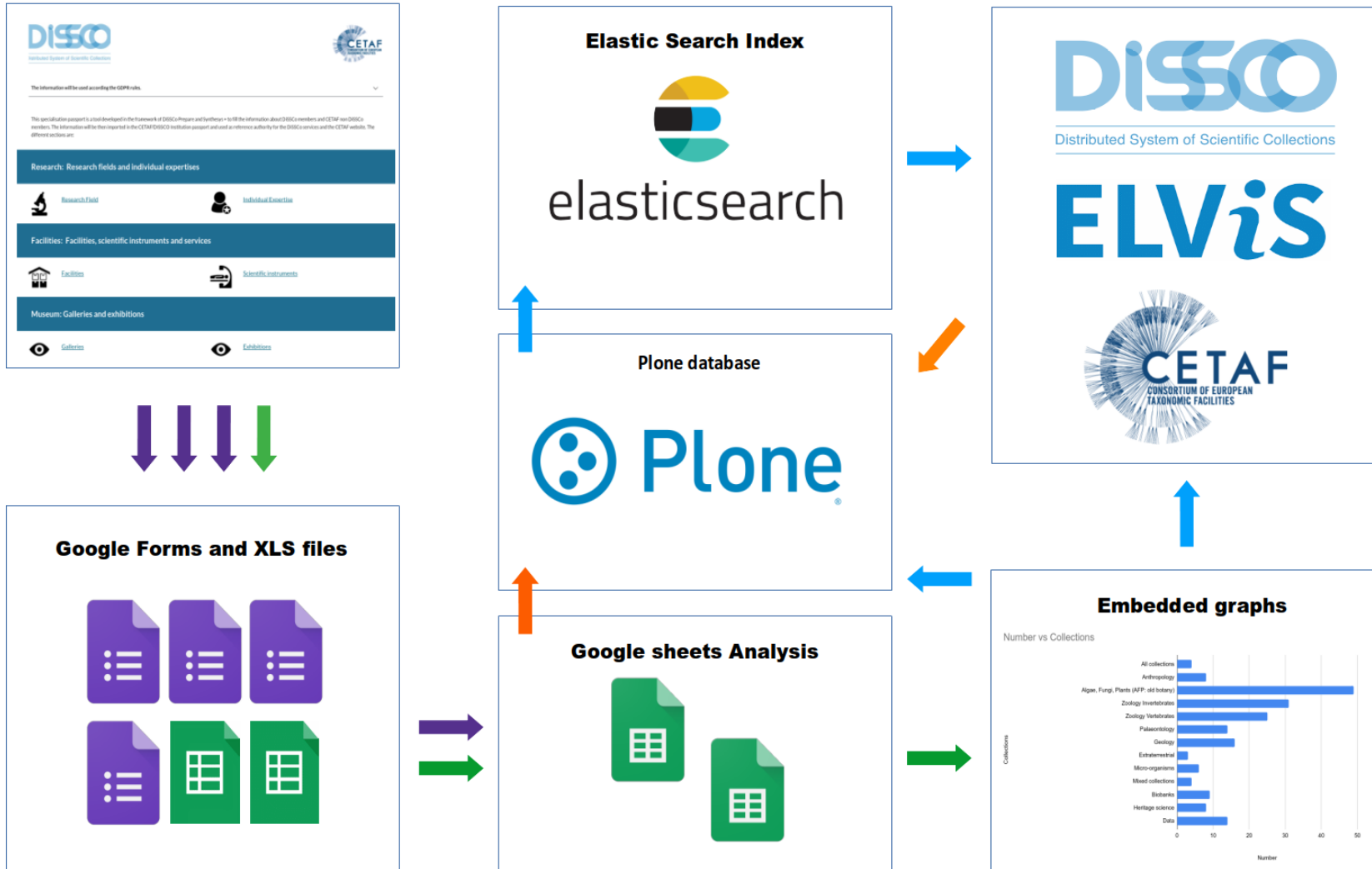
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Name ↑	Owner	Last modified	File size
 Research Field (File responses)		9:16 AM	—
 Research Field XLS (File responses)		9:18 AM	—
 AHM Research Fields analysis 		10:04 AM	40 KB
 Research Field 		9:16 AM	84 KB
 Research Field (Responses) 		9:17 AM	7 KB
 Research Field XLS 		9:18 AM	79 KB

Specialisation Menu for NN







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[Research Field](#)



[Individual Expertise](#)

Facilities: Facilities, scientific instruments and services



[Facilities](#)



[Scientific instruments](#)

Museum: Galleries and exhibitions



[Galleries](#)



[Exhibitions](#)

Education: Trainings



[Training](#)

- (+) management by NN
 - Better access rules
 - National road map
 - Direct links to National forms

