

Engaging the domain expert: is it just a dream?

Alison Specht,
CESAB-FRB, France

the University of Queensland, Australia
DataONE Usability and Assessment WG
Member, GDR Sémandiv, CNRS, France





This talk

- Ecologists
- Synthesis centres
- A new tool

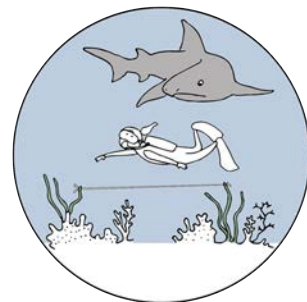
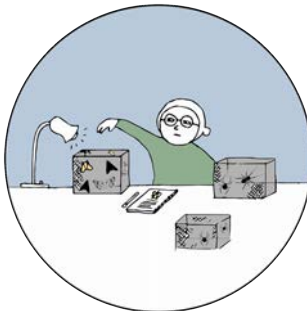


This talk

- Ecologists
- Synthesis centres
- A new tool



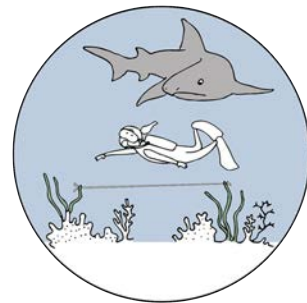
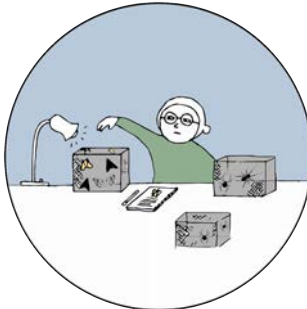
Ecologists...have a demanding life



Ecologists...have a demanding life

They

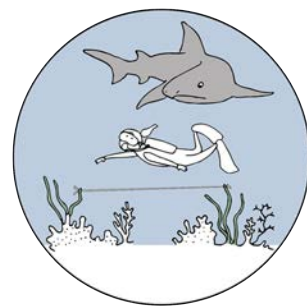
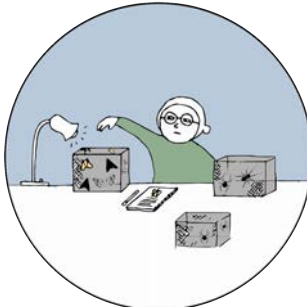
- collect their own data (low reliance on machines)



Ecologists...have a demanding life

They

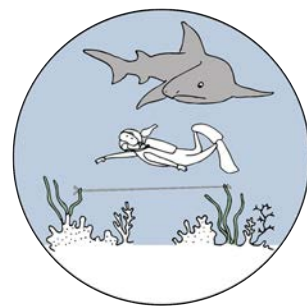
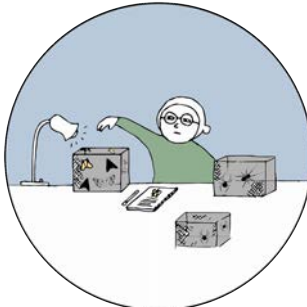
- collect their own data (low reliance on machines)
- have a strong belief system in the value of their work



Ecologists...have a demanding life

They

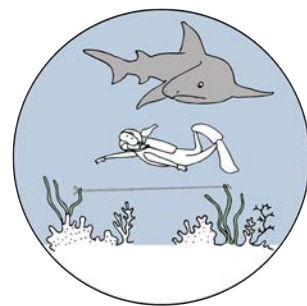
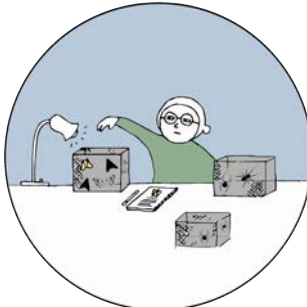
- collect their own data (low reliance on machines)
- have a strong belief system in the value of their work
- work for the common good (low pay)



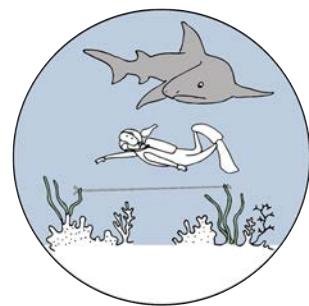
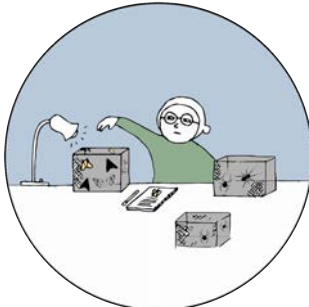
Ecologists...have a demanding life

They

- collect their own data (low reliance on machines)
- have a strong belief system in the value of their work
- work for the common good (low pay)
- are highly variable in their practice



Ecologists...have a demanding life

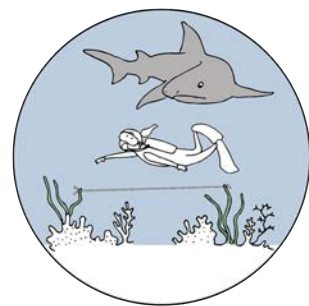
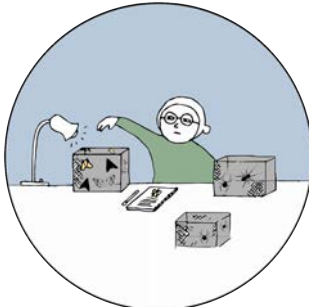


