



Distributed System of Scientific Collections

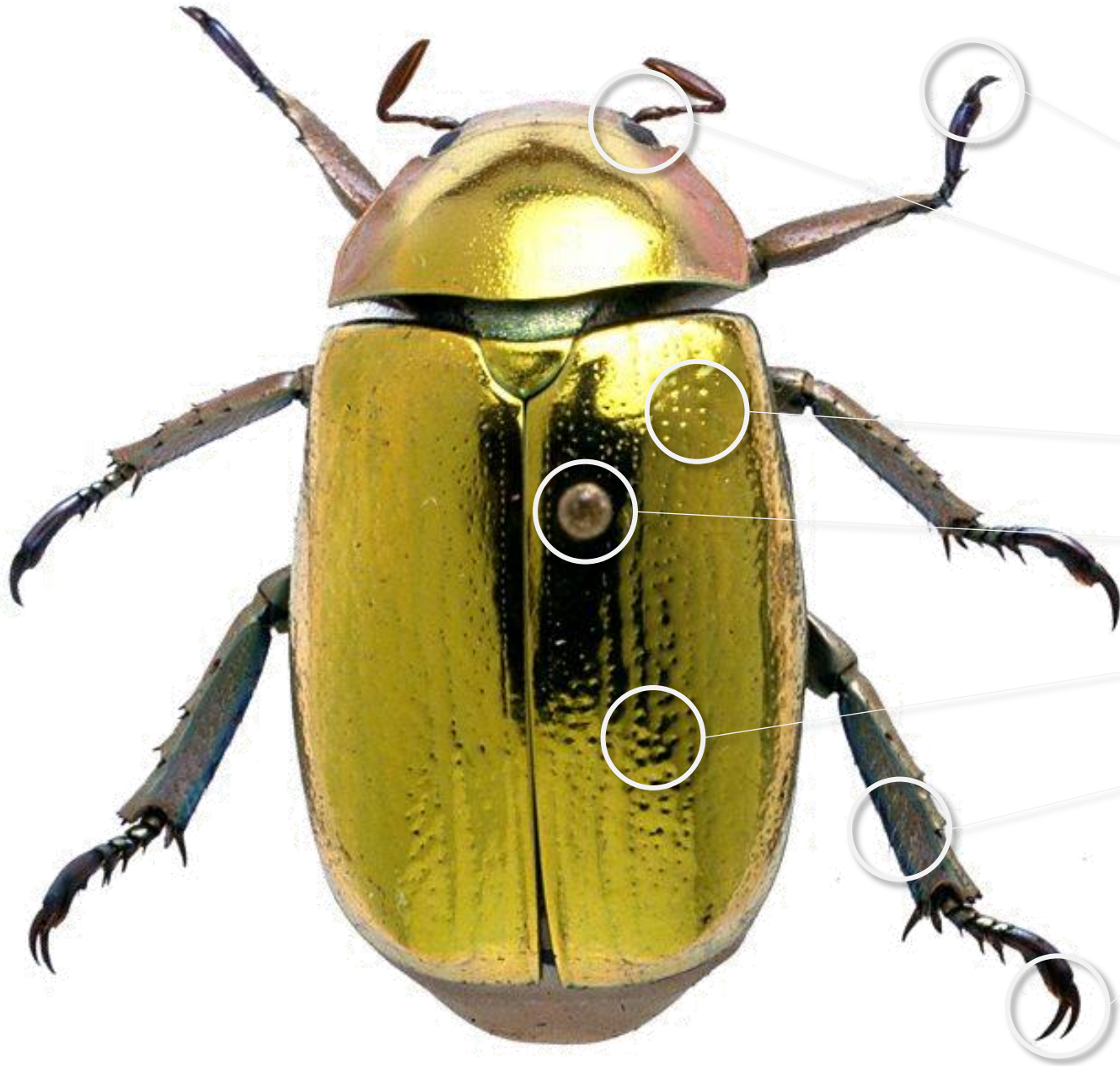


Digital Object Cloud for linking natural science collections information;
The case of DiSSCo

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Coordinator, Distributed System of Scientific Collections (**DiSSCo**)

What's in a Museum specimen?