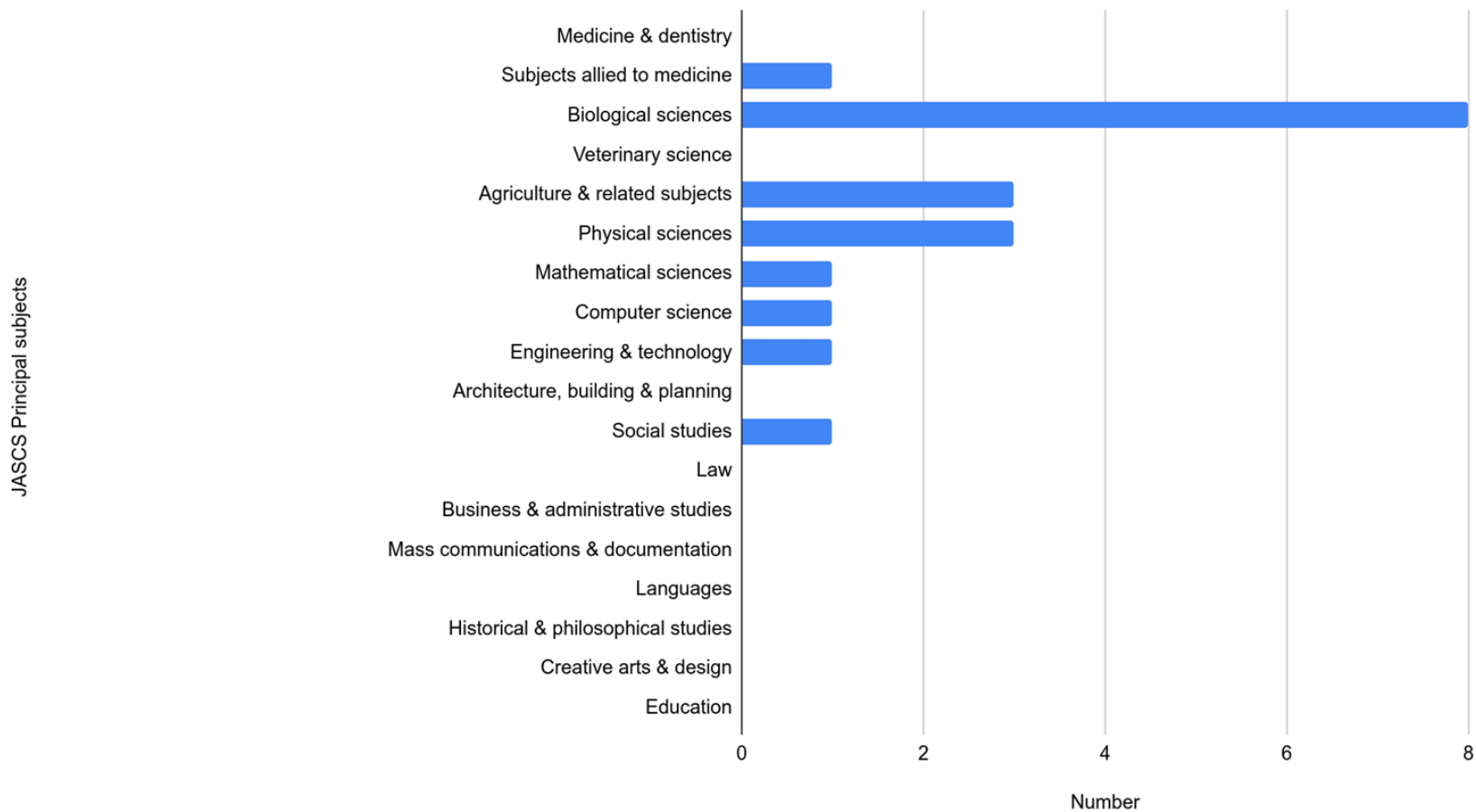
Research Field form BE

<https://forms.gle/FaY1tkEAVtMd9k7r8>

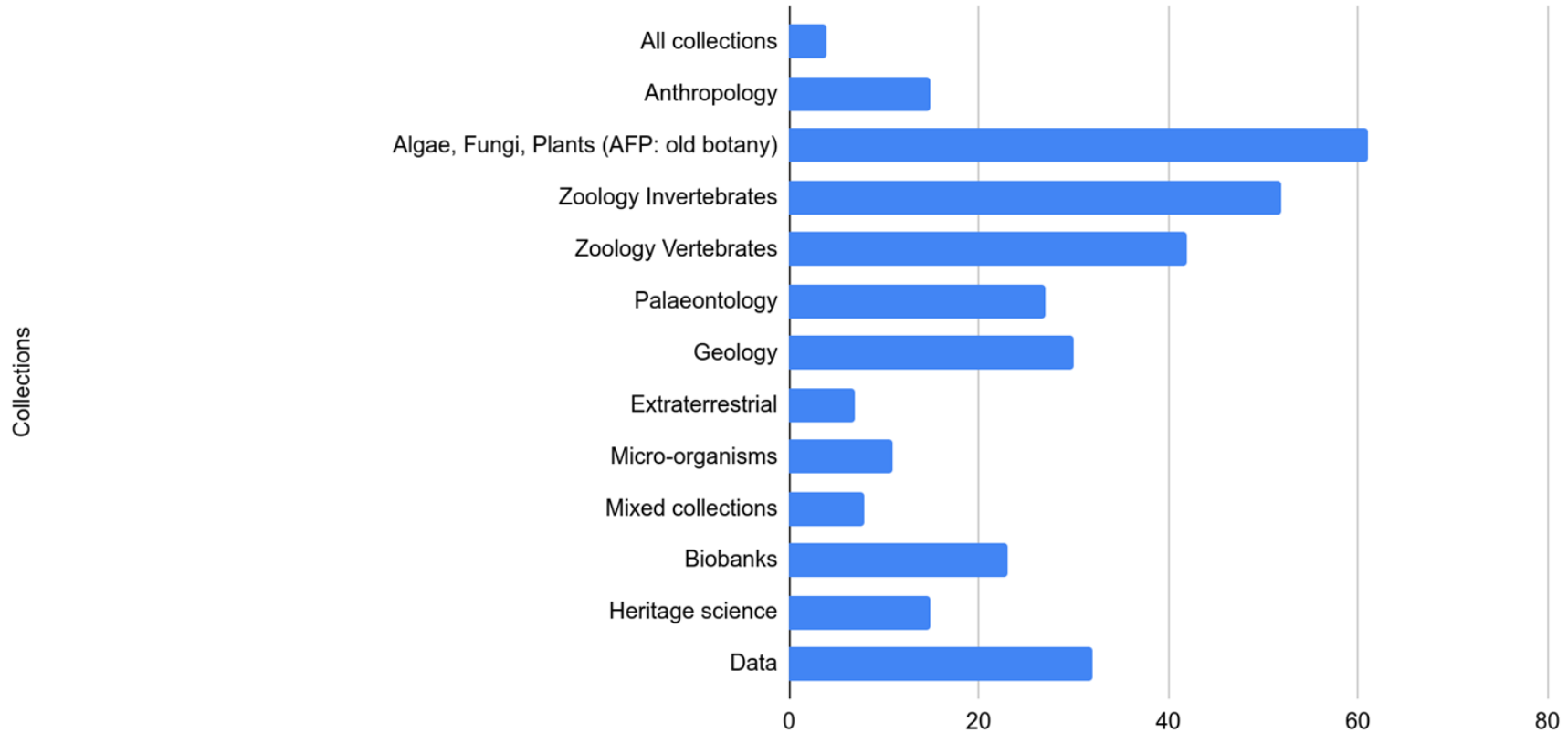
Research Field XLS form

<https://forms.gle/vXo5pjHyUj87gwg26>

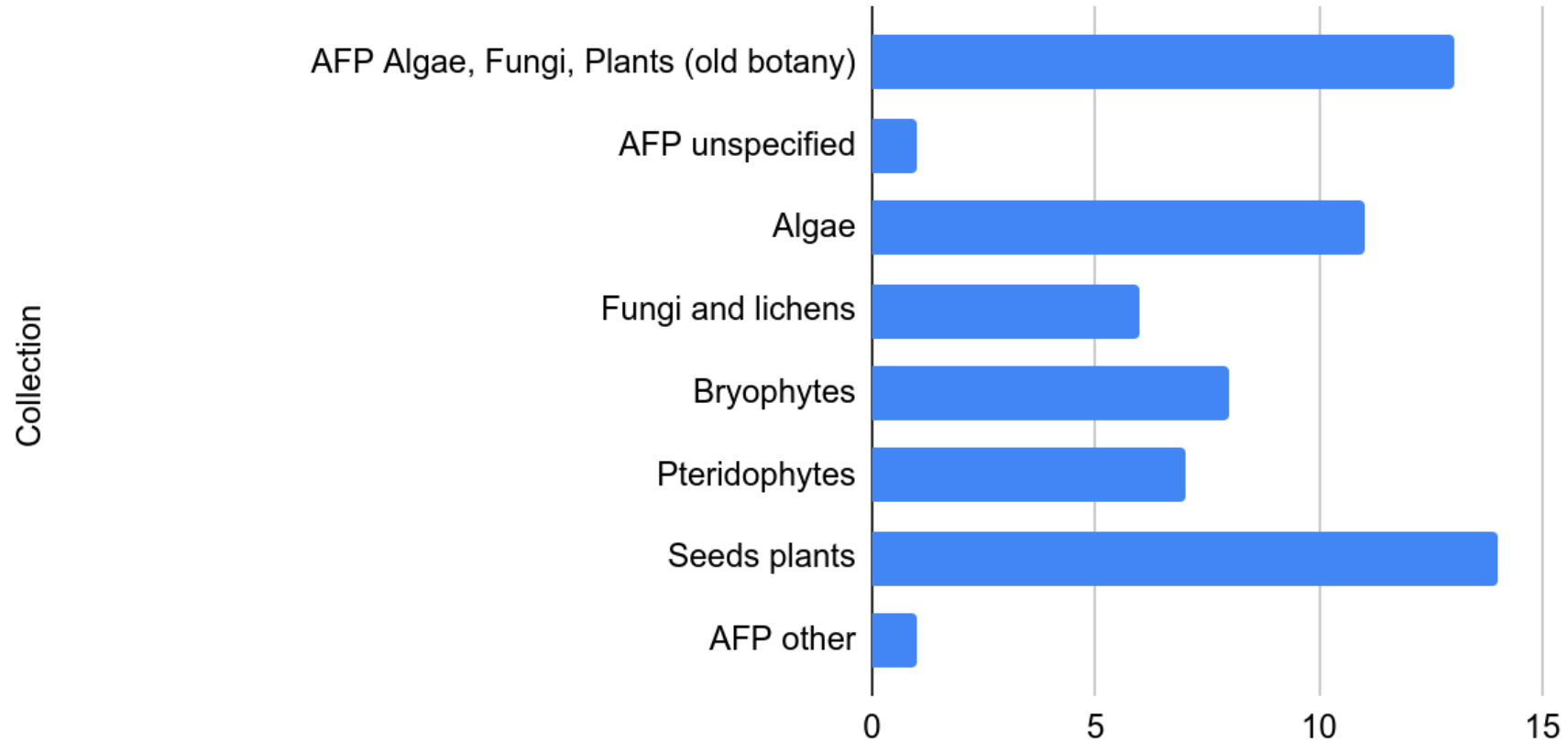
Number vs JASCS Principal subjects



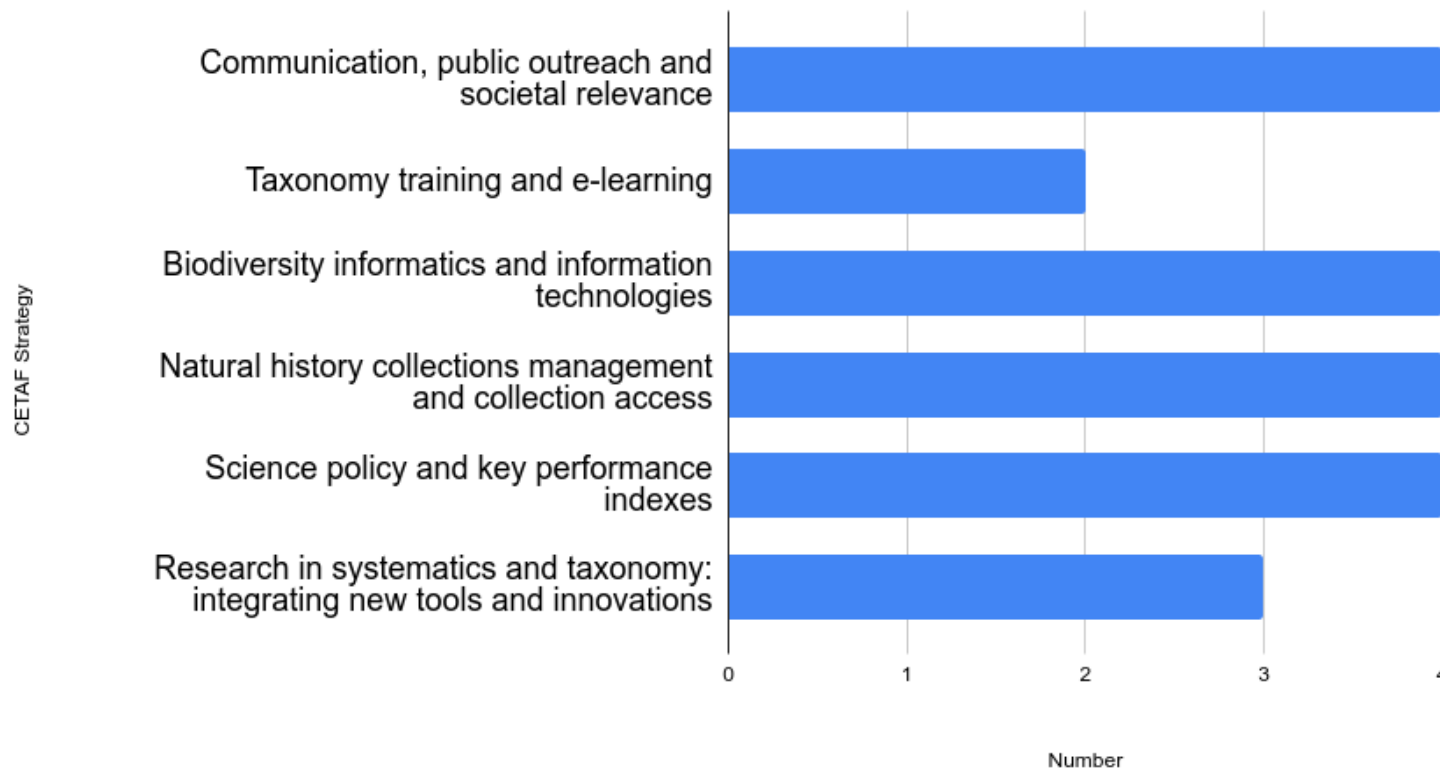
Number vs Collections



Algae, Fungi, Plants (AFP)



Number vs CETAF Strategy

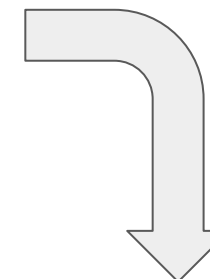
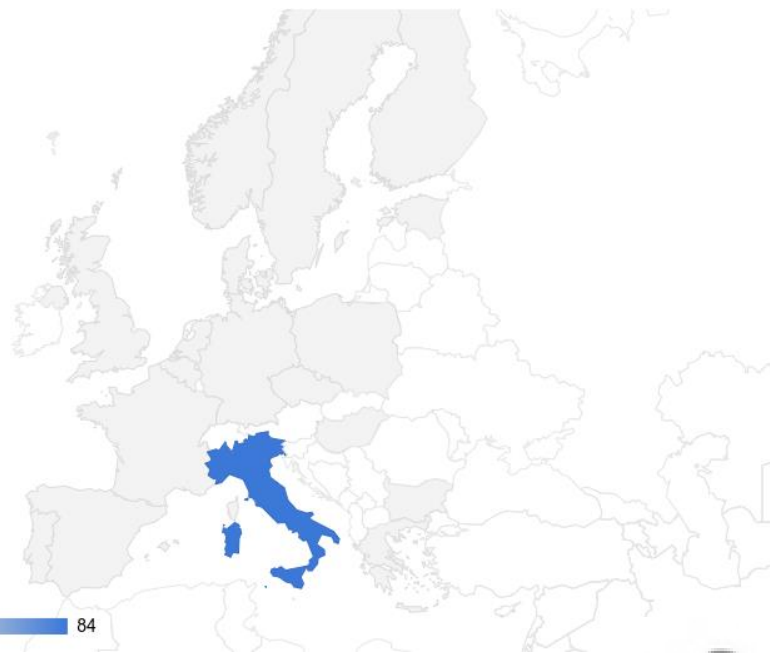
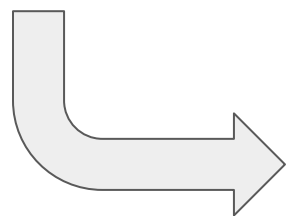


DISCO

Distributed System of Scientific Collections

National Node

Institution



UNIVERSITÀ
DEGLI STUDI
FIRENZE

**MUSEO DI
STORIA
NATURALE**

ALL HANDS MEETING – AHM2

WP8 - T8.1

7 April 2022

Links with other tools and specialisations



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Overview of some Specialisations and tools to be included in the Thematic Specialisation Plan:

- WP2 Training Strategy - Mariano Iossa (CETAF)
- WP6 e-Services - Claus Weiland/ Jonas Grieb (Senckenberg)

Ongoing discussion also with

- WP3 Capacities, Skills and Competences - Digitization Maturity Tool & T3.1 investigation of sources of online information about individuals and institutions
- WP1 - Digitization Priorities
- WP9 DiSSCo Strategy

All Hands Meeting 2

M5 (2.1) Compilation of needs for skills/competencies

DiSSCo Prepare WP2 T2.1 **Training strategy**



Funded by the Horizon 2020
Framework Programme
of the European Union

April 5th 2022
3 – 4.30 PM CET

Objective of the task & milestone

- **To create a training strategy with** distinct channels and modes of accessing to respond to identified training needs of both data suppliers and end-users
- **M5 (2.1) on training needs included:**
 1. **Compilation of needs for skills/competencies**
 2. Identification of training providers/platforms
- **Methodology:** survey, semi-structured interviews and AHM presentation

Survey Respondents landscape

Responding institutions	City	Contry	Approximate staff size of the institution
University of Lisbon	Lisbon	Portugal	small (≤ 100)
University of Florence	Florence	Italy	small (≤ 100)
University of Porto	Porto	Portugal	small (≤ 100)
Luxembourg National Museum of Natural History	Luxembourg	Luxembourg	medium (≤ 250)
University of Oslo	Oslo	Norway	medium (≤ 250)
Meise Botanic Garden	Meise	Belgium	medium (≤ 250)
National Museum	Prague	Czech Republic	medium (≤ 250)
Royal Botanic Garden	Edinburgh	Scotland	medium (≤ 250)
Hungarian Natural History Museum	Budapest	Hungaria	medium (≤ 250)
Institute of Biodiversity and Ecosystem Research at the Bulgarian Academy of Sciences	Sofia	Bulgaria	medium (≤ 250)
Botanic garden and botanical museum	Berlin	Germany	medium (≤ 250)
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National Museum of Natural History	Paris	France	very large (> 500)
Senckenberg Nature Research Society	Frankfurt	Germany	very large (> 500)
Natural History Museum	Berlin	Germany	very large (> 500)

