

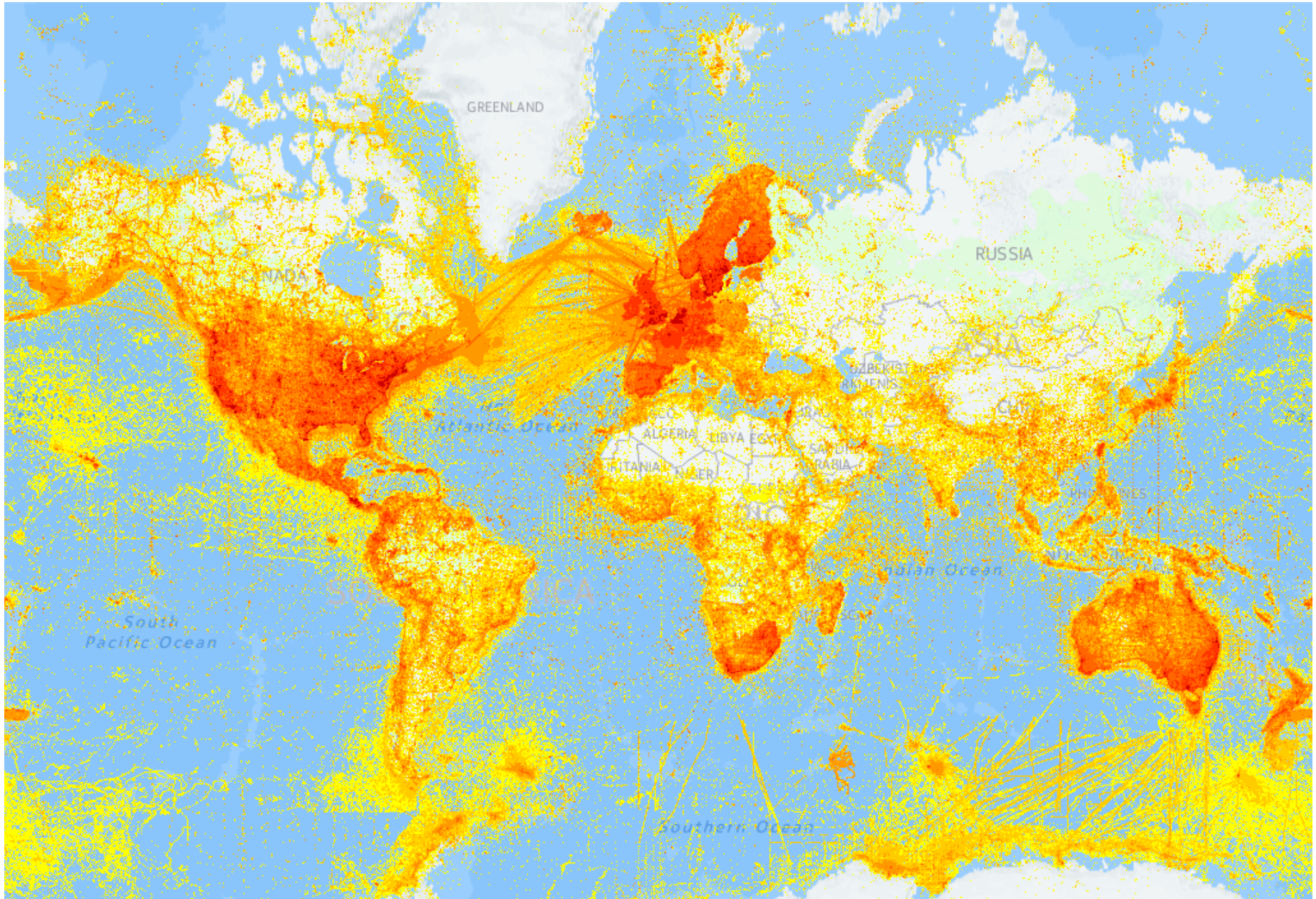


# GBIF and iDigBio

*Donald Hobern, GBIF Executive Secretary*

*iDigBio Summit IV, Gainesville, Florida, 28 October 2014*

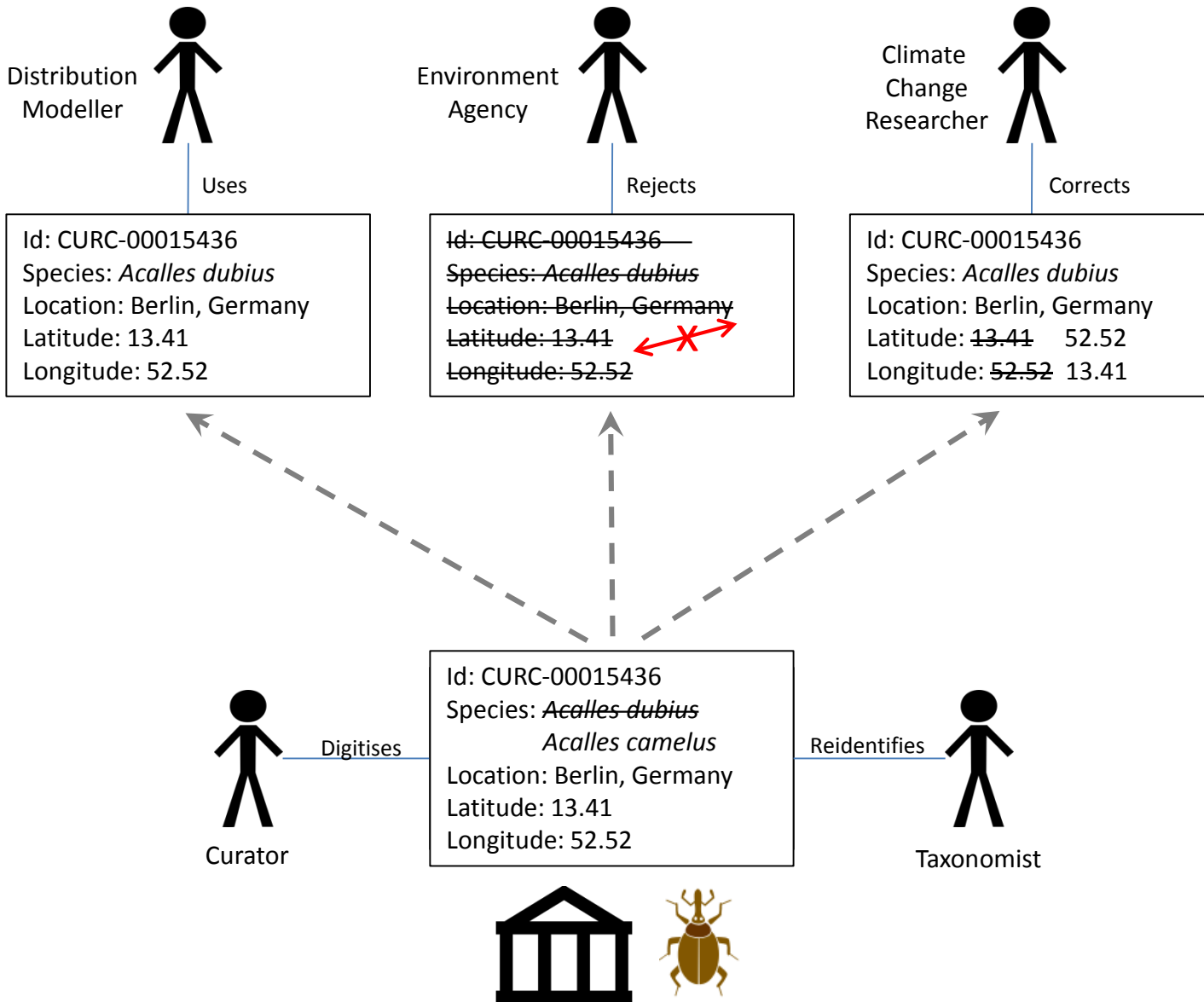
# GLOBAL SPECIES OCCURRENCE DATA



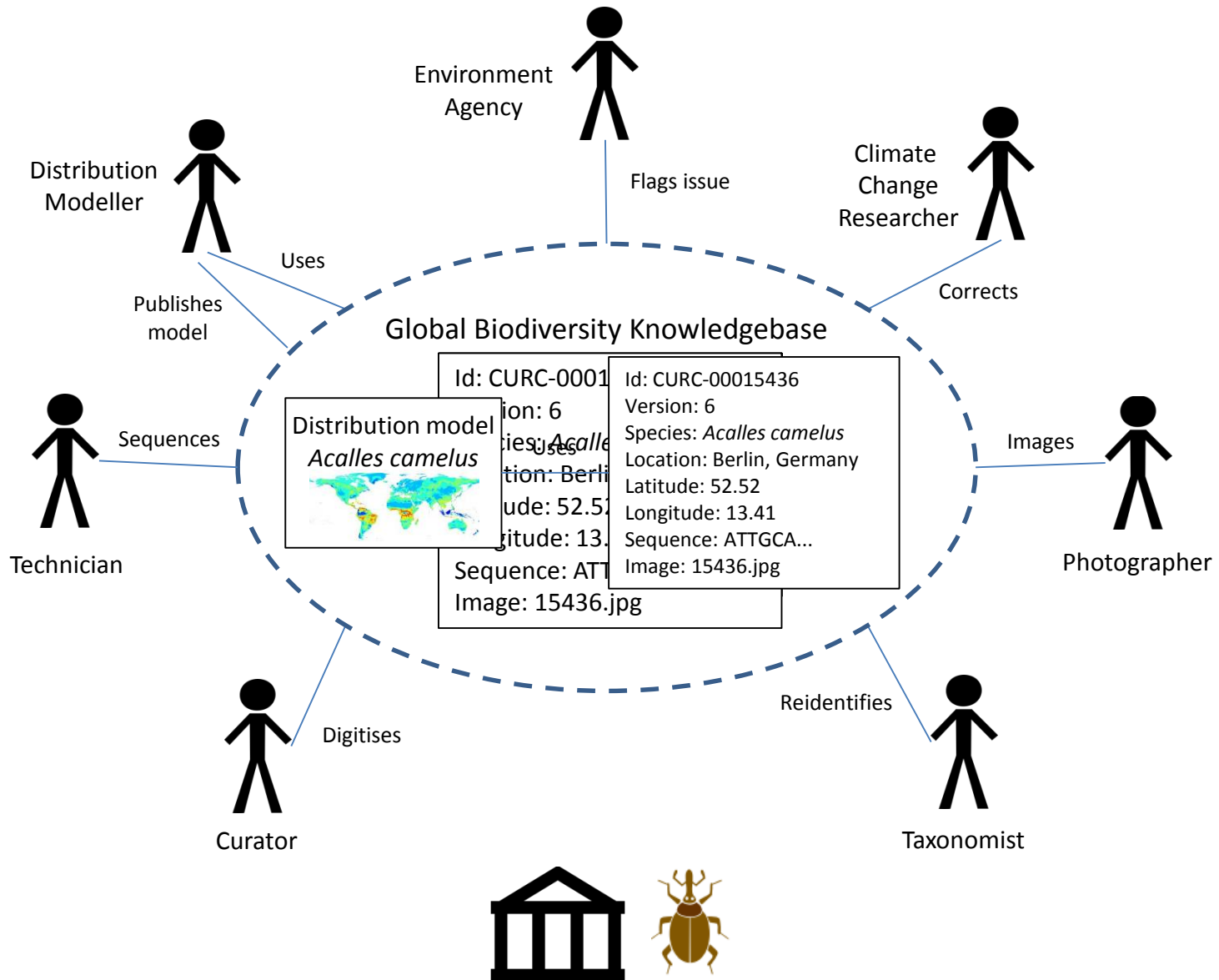
# TWO KEY DATA DELIVERABLES

Virtual natural history collection	Ecoinformatics resource
Focus: collection objects	Focus: geospatial data
Goal: enable modern, accelerated taxonomy via integrated access to all collection materials for any species	Goal: organise all relevant evidence for species occurrence in time and space
Primary data elements: <ul style="list-style-type: none"><li>• Identification history</li><li>• Collection identifiers</li><li>• Locality</li><li>• Images, sequences</li><li>• Morphometric data</li></ul>	Primary data elements: <ul style="list-style-type: none"><li>• Scientific name</li><li>• Coordinates</li><li>• Date</li><li>• Confidence/evidence level</li></ul>
Critical linkages: <ul style="list-style-type: none"><li>• Nomenclators</li><li>• Biodiversity Heritage Library</li><li>• Barcode of Life Database</li><li>• Phylogenetic data</li></ul>	Critical linkages: <ul style="list-style-type: none"><li>• Climate and environment</li><li>• Politics and land use</li><li>• Stable classification</li></ul>