Genomic data



Biochemical data



Morphological data



Geographical data



Taxonomic Information



Species Interactions data

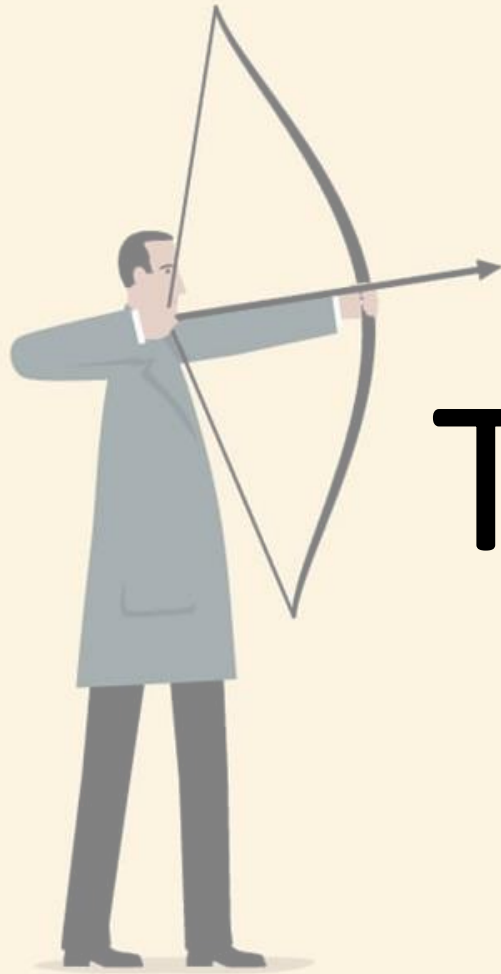


Ecological data



MAN BOTTA 0025

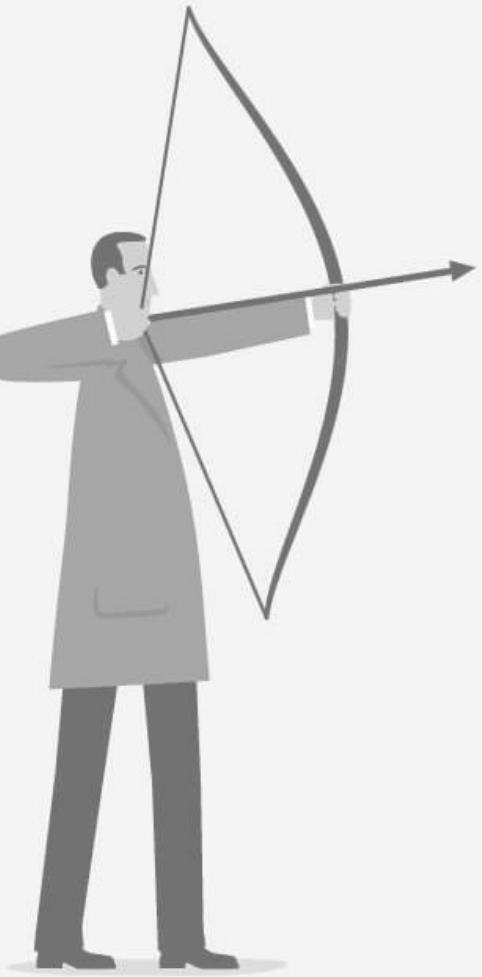
Erasmus Universiteit
bibliotheek Leiden



TRUST

Practices
People
Data





Trust lost when datasets
disconnect from:

context in which they were created,
or
communities who created them.



*What builds
TRUST
in data?*

Relevance

Provenance

Attribution

Completeness

Fitness-for-purpose

Agility

Branding (Datatyping)