Key findings

- **Dual role strategy** (same team for virtual and physical collection) is preferred one
- Most organisations have a **training policy, a training manager and budget** BUT mostly **not results-oriented, unsystematic, lack a catalogue to choose from**
- **Unequal distribution** of training opportunities and red tape to access it
- **Different needs** for beneficiaries and partners (national level, smaller instits)

Key findings - 5 IRL

- **SCIENCE:** DiSSCO to organise essential training for the entire consortium
Training needs in open data for science, data cleaning and handling for research, citizen science, data sharing, use of CMS, machine learning and artificial intelligence
- **DATA:** moving from digitization pilot to scale up (twds MIDS2), with no significant staff increase
Training needs (priority area): commercially available softwares on DMS, FAIR digitisation
- **TECHNOLOGICAL:** Mostly cover their IT needs internally, Slow but steady growth of IT staff (funds a limitation), rely on DiSSCO for the RI
Training needs: cybersecurity
- **ORGANISATIONAL:** dual function strategy BUT not adapted Organigramme and JDs, few have a systems in appraisal to assess skills and training needs, lack of perceived needs in inventory
Training needs (priority area) : policy, management, legal support services and fundraising
- **FINANCIAL:** generally solid in financial procedures and reporting for donor funded project
Training needs: self teaching modules and Forum for info sharing on donor practice/rules

Overall conclusions and recommendations

- DiSSCo should develop a catalogue of trainings that is **financially “accessible”**
- Use **online or hybrid** formats with low/0 fees for outreach to wider audience
- General methodology and English as lingua franca for Int trainings
- **Dedicated methodology (ToT SDT), adaptation and translation** to reach out to all project partners (national level, NN members)
- Capacity building courses to accompany management and speed up such adaptation processes on **human resources policies and procedures** are priority (trickle down effect)
- One contact person per museum for training in order to streamline communication and follow up on needs and trainings

Conclusion and recommendations relevant for 8.1 Specialisation plan

- Training needs are **ongoing and evolve** (changes in staff and ongoing learning)
- Data and Organizational are priority areas in this phase

Recommendations:

- > **M5 needs compilation is** an indication for **prioritization**
- > strategy should not focus on exhaustive list of training but mechanisms to identify training needs on an ongoing basis
- > Tool/database trainers / training providers

ALL HANDS MEETING – AHM2

WP6 e-services perspective on specialisation

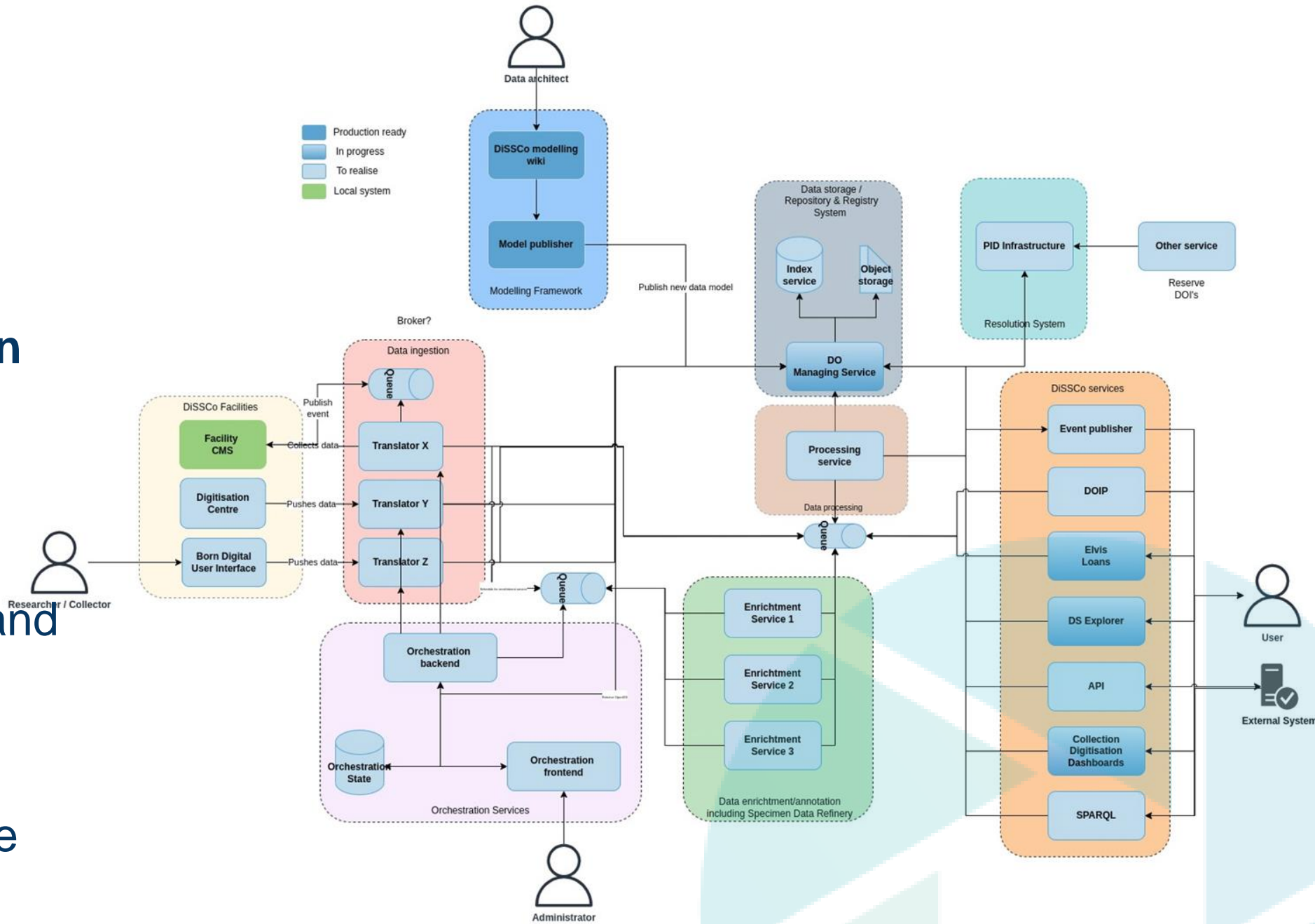
Jonas Grieb (SGN)/ Sam
Leeflang (Naturalis)/Wouter
Addink (Naturalis)/Sharif
Islam (Naturalis)/Claus
Weiland (SGN)



Funded by the Horizon 2020
Framework Programme
of the European Union

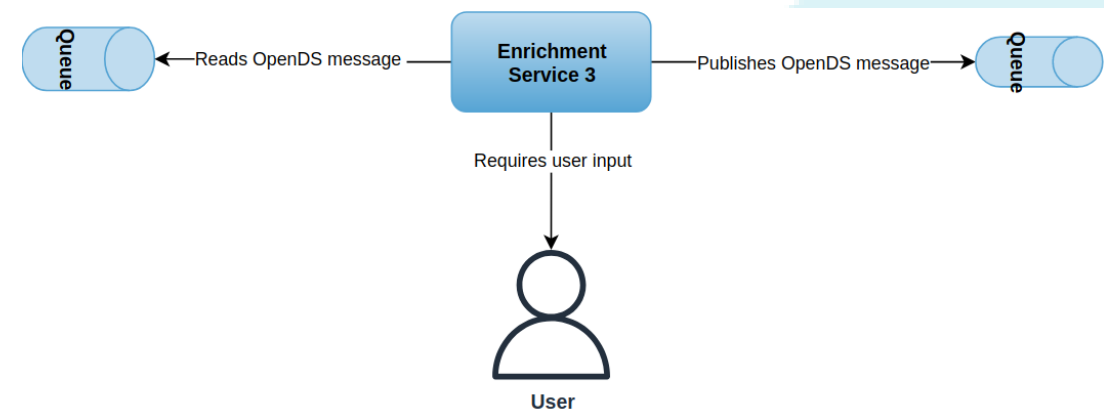
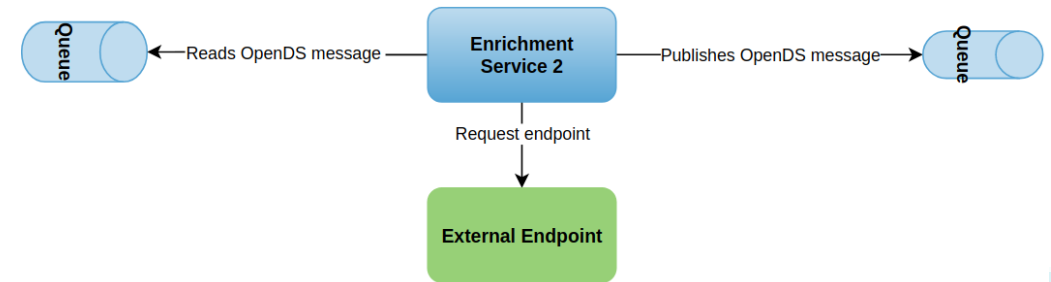
Key components of the Digital Specimen Architecture:

- Data Ingestion
- Data Transformation and Processing
- DS Repo
- PID Infrastructure
- Data Modeling Framework




Connect to the DiSSCo core architecture - Enrichment service

- Aimed at programmatically enriching the data
 - Adding annotations
 - Adding links to other resources
 - Checking data quality
- Loose collection of services some part of the DiSSCo core infrastructure some outside as long as they adhere to the contract.
- OpenDS in, OpenDS out



20.5000.1025/
f9dd382c670e64cccf21

PID




<https://id.senckenberg.de/object/sesam-699726>


ODStypeV0.1

DOType

#0121 (extractROI)
 #0122 (updateTraitInfo)
 #0123 (return MIDS info)
 #0124 (update MIDS level)
 #0125 (return DNaseq)
 #0126 (return gathering)