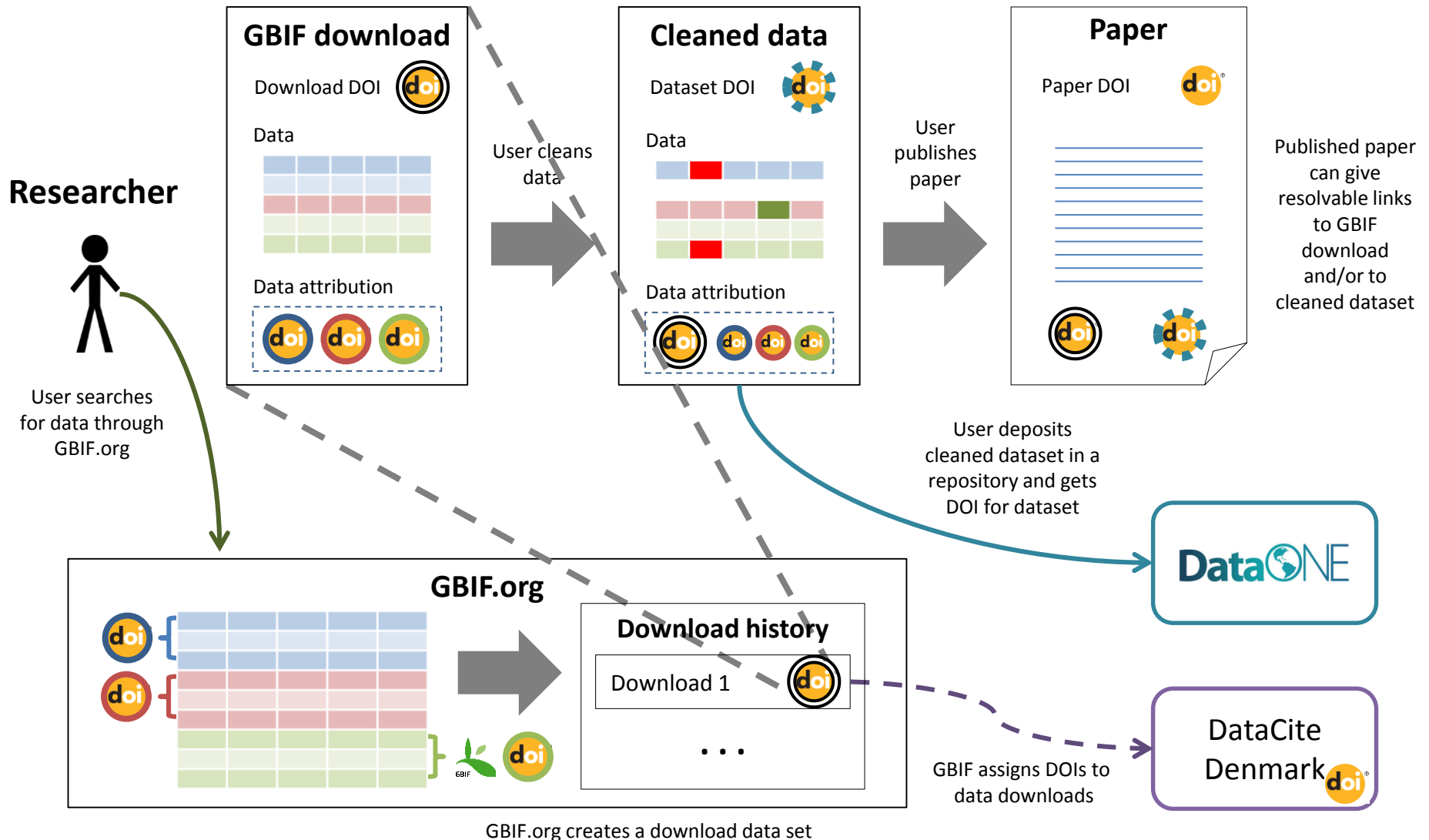
# WEAKNESSES WITH DISTRIBUTED DATA



# TOWARD A SHARED KNOWLEDGEBASE



# GBIF AND DIGITAL OBJECT IDENTIFIERS

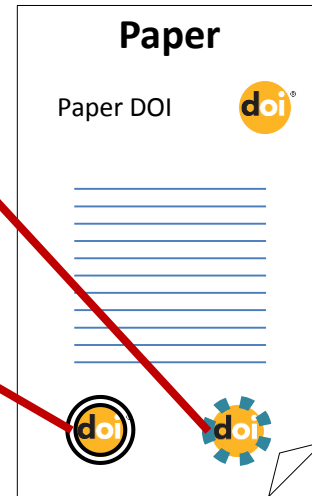
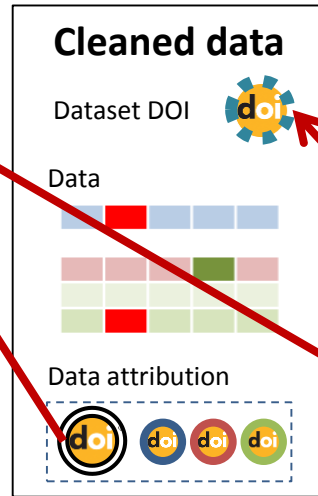
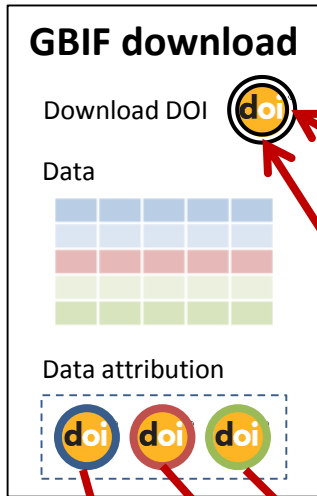


# GBIF AND DIGITAL OBJECT IDENTIFIERS

**Researcher**



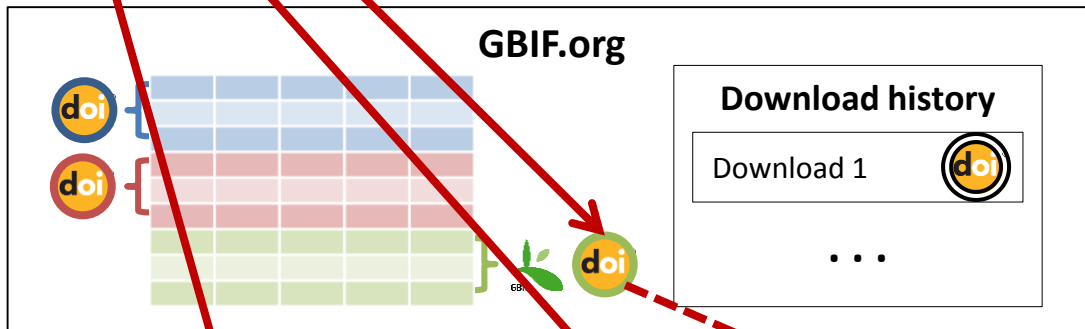
- Cite data sources
- Linked results to data
- Suggest data corrections



**Reader**



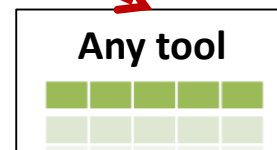
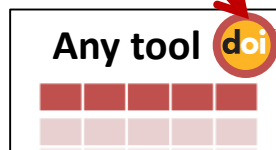
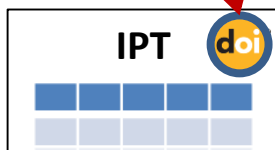
- Retrieve source data
- Reproduce results



**Data Publisher**



- Discover data usage
- Receive suggested data corrections



**GBIF**



- Monitor data usage
- Enhance fitness-for-use


# GBIF AND DIGITAL OBJECT IDENTIFIERS

**Researcher**



- Cite data sources
- Linked results to data
- Suggest data corrections




**GBIF download**

Download DOI 


Data

Blue	Blue	Blue	Blue	Blue
Red	Red	Red	Red	Red
Green	Green	Green	Green	Green

Data attribution





**Cleaned data**

Dataset DOI 

Data

Blue	Red	Blue	Blue	Blue
Red	Red	Red	Green	Red
Green	Red	Green	Green	Green

Data attribution

**Paper**

Paper DOI 

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**Reader**




- Retrieve source data
- Reproduce results

**Data Publisher**






- Discover data usage
- Receive suggested data corrections

**GBIF.org**


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Blue	Blue	Blue	Blue	Blue
Red	Red	Red	Red	Red
Green	Green	Green	Green	Green