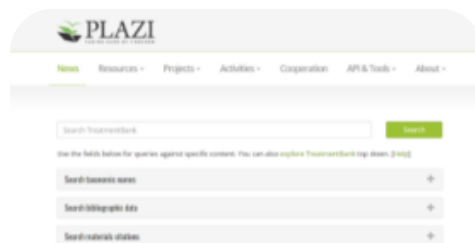
GBIF



GloBI

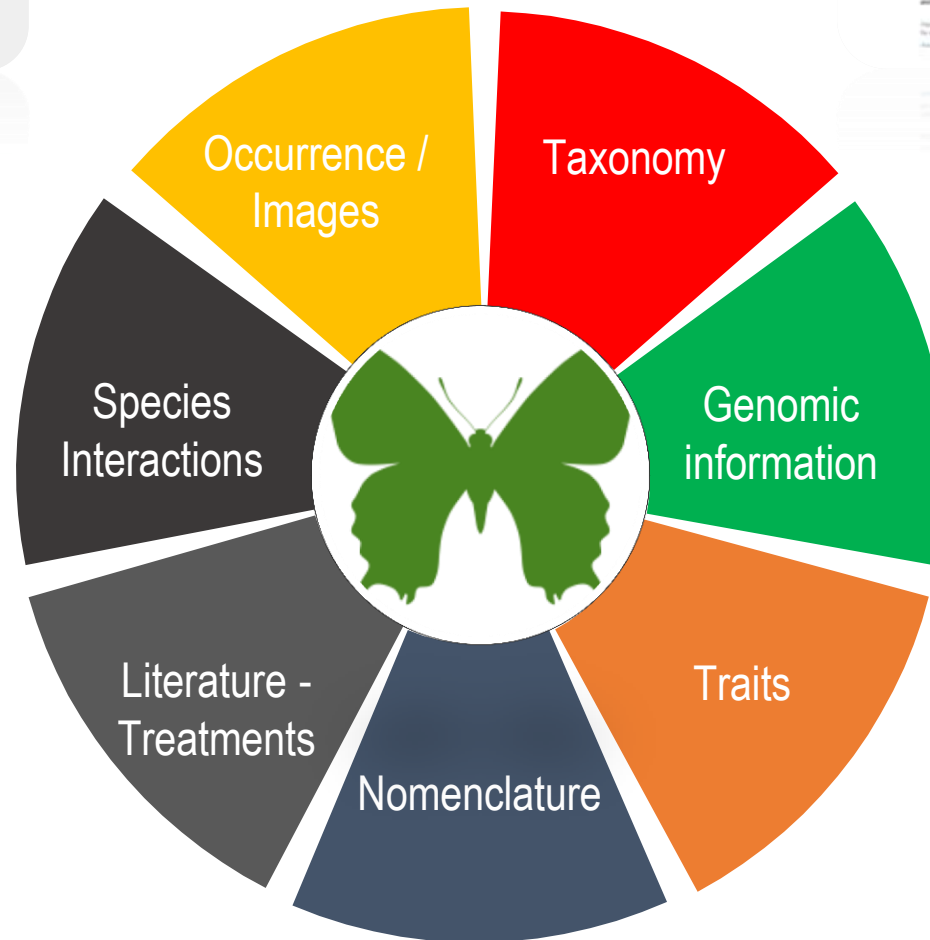


Plazi – TreatmentBank



Collections-related Data classes

Re-unite and Serve