Operations

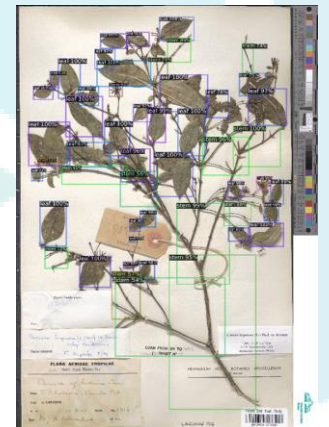
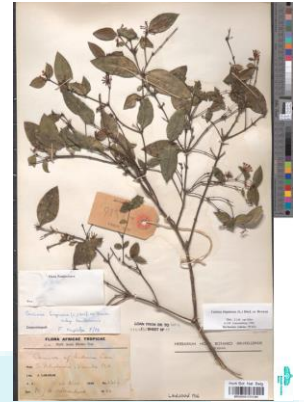
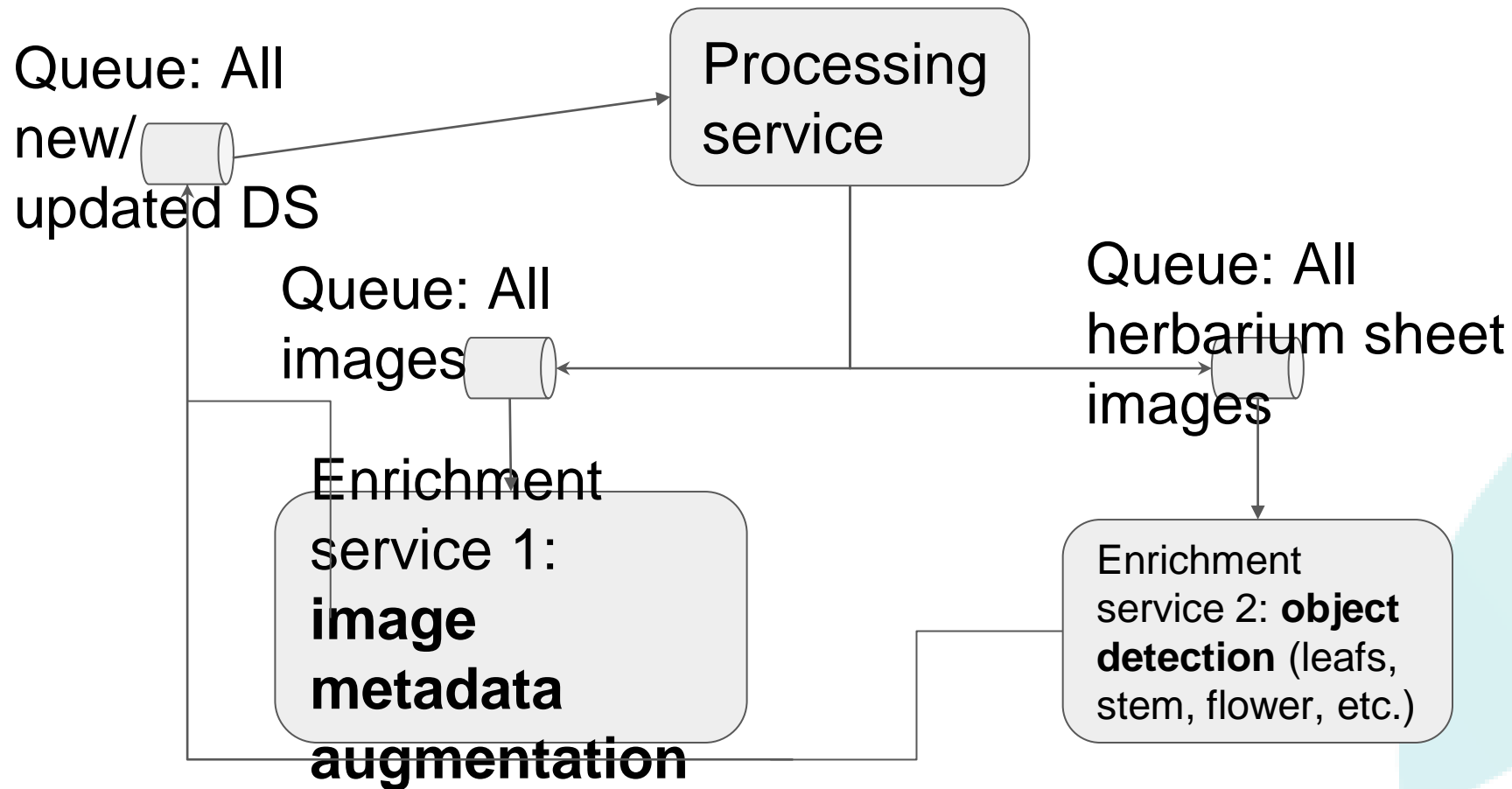




Metadata

name: "Hieracium kuekenthalianum",
 MIDSLevel: 1,
 institution: "https://ror.org/01wz97s39",
 institutionCode: "FR",
 materialType: "Dry - pinned",
 decimalLatitude: 46.967,
 decimalLongitude: 10.152

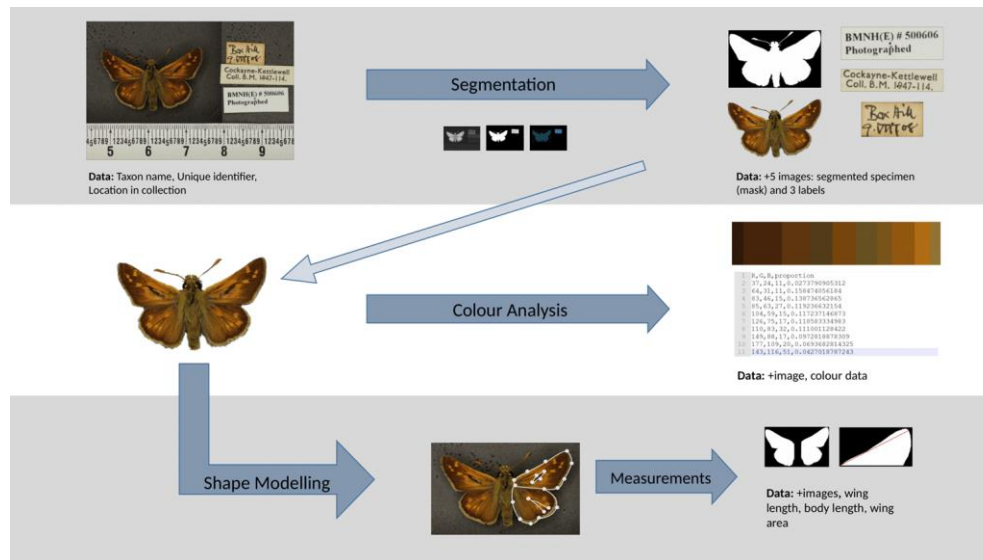
Current image enrichment services



Use case: Specimen Data Refinery

In Specimen Data Refinery (currently in development) FDO is the basis for:

- Primary workflow inputs and outputs
- Data transfer
- Interactions between components within the workflow



Identify
 Describe
 Use

Outlook

Some possible types of annotation/enrichment

partly based on machines (machine-learning/machine-actionability),
partly on humans (crowd-sourcing)

- relationship/link
- error correction
- identification
- quality remark
- score of an annotation
- additional image
- additional information like feature extraction
- loan/visit
- publication
- provenance
- ...

Do we need to differentiate
between tools for experts and
citizen scientists? (Niels Raes)

Slide by Wouter
Addink

Hands-on Specialisation tool



Funded by the Horizon 2020
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of the European Union

Link to the [Questions on the Specialisation tool](#)

<p>After having gone through some of the categories, can you please provide here your feedback</p>	<p>Any existing category of specialisation not yet addressed ?</p>
<p>Is there a controlled list of categories for the scientific instruments present in DiSSCo institutions ?</p>	<p>Any foreseen new specialisation to be developed ?</p>

What next ?

Carole Paleco



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What next

- Refinement of the functionalities and operability of the tool
 - By early May
- Invite more NN to contribute to the specialisation passport
 - Share with NN the link for data gathering (May- mid-June)
- Have in-depth exchanges with
 - NN representatives
 - WP leaders of outputs relevant for the Specialisation Plan
- Provide analysis of the results
- Matching the analysis with DiSSCo Strategy and objectives (WP9 Master Plan)
- **Deliverable D8.2** Thematic Specialisation Plan (M32): September 2022

All Hands Meeting 2

M5 (2.1) Compilation of needs for skills/competencies

DiSSCo Prepare WP2 T2.1 **Training strategy**



Funded by the Horizon 2020
Framework Programme
of the European Union

AHM 2 Session WP2 – T2.1 Training strategy

April 5th 2022
3 – 4.30 PM CET

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Recommendations:

- > **M5 needs compilation is** an indication for **prioritization**
- > strategy should not focus on exhaustive list of training but mechanisms to identify training needs on an ongoing basis
- > Tool/database trainers / training providers
- > Leveraging on **8.1 Specialisation passport**
- > Linkages to **DEST**

ALL HANDS MEETING – AHM2

T2.2. Helpdesk

8 April 2022

Judite Alves – MUHNAC/ULisboa

DiSSCo Prepare WP2. T2.2 Leader



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WP2. Human resources, Training & Users Support



T2.2. Helpdesk and User Support Services

Specific objective:

Design a DiSSCo Helpdesk that will provide a personalised support service on the use of the infrastructure.



DiSSCo Helpdesk will constitute a **single point of contact**, providing the necessary **information and support on the use of the infrastructure**, its services and facilities, both to data providers and users.

T2.2. Helpdesk and User Support Services

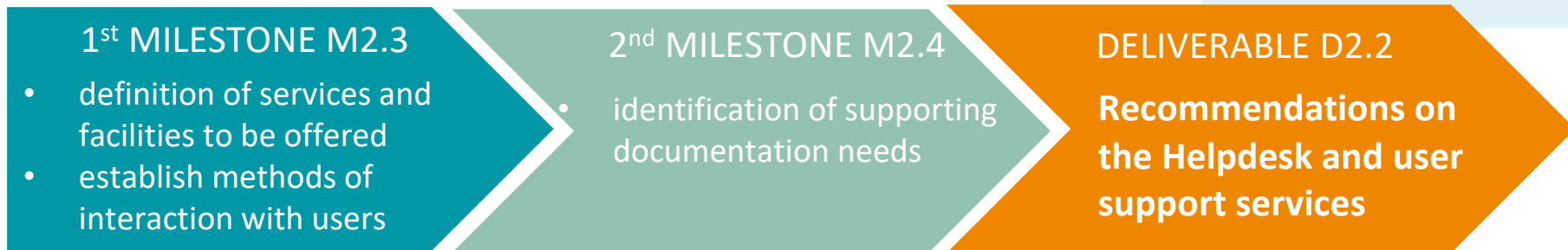


T2.2. Helpdesk and User Support Services



Partners: ULISBOA-MUHNAC (leader)
CETAF, UniFi, MfN

Milestones & Deliverable:



T2.2. Helpdesk and User Support Services

AHM2 Session Objectives:

- Provide an opportunity to discuss DPP Milestone 2.3. on services and facilities to be offered by the Helpdesk
- Share an update on work progress of the task team on M2.4 on supporting documentation needs
- collect feedback about needs, users and features of supporting documentation.
- Discuss articulation with ELViS helpdesk (Synthesys+),
- Discuss integration of the HD with the knowledge-base

T2.2. Helpdesk and User Support Services

AHM2 Session Agenda:

1h30	Topic	Lead/ Facilitator
10.45-10.50	Welcome & brief presentation of the aims of the meeting	MJA (MUHNAC-UlIsboa)
10.50-11.00	Presentation: Milestone 2.3 <ul style="list-style-type: none"> Overview of services and facilities to be offered by the Helpdesk 	MJA (MUHNAC-UlIsboa)
11.00-11.15	Presentation: ELVIS Helpdesk (SYNTHESYS+ T2.4 'Run helpdesk for online support' <ul style="list-style-type: none"> Q&A 	Laura Tilley (CETAF)
11.15-11.25		
11.25-11.35	Presentation: Milestone 2.4 <ul style="list-style-type: none"> Compilation of supporting documentation: preliminary results 	MJA (MUHNAC-UlIsboa)
11.35-11.55	Collect feedback on documentation needs	all
11.55-12.05	Helpdesk documentation and the Knowledge-base	Sabine von Mering & Julia Reis (MfN)
12.05-12.15	Wrap-up. Next steps towards a proposal of recommendations for a Helpdesk for DISSCO	MJA (MUHNAC-UlIsboa)



M2.3. Overview of services and facilities to be offered by the Helpdesk

Judite Alves – MUHNAC/ULisboa

DiSSCo Prepare *WP2. T2.2 Leader*



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MILESTONE M2.3: Overview of services and facilities to be offered by DiSSCo's helpdesk

Methodology:

- ❖ building on the top of **SYNTHEsys+ project**, namely the HD of **ELViS** – The European Loans and Visits System
- ❖ **Landscape analysis:**
 - CORBEL
 - DARIAH-EU
 - CLARIN
 - Lifewatch





MILESTONE M2.3: Overview of services and facilities to be offered by DiSSCo's helpdesk

❖ Landscape analysis:

Support National helpdesks

Many national **CLARIN** consortia have a helpdesk in place:

- Czech Republic: [LINDAT/CLARIN helpdesk](#)
- Denmark: [CLARIN-DK helpdesk](#)
- Finland: [FIN-CLARIN helpdesk](#)
- Germany: [CLARIN-D helpdesk](#)
- Italy: [CLARIN-IT helpdesk](#)
- The Netherlands: [CLARIN-NL helpdesk](#)
- Poland: [CLARIN-PL helpdesk](#)
- Portugal: [PORTULAN helpdesk](#)
- Slovenia: [CLARIN.SI helpdesk](#)

Technical support

In case of technical support questions about central infrastructure components

Topic

Centre Registry



INNOVATION HELPDESK

- Guidelines
- Templates
- Links
- Contact
- FAQ



MILESTONE M2.3: Overview of services and facilities to be offered by DiSSCo's helpdesk

Four complementary services:

- ❖ Frequently Asked Questions (FAQs)
- ❖ Human Intermediated Question and Answer Service (HIQAS)
- ❖ Catalogue of Services (CS)
- ❖ How-to guides and other support documentation





MILESTONE M2.3: Overview of services and facilities to be offered by DiSSCo's helpdesk

❖ Frequently Asked Questions (FAQs)

- organized hierarchically -- hierarchy scheme based on users' functional demands (DPP D1.1 and D1.2 Report on Life / Earth sciences use cases and user stories -- 35 functional demands, placed into 11 categories and 24 subcategories)
- knowledge-based tool to search among questions
- constantly revised according to the users' frequent requests -- fed by HIQAS



MILESTONE M2.3: Overview of services and facilities to be offered by DiSSCo's helpdesk

❖ Human Intermediated Question and Answer Service (HIQAS)

- manage a large number of questions from end-users;
- manage a large number of experts' interactions answering questions submitted by users;
- offer an easy to use interface for everybody (end-users and experts);
- be easily customizable / extendable by administrators; and
- be cost and time efficient.