 }

**Download history**


Download 1 

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**GBIF**



- Monitor data usage
- Enhance fitness-for-use

**IPT** 

Blue	Blue	Blue	Blue	Blue
Blue	Blue	Blue	Blue	Blue

**Any tool** 

Red	Red	Red	Red	Red
Red	Red	Red	Red	Red

**Any tool**

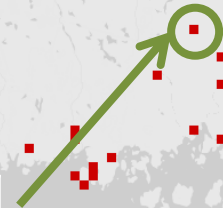
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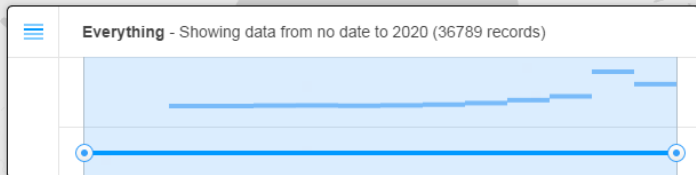
# EXTENDING GBIF FOR SAMPLE-BASED DATA



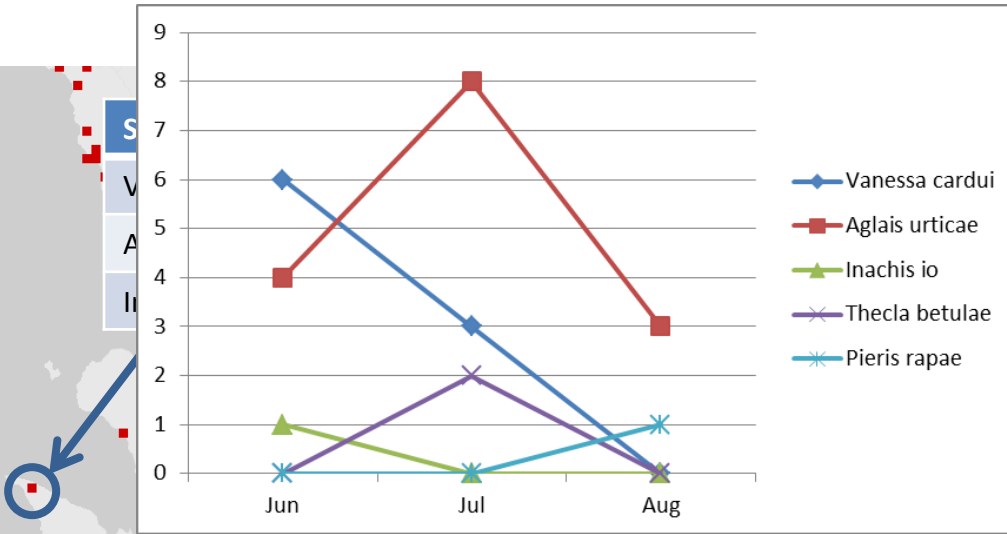
Species	Event	Quantity	Sample size	Protocol		
Var	Species	Event	Quantity	Sample size	Protocol	
Agl	Var	Species	Event	Quantity	Sample size	Protocol
Ina	Agl	Pieris rapae	PlotA-2014-08	1 individuals	1 km	Butterfly transect
The	Agl	Aglais urticae	PlotA-2014-08	3 individuals	1 km	Butterfly transect



Species	Event	Quantity	Sample size	Protocol		
Pier	Species	Event	Quantity	Sample size	Protocol	
Van	Pier	Species	Event	Quantity	Sample size	Protocol
Agl	Van	Pieris rapae	PlotB-2014-08	8 individuals	1 km	Butterfly transect
Agl	Agl	Aglais urticae	PlotB-2014-08	2 individuals	1 km	Butterfly transect



# EXTENDING GBIF FOR SAMPLE-BASED DATA



Sample size	Protocol
1 km	Butterfly transect
1 km	Butterfly transect

Species	Event	Quantity	Sample size	Protocol
Pieris rapae	PlotB-2014-08	8 individuals	8	Butterfly transect
Aglais urticae	PlotB-2014-08	2 individuals	2	Butterfly transect