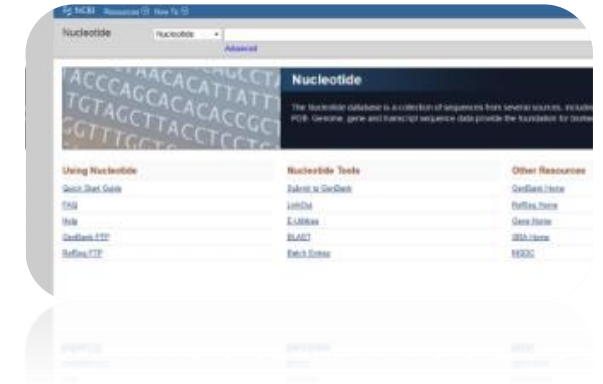


IPNI / Zoobank

Catalogue of Life



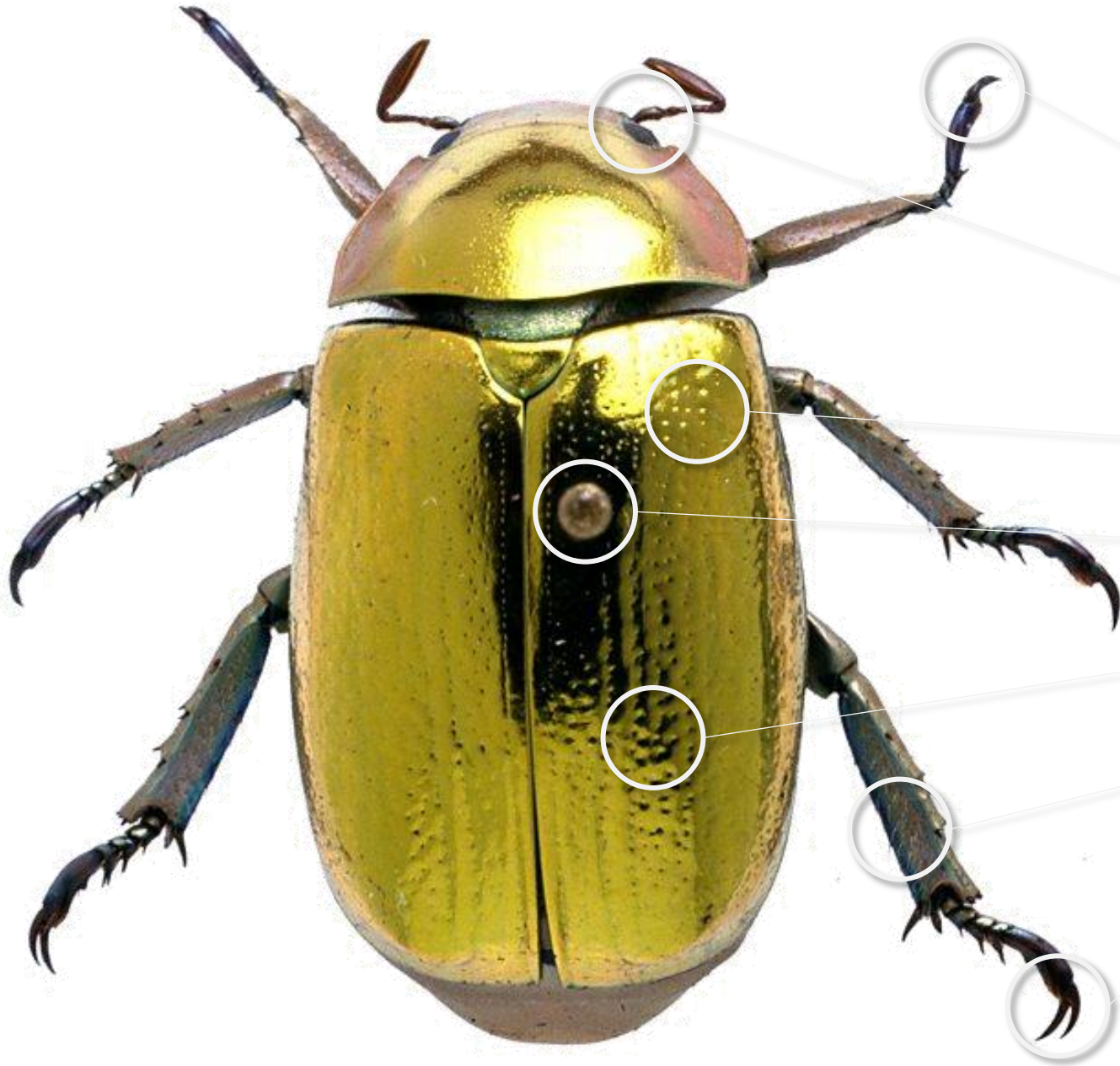
Genbank



EoL - TraitBank



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