MILESTONE M2.3: Overview of services and facilities to be offered by DiSSCo's helpdesk

❖ Human Intermediated Question and Answer Service (HIQAS)

(cont.)

- include a **knowledge base** containing solutions to common problems
- support request via **multichannels** like webchat, email, and social media messaging
- **ticket system**
- **real-time monitoring** of the support process (key operational metrics)



MILESTONE M2.3: Overview of services and facilities to be offered by DiSSCo's helpdesk

❖ Human Intermediated Question and Answer Service (HIQAS)

(cont.)

Jitbit is the system selected for the ELViS helpdesk

(due to the completeness of its functionality, which matched almost all of the demands and requirements, it has a user friendly and intuitive interface with possibilities for interoperability with other systems.)



MILESTONE M2.3: Overview of services and facilities to be offered by DiSSCo's helpdesk

❖ Catalogue of Services (CS)

list the main services provided by DiSSCo at a glance, with the aim to facilitate the utilization of RI services by the community.

(https://www.dissco.eu/wp-content/uploads/DiSSCo_community_e-services.pdf; additional new services are expected to arise)

MILESTONE M2.3: Overview of services and facilities to be offered by DiSSCo's helpdesk

❖ Supporting documentation

For each service listed in the Catalogue of Services, supporting documentation should be made available, which will guide the user on how to apply and use the service.



2nd MILESTONE M2.4
**identification of supporting
documentation needs**



MILESTONE M2.3: Overview of services and facilities to be offered by DiSSCo's helpdesk

HELPDESK FEATURES

- SCALABILITY/FLEXIBILITY
- MULTILINGUALITY
- INCLUSIVENESS

(recommendations of the Web Accessibility Initiative (WAI) “Strategies, standards, resources to make the Web accessible to people with disabilities”, <https://www.w3.org/WAI/>)

- AUTHORISATION AND AUTHENTICATION
- compliance with GDPR

ELViS Helpdesk (SYNTHESYS+ T2.4 'Run helpdesk for online support')

Laura Tilley – CETAF

SYNTHESYS+ T2.4



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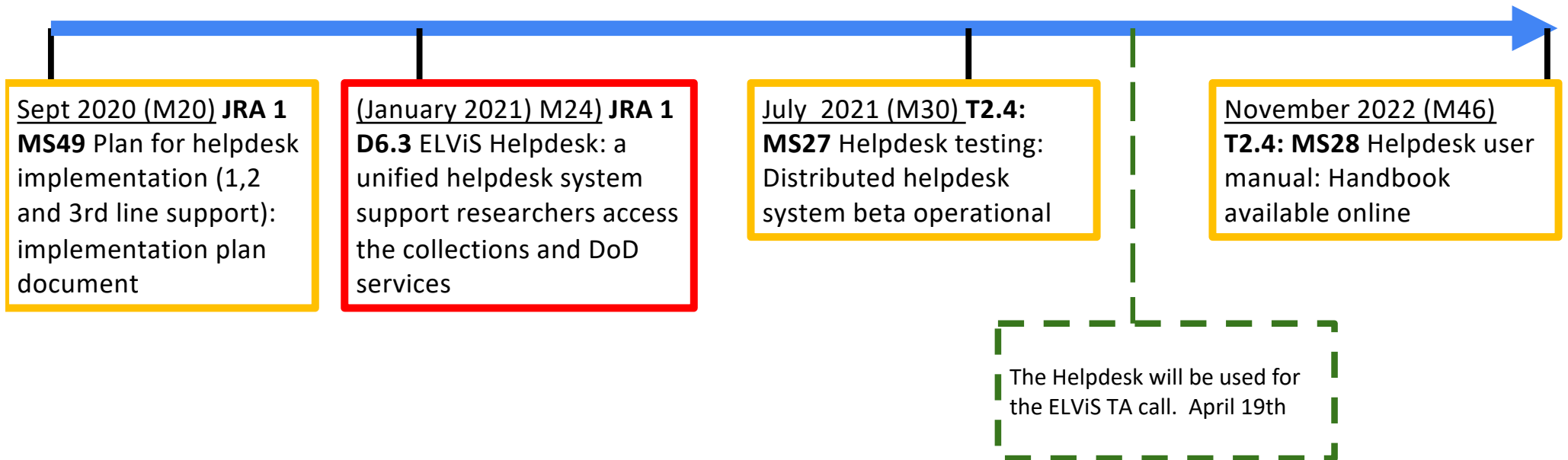
T2.4 Run helpdesk for online support

Partners: CETAF, NHM, Naturalis, MNHN, RMCA, RBINS

Scope from grant

- A distributed system of contact points will be established to provide help with the use ELViS.
- Develop performance indicators (response times, quality controls of response).
- Test the Helpdesk System
- Develop a Helpdesk manual
- Investigate feasibility of multi-lingual support.

Working in close collaboration with SYNTHESYS+ JRA 1 'Optimisation of Access' - in charge of the development of ELViS (coordinators: Naturalis, and Picturae)



Task T2.4 has no deliverables only 2 milestones

Summary of work done so far:

- Identified the helpdesk feature requirements - JRA1 MS49 'Plan for Helpdesk Implementation. **November 2020 - January 2021**
- Evaluation and short list of commercial Helpdesk Systems based on the Must have requirements. **November - January 2021**
- Trial test the chosen commercial Helpdesk (Jitbit) **January - March 2021**
- Helpdesk system bought. **May 2021**
- First draft of the helpdesk manual for Agents. **July 2021**
- Defined the workflow and rules for prioritising tickets July - **August 2021**
- MS27 Helpdesk testing. **August 2021**
- Provided some basic training for technician's operating the helpdesk ready for SYNTHESYS+ TA calls. **March 2022**

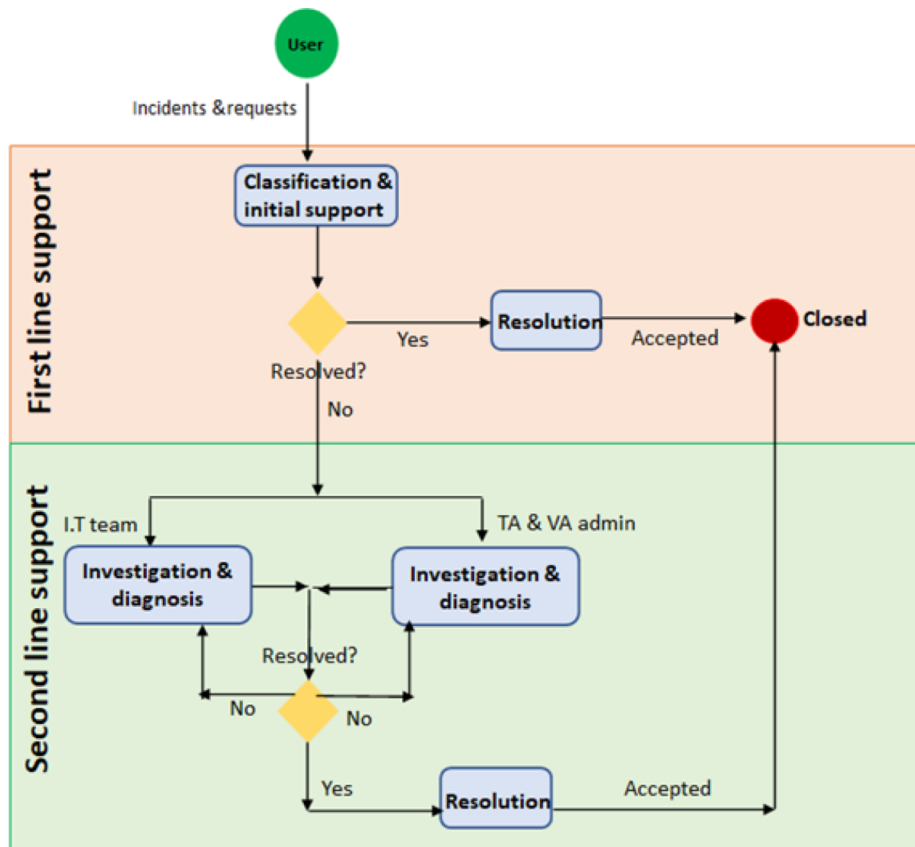
The prioritisation of considered helpdesk system requirements

Must haves	Should haves	Could haves
Ticketing System	Customisable	Group email distribution
Multi-lingual	Scalable (i.e can be expanded to include other services).	reporting features, dashboard, analysis tools
Trustworthy	Data migration	Split and merge tickets
API integration	AAI Support	
Connect with Github	Form design	
Security	Canned replies	
Good user experience	Resource management tools, tick response times, overview of ticket types.	
File sharing	Collaboration tools	
Storage space		
Alerts and notifications		
Automated workflows		
Email import		

Scope of Helpdesk support

The Helpdesk <u>WILL</u> :	The Helpdesk <u>WILL NOT</u> provide:
Provide guidance for users on how to provide data to ELViS	Collection/specimen, institutional specific information. Like visit logistics, digitisation of certain specimens, access to certain specimens.
Provide guidance on data standards used in ELViS	The processing of access requests specific institutions.
Provide guidance and resolve general difficulties/complaints with using ELViS.	Specific issues/complaints that occurred within an institute.
Complaints about the VATA application process, and application rejections.	
Technical issues with the System.	
Provide information about TA and VA call processes.	
Feedback on new additions and improvements to ELViS.	
Assigning ELViS/access roles definitions of roles. Possible guidance on what the different roles are and how to assign them. b	

Helpdesk Workflow



Documents for details [MS28: Helpdesk Testing](#) and [Draft Manual](#)

Roles of task T2.4 partners within the ELViS helpdesk and the types of queries each supportline will resolve

Ticket Categories	People (technicians)
1st line support	
General issues/queries Common I.T Issues Data standards Policy and Data management Best practices General information about TA and VA Feedback about ELViS	*Laura Tilley (CETAF), *Wouter Addink (Naturalis), *Sharif Islam (Naturalis), Pierre - Yves Gagnier (MNHN), Larissa Smirnova (RMCA), Franck Theeten (RMCA), Patricia Mergen (RMCA), Patrick Semal (RBINS).
Technical 2nd line support	
Technical software issues Feature requests	Technical team at Picturae
TA & VA 2nd line support	
Transnational Access Admin Deals with specific issues around TA applications.	Kristina Gorman (NHM), Scott Wilson (NHM)
Transnational Access Admin Deals with Specific Issues around VA.	Kristina Gorman (NHM), Scott Wilson (NHM)

Dissco Helpdesk ([hosted by Jitbit](https://dissco.jitbit.com/helpdesk)): <https://dissco.jitbit.com/helpdesk>

The screenshot displays the DiSSCo Helpdesk interface. At the top, there's a navigation bar with 'SYNTHESIS+ DiSSCo Helpdesk' and a user profile for 'Laura Tilley'. Below this, there are tabs for 'Tickets', 'Knowledge base', 'Assets', 'Reports', and 'Administration'. A 'New ticket' button and a search bar are also present. The main area shows a list of tickets with columns for SUBJECT, PRIORITY, STATUS, DATE, DUE, TECH, and UPDATED. Three tickets are visible:

SUBJECT	PRIORITY	STATUS	DATE	DUE	TECH	UPDATED
Testing prioritisation rule-do not reply. Laura Tilley Cetaf Issue/query	Normal	Assigned	13/07/2021 16:15		Laura Tilley	13/07/2021 16:15
Laura impersonating Pierrer to test ticket automated rule Pierre-Yves Gagnier Mnhn Issue/query	Normal	Assigned	12/07/2021 17:50	15/07/2021 17:50	Laura Tilley	13/07/2021 15:46 (Gagnier)
Testing automated notification sent to agents Laura Tilley Cetaf VA & TA Second-line support - Transnational Access Admin	Normal	Assigned	12/07/2021 15:36	15/07/2021 15:36	Laura Tilley	13/07/2021 12:02

The detailed view for ticket #39007238 shows it is 'Assigned' with a 'Normal' priority. The category is 'Issue/query', and it was submitted via 'WebApp'. The assigned technician is 'Laura Tilley'. The date is '13/07/2021 16:15' and the due date is '13/07/2021 16:15'. The time spent is '03:05:54'. The start date is '13/07/2021 16:15' and the close date is '13/07/2021 16:15'. The ticket is not recurring. The subject is 'Testing prioritisation rule-do not reply. Just a test please do not reply.' The interface also shows a 'Reply...' field and a list of recent activity, including a message from Laura Tilley stating 'The ticket has been taken by Laura Tilley' and 'The ticket has been assigned to technician: Laura Tilley'.