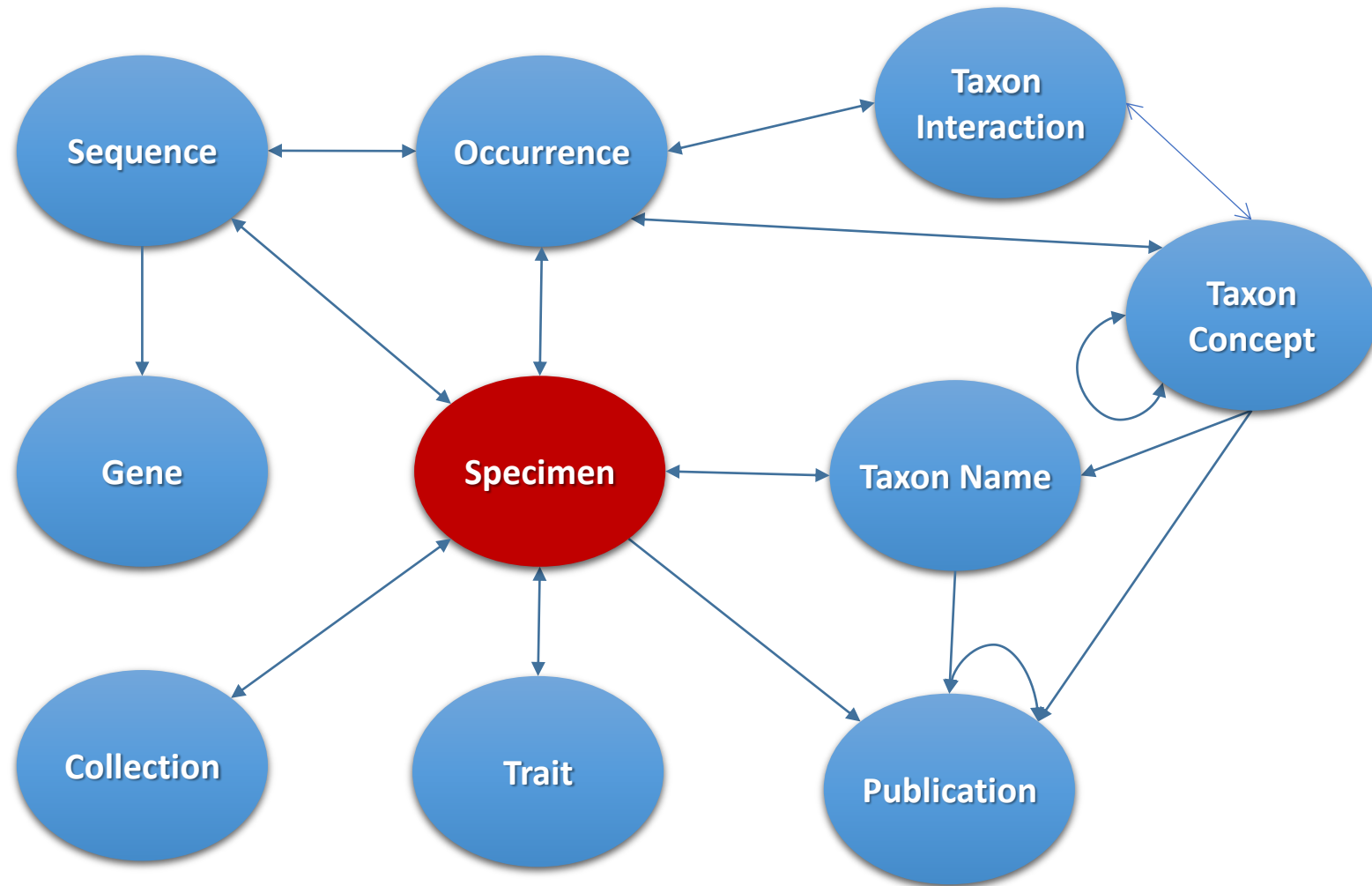


Species Interactions data



Ecological data

All data classes
unambiguously linked
to the **physical
objects** they derive
from