List of Features

- Ticketing System
- Multilingual
- API integration
- Connect with Github
- Security (Login)
- File Sharing
- Alerts and Notifications
- Automated rules
- Ticket Prioritisation
- Dashboard for helpdesk usage reporting
- Collaborative tools
- Customisation
- Scalability
- Role allocation
- Split and Merge Tickets

Allows for different technician departments.

Roles in the helpdesk

Administrator: The administrators have access to all the functionalities of the Jitbit helpdesk. More specifically, they can add and remove people from the helpdesk, set up action triggers/rules, they can see all tickets and view all technicians profiles and allocated ticket status, create reports, change user passwords.

Technician: Can answer and close incoming tickets, view reports, etc. Also, receives email-notifications about new tickets in their categories.

Regular user: Can submit new tickets and leave replies to their tickets.

Partners and their current roles

Admins: Laura Tilley, Wouter Addink, CETAF GS, Sharif Islam, Wim Vandongen

Technicians: Franck Theeten, Pierre Yves Gagnier, Krissie Gorman, Larissa Smirnov, Patrick Semal, Patricia Mergen.

ELViS Helpdesk Manual

Updated (23.03.2022)

Authors: Laura Tilley (CETAF), Larissa Smirnova (RMCA), Pierre Yves- Gagnier (MNHN), Franck Theeten (RMCA), [add other peoples names](#).

The ELViS helpdesk system/software is made by [Jitbit](#)

What is the helpdesk manual?

- Audience, mostly for the help desk technicians, but also ELViS users.
- Information about the different person roles in the helpdesk.
- Provide information on the help desk workflows and lines of support.
- This is a living document and will be reviewed at least on a monthly basis.
- Explains the features/functionalities of the helpdesk.
- Guidance on how to solve user issues.
- Explain a code of conduct, rules.
- Links to external resources and their allocation.

Manual:

https://docs.google.com/document/d/1k5-mjLU5NdcxWqd87P2Jzv_HWqGqNjhrQtGYOMc-8WU/edit?usp=sharing

Challenges

T2.4 Partners will only work on the helpdesk till the end of SYNTHESYS+. We need to have a future Sustainable Business Plan for Staff (Expertise for the different levels of support).

How the helpdesk will link to the Knowledge base.

Future Work

- Finalise the Helpdesk Manual (add content on how to solve certain issues and queries).
- Plan of how the Knowledge base can be linked to the Helpdesk.

Documents:

Helpdesk Manual: https://docs.google.com/document/d/1k5-mjLU5NdcxWqd87P2Jzv_HWgGqNjhrQtGYOMc-8WU/edit?usp=sharing

Milestone 27 report: Final deadline end of July <https://docs.google.com/document/d/1XhOERcoAHC-X73UMCWAwcWp8dGgx3heJ/edit>

D6.3 Helpdesk implementation <https://docs.google.com/document/d/1piyEzCMLjqV5ZFdBzWXtFOYtGIPafSS8hQEiKOArHk/edit>

M2.4. identification of supporting documentation needs

Judite Alves – MUHNAC/ULisboa

DiSSCo Prepare *WP2. T2.2 Leader*



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U LISBOA

UNIVERSIDADE
DE LISBOA

MUSEU NACIONAL DE HISTÓRIA
NATURAL E DA CIÊNCIA

Methodology:

- ❖ Questionnaire to compile the documentation needs that each WPs/Tasks leaders and e-services' developers could foresee.

14 answers



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	SERVICE	
Task 1.3	PRIORITIZATION OF DIGITIZATION TOOL	
henghoff@snm.ku.dk	STATUS	under development
	TYPE OF RESOURCE	Manual
	TITLE	Guidelines for prioritization of digitization
	USERS	Research (academic, non-academic, including Citizen Science), Collection management, Policy (institutional, national & international)
Task 2.1	E-LEARNING PLATFORM	
mariano.iossa@cetaf.org	STATUS	planned
	TYPE OF RESOURCE	Online how-to guide. Video Tutorial
	TITLE	How to use the e learning platform (both for users and trainers)
	USERS	Research (academic, non-academic, including Citizen Science), Collection management, Education (academic & non-academic)
SYNTHESYS+	ELVIS	
laura.tilley@cetaf.org	STATUS	
	TYPE OF RESOURCE	Manual
	TITLE	ELViS user manual
	USERS	Technical support (IT & IM)
Task 2.2	HELPDESK (includes ELViS HD)	
laura.tilley@cetaf.org	STATUS	under development
mjalves@museus.ulisboa.pt	TYPE OF RESOURCE	Manual
	TITLE	Helpdesk user manual
	USERS	Technical support (IT & IM)
Task 3.2	DIGITIZATION BPs	
lisa.french@nhm.ac.uk	RESOURCE PLANNED (YES/NO/NOT KNOW)	under development
	TYPE OF RESOURCE	website: https://dissco.github.io/
	TITLE	Digitisation guides
	USERS	Collection management, Technical support (IT & IM)

	SERVICE	
Task 3.1	DIGITAL MATURITY SELF-ASSESSMENT TOOL	
H.Hardy@nhm.ac.uk		STATUS not needed
		TYPE OF RESOURCE
		TITLE
		USERS
Task 4.1	COST CALCULATION	
michel.guiraud@mnhn.fr		STATUS under evaluation whether it is necessary
		TYPE OF RESOURCE Manual
		TITLE Cost calculation methodology
		USERS Policy (institutional, national & international), Industry
Task 4.4	PRE-COMMERCIAL PROCUREMENTS AND OTHER FINANCIAL ASPECTS	
Patricia.Mergen@plantentuinmeise.be		STATUS not yet developed
		TYPE OF RESOURCE Multiple
		TITLE Support for Procurements
		USERS Policy (institutional, national & international), Industry
Task 5.1	KNOWLEDGE-BASE	
mareike.petersen@mfn.berlin		STATUS under development
		TYPE OF RESOURCE Video Tutorials
		TITLE Knowlegde-base
		USERS Research (academic, non-academic, including Citizen Science), Collection management, Technical support (IT & IM), Policy (institutional, national & international)
Task 7.3	POLICY SELF-ASSESSMENT TOOL	
lisa.french@nhm.ac.uk		STATUS not sure if it will necessary. Will be evaluated during users' testing
		TYPE OF RESOURCE Manual
		TITLE DiSSCo Policy Tool Manual
		USERS Research (academic, non-academic, including Citizen Science), Collection management, Policy (institutional, national & international)
SYNTHESYS+	SPECIMEN DATA REFINERY	
l.livermore@nhm.ac.uk		STATUS not yet developed
		TYPE OF RESOURCE documentation for developers (and training for users)
		TITLE
		USERS Research (academic, non-academic, including Citizen Science), Collection management, Technical support (IT & IM)

https://www.dissco.eu/wp-content/uploads/DiSSCo_community_e-services.pdf;

European Loans and Visits System – ELViS

Collection Digitisation Dashboard – CDD

Specimen Data Refinery – SDR

Knowledge Base – KB

Authorisation and Authentication Infrastructure – AAI

Unified Curation and Annotation System – UCAS

Digital Specimen Repository



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Prioritization of Digitization Tool

Digitization Best Practices

Digital maturity self-assessment tool

e-learning

Pre-commercial procurements and other financial aspects

Specialization Tool

Cost calculation Tool

Policies compliance self-assessment Tool



Your feedback on the relevance of providing supporting documentation for the several DiSSCo services:

https://docs.google.com/forms/d/e/1FAIpQLSe3OGxEYoWEexwyGNp-4vz3sQFEhlc6hk_0PYJIXI5YX6p3uQ/viewform?usp=pp_url

20 minutes !



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ALL HANDS MEETING – AHM2 T2.2. Helpdesk

Integration between the Helpdesk and the DiSSCo Knowledgebase

Sabine von Mering & Julia Pim Reis

DiSSCo Prepare

Museum für Naturkunde Berlin (MfN)



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DiSSCo Knowledgebase



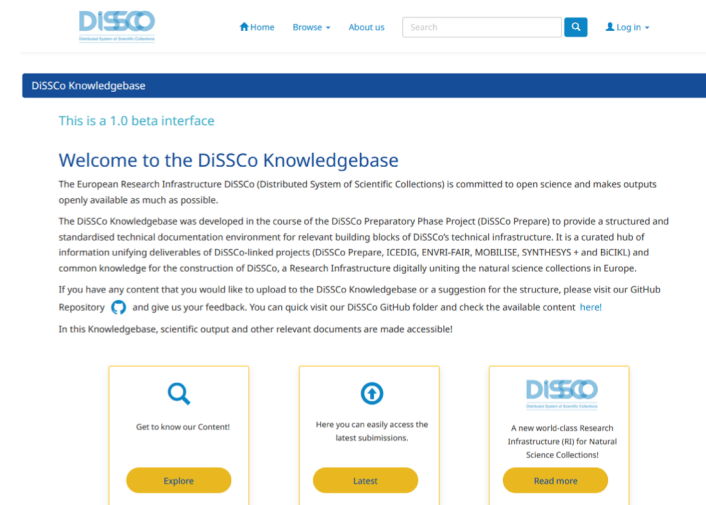
developed within Task 5.1 (concluded in Jan. 2022)