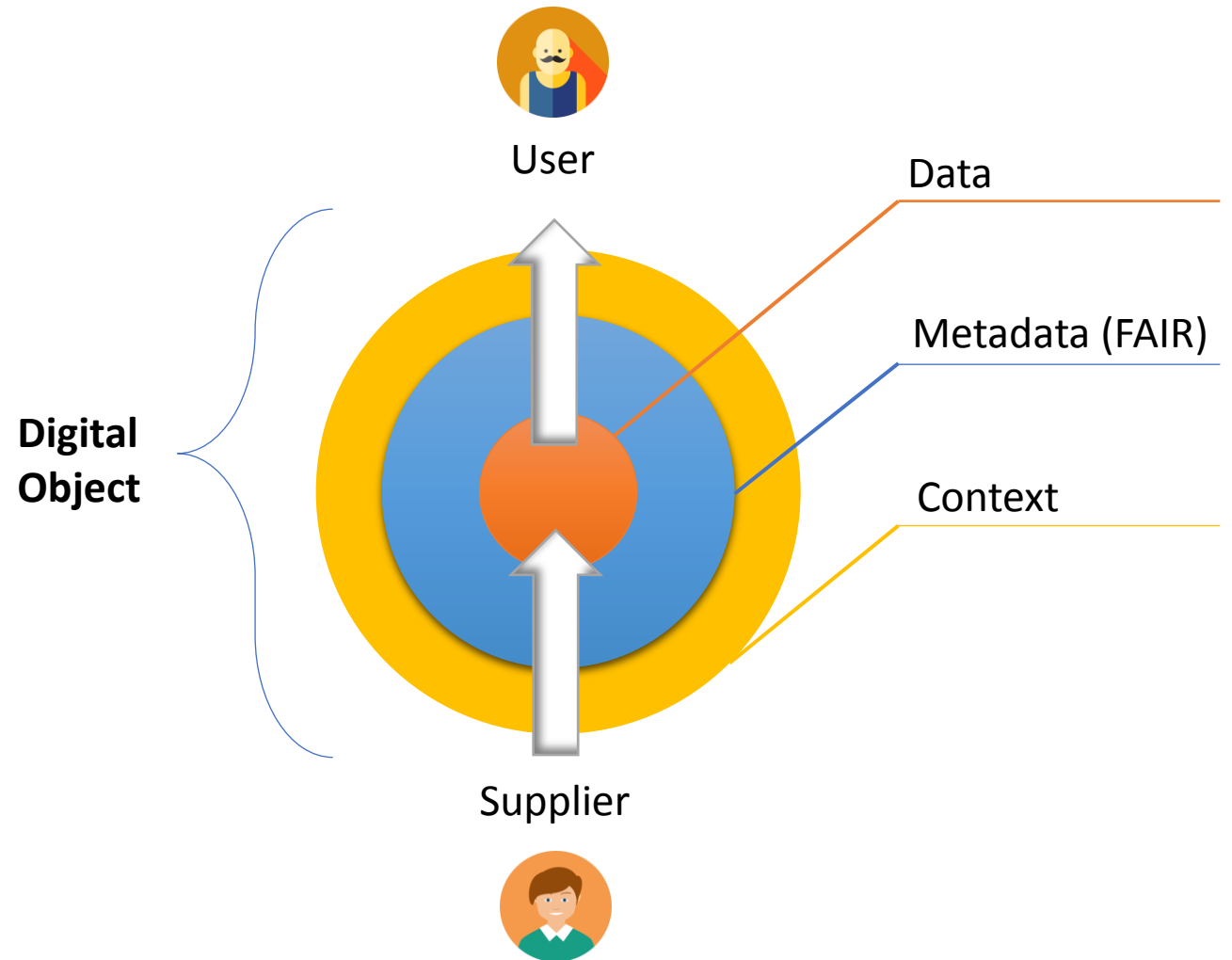


**Specimens representations become the centrepiece of the DiSSCo knowledge base –
They are used as anchoring points for disperse data classes**

Transforming digital entities to meaningful entities

Need for robust mechanisms, which

- **Link** persistently **data** with its **metadata** (Data in context)
- Enable for data objects to become **self-interpretable, actionable** and **trusted** entities
- Enable **curation and annotation** of objects to be performed across repositories and permanently attached to the object



Digital Specimen: A dynamic “box” collecting links to all core information about a thing in one place

Images (2D, 3D)