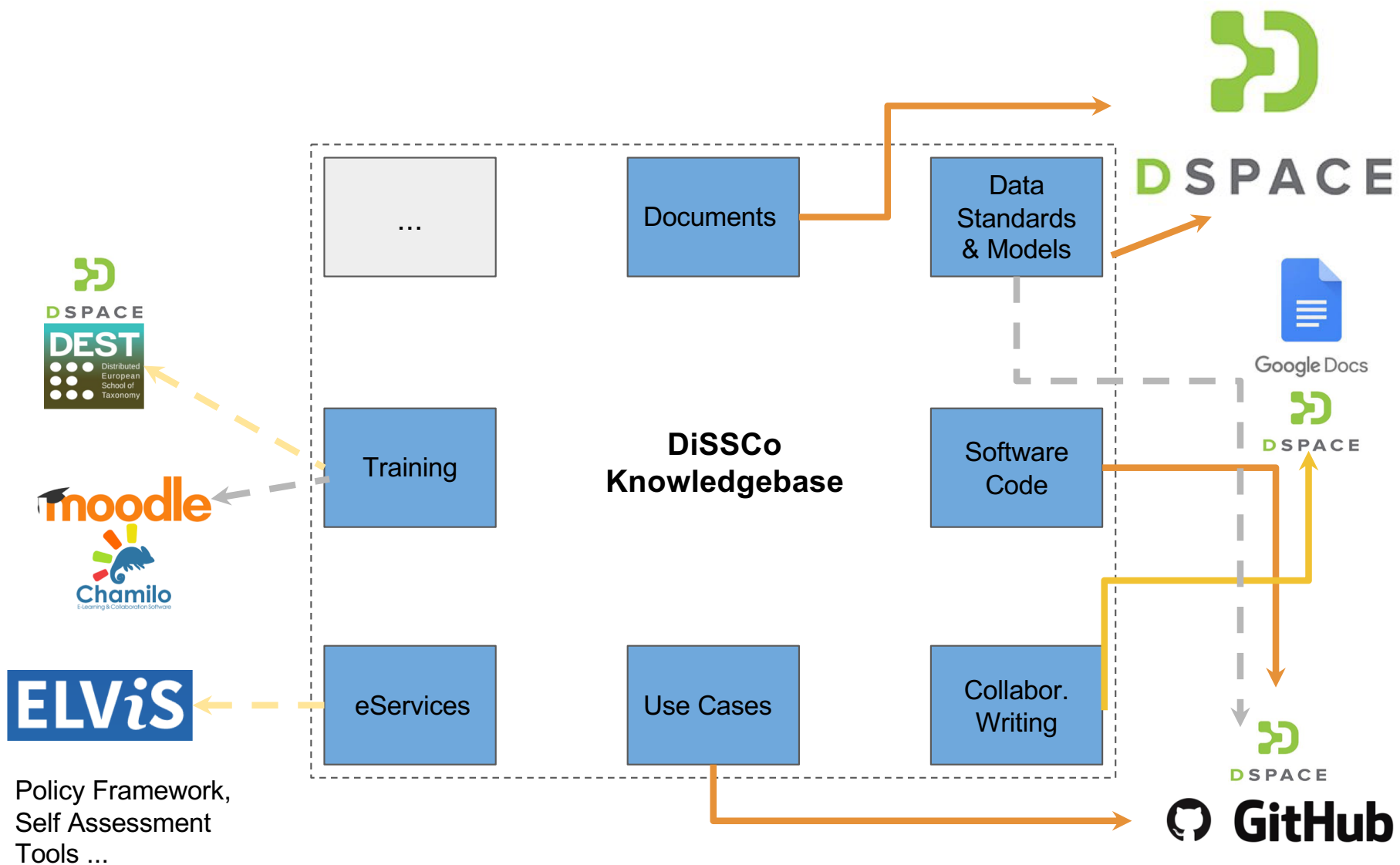
DiSSCo Knowledgebase pilot implementation

<https://know.dissco.eu/>

- a central and freely accessible hub for knowledge management
- provide unified access to outputs, technical documentation, etc.
- allow efficient knowledge and technology transfer for information relevant within the DiSSCo context

(see D5.1 <https://doi.org/10.34960/myr2-vm35>)

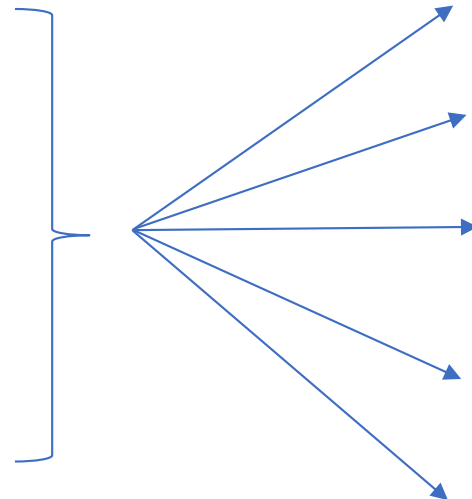




DiSSCo Knowledgebase



Central hub
Free and open
access
Trusted source



Technical documentations

Information about standards
and identifier

Glossary and FAQs

Publications and reports

Guidelines, best practices,
policies, training materials,
etc.

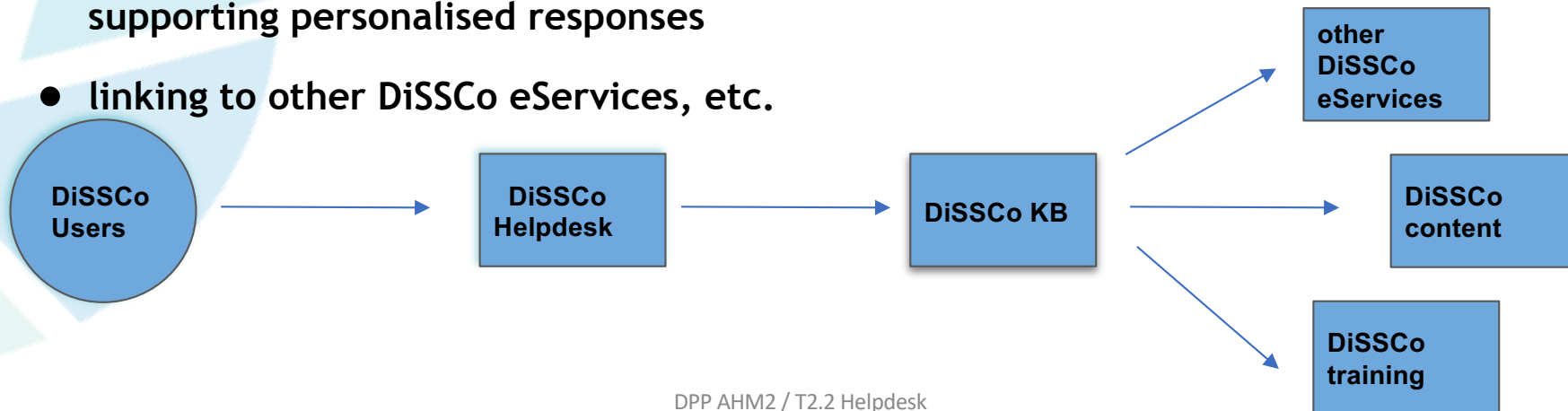
DiSSCo Knowledgebase & Helpdesk



Potential for linkage & integration

In response to users contacting the Helpdesk, the KB can provide:

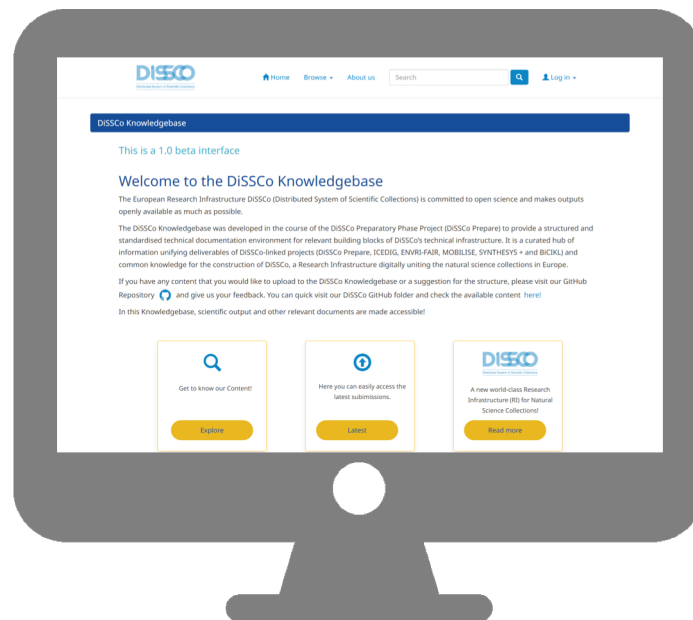
- links to new and/or relevant content in the KB
- automatically generated search results from the KB based on incoming questions, supporting personalised responses
- linking to other DiSSCo eServices, etc.



DiSSCo Knowledgebase & Helpdesk



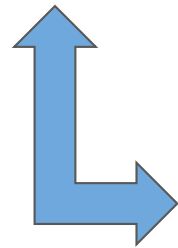
Demo



DPP AHM2 / T2.2 Helpdesk

Further possible scenarios

Jitbit Helpdesk REST API



DiSSCo KB (DSpace Open Source)



Any questions or ideas?

Thank you!

DiSSCo Knowledgebase: <https://know.dissco.eu/>



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DPP AHM2

T2.1 Helpdesk session

When: Friday 8th April 2022

09:45-11:15 WET / 10:45-12:15 CET / 11:45 -13:15 EET

Location: Online (Zoom): [Link to access sessions and plenaries](#)

Organizer: M. Judite Alves (MUHNAC-ULisboa)

Objectives:

The services and facilities to be offered by the Helpdesk were compiled in DPP Milestone 2.3. This session will provide an opportunity for Q&A, discussions and input from the broader community on this output.

The next phase is to compile the supporting documentation needs – Milestone 2.4. We will share an update on the work progress, and collect feedback from the DISSCO community about needs, users and features of supporting documentation.

Articulation with ELViS helpdesk (Synthesys+), and with the knowledge-base will be discussed.

Reference Documents:

DiSSCo Prepare WP 2 – MS2.3. Compilation of services and facilities to be included in the helpdesk. (<https://drive.google.com/file/d/18v6TGOPDpjkcuZMOuTJOG6HBge-XKFLz/view?usp=sharing>)

Links to the Presentations

<https://docs.google.com/presentation/d/1Blcl6z3wvMfv5StvdJ90ejsWZXM5jsdr/edit?usp=sharing&oid=117929502754178751300&rtpof=true&sd=true>

SYNTHESYS+ helpdesk presentation (Laura Tilley):

https://docs.google.com/presentation/d/16sx-SjaF15SHGMTKOYK_DpZzWbFsOK2q/edit#slide=id.p1

Integration between the Helpdesk and the DiSSCo Knowledgebase (Sabine von Mering & Julia Pim Reis):

https://docs.google.com/presentation/d/1hMFEBEx8K6XxKMD48fzF9c8ZPAkKZO_s/edit#slide=id.p1

Agenda

1h30	Topic	Lead/ Facilitator
5 mns	Welcome & brief presentation of the aims of the meeting	MJA (MUHNAC-ULisboa)
10 mns	Presentation: Milestone 2.3 <ul style="list-style-type: none">• Overview of services and facilities to be offered by the Helpdesk	MJA (MUHNAC-ULisboa)
15 mns	Presentation: ELVIS Helpdesk (SYNTHESYS+ T2.4 'Run helpdesk for online support')	Laura Tilley (CETAF)
10 mns	<ul style="list-style-type: none">• Q&A	
10 mns	Presentation: Milestone 2.4 <ul style="list-style-type: none">• Compilation of supporting documentation: preliminary results	MJA (MUHNAC-ULisboa)
20 mns	Collect feedback on documentation needs https://docs.google.com/forms/d/e/1FAIpQLSe3OGxEYoWEexwyGNp-4vz3sQFEhlc6hk_0PYJIXI5YX6p3uQ/viewform?usp=pp_url	all
10 mns	Helpdesk documentation and the Knowledge-base	Sabine von Mering & Julia Reis (MfN)
10 mns	Wrap-up.	MJA

	Next steps towards a proposal of recommendations for a Helpdesk for DISSCO	(MUHNAC-ULisboa)
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Attendees (32) -

1. Michel Guiraud (MNHN)
2. Eva Alonso (Naturalis, CSO)
3. Gianna Innocenti (NHM, UNIFI - Italy)
4. Patricia Mergen (MeiseBG)
5. Marko Lovric (CETAF)
6. Mariano Iossa (CETAF)
7. Henrik Enghoff (UCPH, WP1 leader)
8. Paul Braun (MnhnL)
9. Celia Santos (MNCN-CSIC)
10. Emily Veltjen (INBO)
11. Katharine Worley (MNHN)
12. Stefaan Pijls (MeiseBG)
13. Wouter Addink (DiSSCo, CSO)
14. Tim Claerhout (UGent)
15. Sabine von Mering (MfN Berlin)
16. Ann Van Baelen (KU Leuven)
17. Rui Figueira (ULisboa)
18. Lorenzo Cecchi (NHM, UNIFI - Italy)
19. Marta Biaggini (NHM, UNIFI - Italy)
20. Julia Pim Reus (MfN Berlin)
21. Laura Tilley (CETAF)
22. Carole Paleco (RBINS)
23. Pierre-Yves Gagnier (MNHN Paris)
24. Jose Alonso (DiSSCo CSO, Naturalis)
25. Pedro Arsénio (ULisboa)
26. Tina Loo (Naturalis) - yes
27. Isabel Rey (MNCN-CSIC)
28. Salomé Landel (MNHN)
29. Ana Casino (CETAF)
30. Philip Fischer (NHMW)
31. Judite Alves (ULisboa)
32. Sonia La Felice (CNR-IGG, Italy)

Minutes

1. 5 minutes presentation by Judite Alves, ULisboa (task leader) with brief presentation of the Task and the aims of the session ()
2. 10 minutes presentation by Judite Alves, ULisboa (task leader) with brief presentation of Milestone 2.3 - Overview of services and facilities to be offered by the Helpdesk
3. 15 minutes presentation by Laura Tilley, CETAF (SYNTHEsys+ T2.4 leader) with a presentation on the helpdesk for online support of ELViS.

The link to ELViS helpdesk presently hosted by Jitbit is:

<http://dissco.jitbit.com/helpdesk>

4. 10 minutes of Q&A, to collect input from the audience about the Helpdesk services and features

Jose Alonso in the chat: You can find additional information about DiSSCo services here: <https://www.dissco.eu/services/>

Wouter Addink Q in the chat: Since dissco services are already described in the DiSSCo website, I think this does not need to be duplicated in the helpdesk, maybe just link to that and perhaps improve the structure in the website a little.

Judite Alves A: We should ensure articulation between the HD, the website and the knowledge-base

Wouter Addink Q: ELViS includes a workflow for communication between requesters of access to the collections and the collection providing institutions, therefore any support requests regarding access to the collections should not be done through the helpdesk.

Judite Alves A: Yes, the HD will just provide help to the services. Access to collections is a service that will be provided by ELViS

Judite Alves Q: Laura, since Jitbit allows structuring in different departments, do you think that may be a way of accommodating support to services other than ELViS?

Laura Tilley A: Yes, so users can go directly to the right department.

Stefaan Pijls Q: Do you think there may be an overlap between Training and HD?

Judite Alves A: We can work together. The supporting materials can be elaborated by the training services and made available at the HD.

Mariano Iossa A: We can upload “How To” sessions and provide people with practical videos. We could have a repository of this material.

Judite Alves Q: What kind of channels could people use in the ELViS HD, social media for example?

Laura Tilley A: For the moment, only email, because that would imply a lot of staff - it is presently voluntary based.

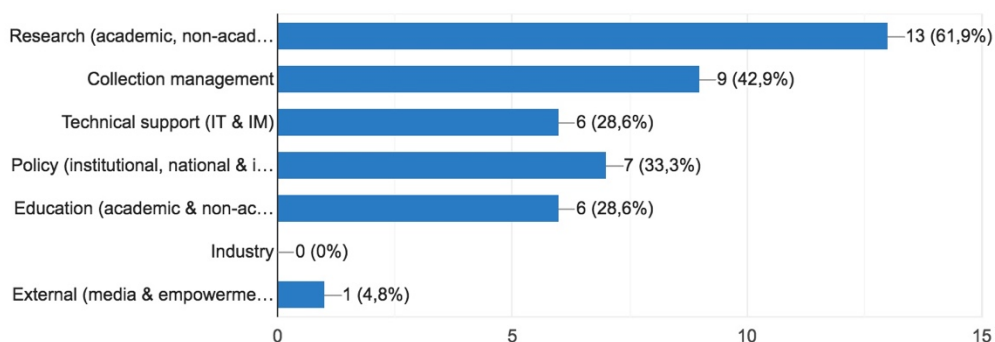
5. 10 minutes presentation by Judite Alves, ULisboa (task leader) with brief introduction to Milestone 2.4, namely on the preliminary results of the survey conducted to collect the documentation needs that each WPs/Tasks leaders and e-services’ developers foresee.

6. administration of a 20 minutes survey to collect feedback from the audience on the relevance of providing supporting documentation for the several DiSSCo services.

https://docs.google.com/forms/d/e/1FAIpQLSe3OGxEYoWEexwyGNp-4vz3sQFEhlc6hk_0PYJIX15YX6p3uQ/viewform?usp=pp_url

Resume of the responses here: <https://drive.google.com/file/d/1LZuRo-7hSijhGX5FrM856uCHNfZiOUY/view?usp=sharing>

We collected 21-22 responses, mainly representing Research and Collection Management -related users, but also users related with Technical Support, Policy and Education.



Audience was asked to score the relevance on providing of supporting documentation (manuals, video tutorials, how-to guides, etc.), in addition to FAQs, for for the main e-services, and also on other contents as digitization best practices, guidelines on

movement of sensitive data across international borders, etc., from 1 (Low relevance) to 5 (High relevance).

The majority of the audience considered highly relevant (score 5) the existence of supporting documentation for most services. The medium scores were:

- Collection Digitisation Dashboard, CDD – 4,18
- European Loans and Visits System, ELViS – 4,82
- Specimen Data Refinery, SDR – 4,64
- Knowledge-base, KB – 3,54
- Unified Curation and Annotation System, UCAS – 4,36
- Open Digital Specimen, ODS – 4,32
- Minimum Information about a Digital Specimen, MIDS – 4,55
- Digital Specimen Repository – 4,23
- Prioritization of Digitization Tool – 3,90
- Digital Maturity Self-Assessment Tool – 3,77
- Policies Compliance Self-Assessment Tool – 3,73
- Digitization Best Practices – 4,14
- E-Learning Platform – 3,73
- Cost Calculation Tool – 4,00
- Pre-Commercial procurements and other financial aspects – 3,19
- Specialization Tool – 3,59
- Compliance and Moderation Service (about movement of sensitive data across international borders) – 4,14
- Authorisation and Authentication Infrastructure, AAI – 3,5

When asked about the importance to have the Helpdesk services in their own national language (if different from English), most respondents considered highly relevant or relevant to have the FAQ service, the Human Intermediated Q&A service and the supporting documentation in their own national language (15, 14 and 13 out of 22, respectively).

Respondents were also asked to identify any further needs or to provide comments:

Comm1: Some (many) users might not be familiar with some of our day-by-day concepts (Digital Objects, FAIR, etc.)

Comm2: Having good user guides and video tutorials is helpful, but having human contacts in a helpdesks remains essential.

Comm3: Perhaps diagrams explaining the DiSSCo service landscape - how are they all connected or how do they differ? There could even be an interactive "journey", i.e. a user chooses a profile and then answers a series of questions to be directed to the information and/or service that is most relevant for them.

Comm4: Helpdesk on main DiSSCo RI Governance model documentation and structure

Comm5: Clear guidance on the purposes of each of these services offered. To guide a user who wants to do "thing x" is guided to the right service needed and is not lost (list of common use cases and what tool to use).

Comm6: Regarding multilingual support, there's a balance that needs to be struck between providing enough information in one's native language so one knows where to go to get the help they're looking for, and having to provide all helpdesk support (documentation, videos, etc.) in the 24 different languages of the European Union. Perhaps just landing pages in the 24 different languages is sufficient to enable someone to know where to go to get their specific help. But multilingual HIQAS could supplement that.

Comm7: I would prioritize/choose to make extra documentation on the size of the user group, the amount of usage and the user-friendliness of the applications. Some applications are self-explanatory enough (e.g. Specialization tool - but here you might need some documentation for the national nodes in terms of management). Some applications will be used only for limited purposes (like the collection dashboard). Some applications only by financial managers, ... etc. So these have a lower priority. I would also be careful not to make too much documentation and perhaps work with demand-based; if you see there is a need for more documentation, provide it.

7. 10 minutes presentation by Sabine von Mering & Julia Reis, MfN (DPP Task 5.1) on the integration between the Helpdesk and the DiSSCo Knowledgebase

The KB is in a central hub, with free and open access, and there are several issues useful to the HelpDesk platform: a glossary and FAQs, standards, identifiers, publications, reports, guidelines, best practices, policies, training materials, etc.

Information of the knowledge base can be found here:

<https://doi.org/10.34960/myr2-vm35>

<https://know.dissco.eu/>

A Demo of KB was given by Julia Pim Reis.

KB as hierarchical directories. Subdirectory HelpDesk inside Documentation / FAQ

It is possible to use the software API to feed the FAQ.

8. 5 minutes of Q&A to collect final comments

Sabine von Mering in the chat: *We are really depending on the communities input - please share content to be added to the KB.*

Judite Alves Q: *If I need to do a search should I go directly to knowledgebase?*

Julia Reis A: *Yes, for the moment.*

Ana Casino Q: *the knowledge base is dependent on the feedback, how do we ensure that we have a retrieval from the doi or from any publication platform? manually made?*

Sabine von Mering A: *we are adding the doi and it is public, we add manually. It would be really good to have a workflow about this issue. Julia is preparing video tutorials and we are trying to include all the information from DiSSCo related projects and also from old ones.*

Julia Pim Reis in the chat: *please, if you have Content available for the KB, use this issue template to let us know :-)*
<https://github.com/DiSSCo/kb/issues/27>

Sabine von Mering in the chat: *The DOI workflow can and should be linked to DataCite where we generate the DOIs and add metadata.*

9. Wrap-up, Judite Alves

The survey made evident that supporting documentation will be very relevant to meet users' support needs.

The survey also evidenced that the question of multilinguality should be taken into consideration to ensure inclusiveness and promote equal opportunities among users.

In the Session on the Training Strategy, it has been referred the relevance of providing Glossaries – the HD is the right place to provide such.

Articulation with the Training Service should be promoted for the provision of Tutorials and How-to Guides.



All Hands Meeting 2

The Construction Master Plan

April 8th 2022

**DiSSCo Prepare WP9
T9.4**



Funded by the Horizon 2020
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STATUS

- 32 DPP deliverables in total: about $\frac{1}{3}$ already submitted; about $\frac{1}{3}$ due between now and Jan 2023; and the final $\frac{1}{3}$ due in Jan 2023
- the structure of the MP framework will be tested using already submitted deliverables (11) to map the contents

CONTENTS AND METHODS

- From this evaluation, a **simple online survey form for WP leaders** will be developed to be sent two weeks after this AHM (~25 April)
- It will help us to better **understand critical aspects** of the deliverables relevant to the MasterPlan
- Also, it will allow the immediate **identification of the text we need to pay attention to** and to collate each single contribution in a single place

Goals of the CMP Survey

WP Leader Think Tank

Please identify:

- Outcomes **not effective** for the CMP
- Outcomes with just an **informative** meanings (to be included in the DiSSCo Knowledgebase)
- **Recommendations** you consider to be actionable as of 1 feb 2023
- **Recommendations** needing further work as of 1 feb 2023

CMP Survey Questions

- **CMP Survey** (*raw descriptive answers - but in final update refinements will be required*)

AGENDA

- provisionally **continue to update the MP** with any milestones that are received in the interim.
- **meeting with individual WP Leaders at least once, and possibly again collectively as a group in December 2022 or January 2023** to receive comments on the draft MP.

BRAINSTORMING

- Will the recommendations made in the deliverable bring DiSSCo to operational readiness? If not, **what are the gaps?** What else is required?
- **Have outputs from DiSSCo-linked projects and other community concerns been taken into account in deliberations and analyses?** If so, what has been already included, and/or what else needs to be included?
- Are these reasonable questions that you will be able to answer?

Any contribution is welcome - THE DISCUSSION ... IS OPEN!

QUESTIONS

Which among the different contributions provided within WP could be “directly” transferred to the masterplan?

Which ones should be merely mentioned as part of the improving knowledge base platform (differentiate actionable vs. informational outcomes)?

How much from the other projects should be included?

Which of the outcomes will be already definitive BEFORE the scheduled publication of the masterplan? This will affect their “position” within the document.

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