GET Image PIDs

GET Image metadata



GET Physical Object (PO) PID

GET PO PID metadata

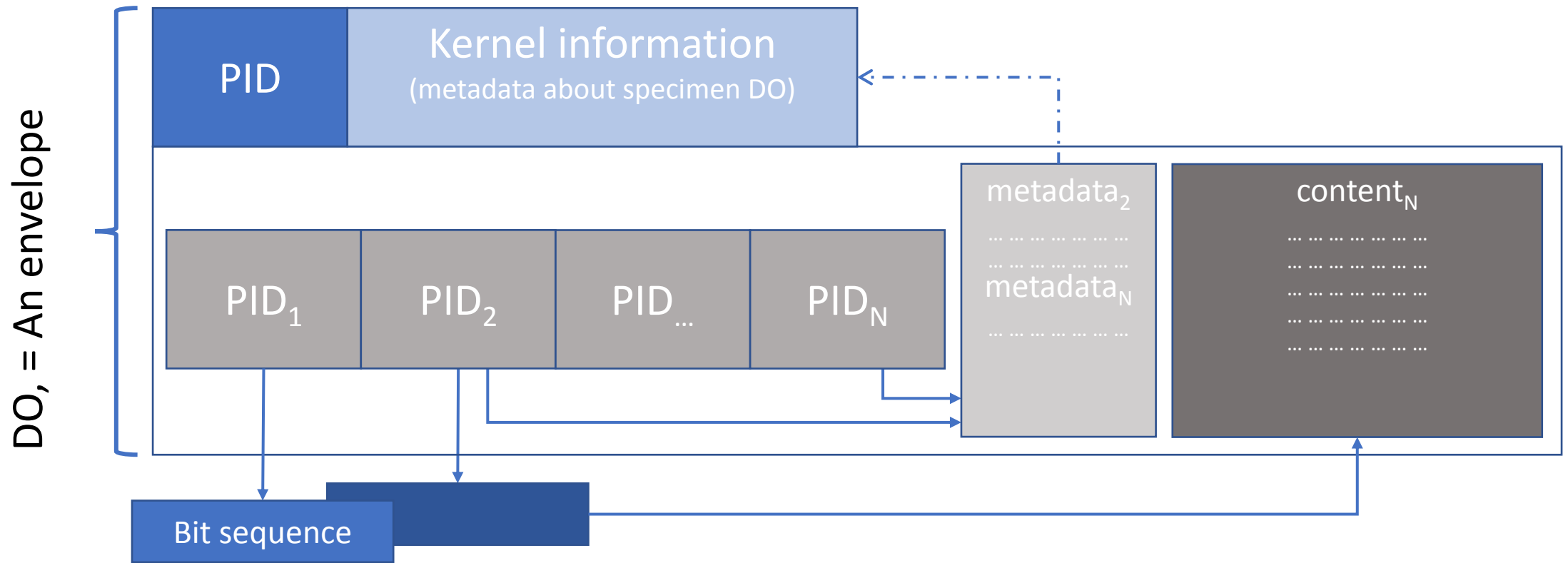
Occurrence ID
GenBank Accession No
Taxon PID



PO PID
Image PIDs

Digital Specimen object








Structure of a Digital Specimen Object (DSO)



Physical Object



Digital Surrogate

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



An actionable **knowledge unit**

Piloting with Cordra

Handle Prefix 0.NA/20.5000.1025 will expire in 635 days. Click [here](#) to convert the prefix to operational status.

Agathis palmerstonii (F.Muell.) F.M.Bailey

Type: Digital Specimen

[JSON](#) [Versions](#) [Details](#) [Show Relationships](#)

Digital Specimen

id *

20.5000.1025/B100003484

creationdatetime

2019-01-25T14:41:01.988Z

creator

20.5000.1025/60c6d277a8bd81de7fdd

Username: alex

midslevel *

2

Scientific name *

Agathis palmerstonii (F.Muell.) F.M.Bailey

Common name

--

Country

Australia

Locality

Queensland

Recorded by

L. J. Brass 2421

Collection date

1932-04-08

Catalog number

B

Collection code

Australia: Queensland

CETAF stable identifier (uri)

<http://herbarium.bgbm.org/object/B100003484>

Physical specimen identifier *

B 10 0003484

Determinations

Yes

Catalogue of Life

<http://www.catalogueoflife.org/col/details/species/id/2dabb88156621856eede45d071d76f13/synonym/e082fe585f089db1d1c5ad170f89a25d>

Image id

206596

Available images

Image 1 *

<http://ww2.bgbm.org/Herbarium/specimen.cfm?idThumb=206596&SpecimenPK=4699&Loan=1&Flash=True&SpecimenSequenz=1>

Image 2 *

<https://doi.org/10.5281/zenodo.1479085>

Biodiversity Heritage Library pages

BHL page 1 *

<https://www.biodiversitylibrary.org/page/34929050#page/71/mode/1up>

BHL page 2 *

<https://www.biodiversitylibrary.org/page/34928490#page/227/mode/1up>

BHL page 3 *

<https://www.biodiversitylibrary.org/page/8897439#page/419/mode/1up>

self