They

- collect their own data (low reliance on machines)
- have a strong belief system in the value of their work
- work for the common good (low pay)
- are highly variable in their practice
- understand the value of long-term data preservation



Ecologists...have a demanding life



They

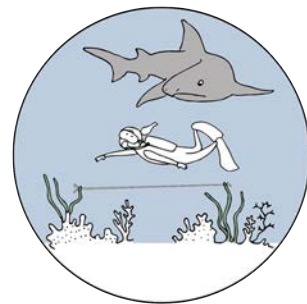
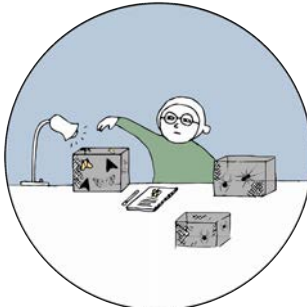
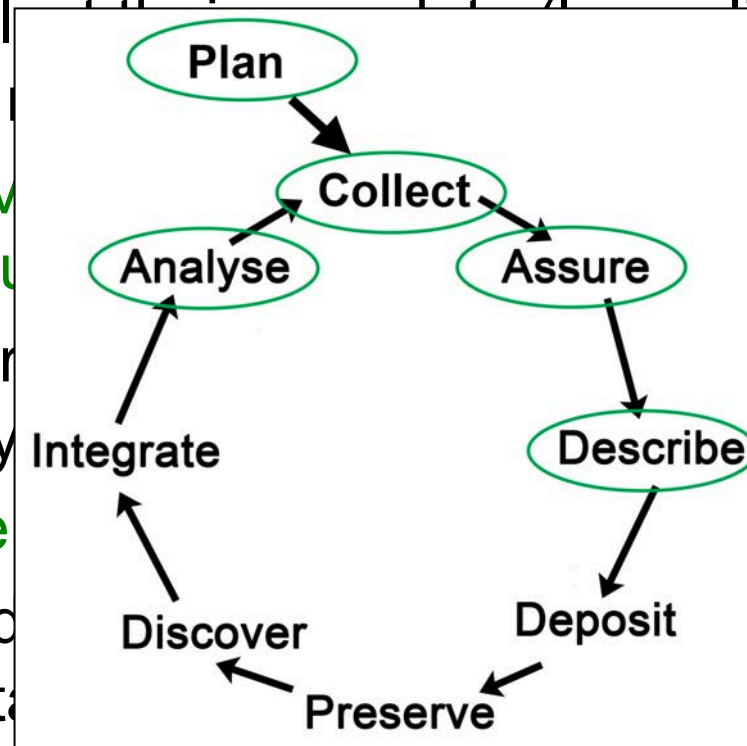
- collect their own data (low reliance on machines)
- have a strong belief system in the value of their work
- work for the common good (low pay)
- are highly variable in their practice
- understand the value of long-term data preservation
- but they tend not to prioritise data standardisation, archiving etc.



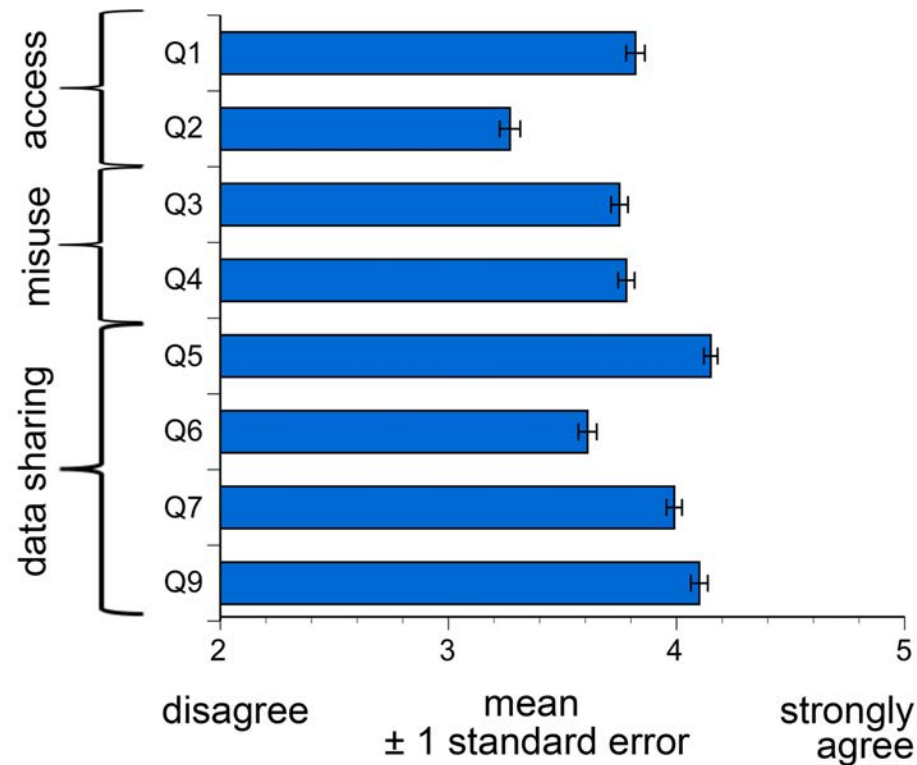
Ecologists...have a demanding life

They

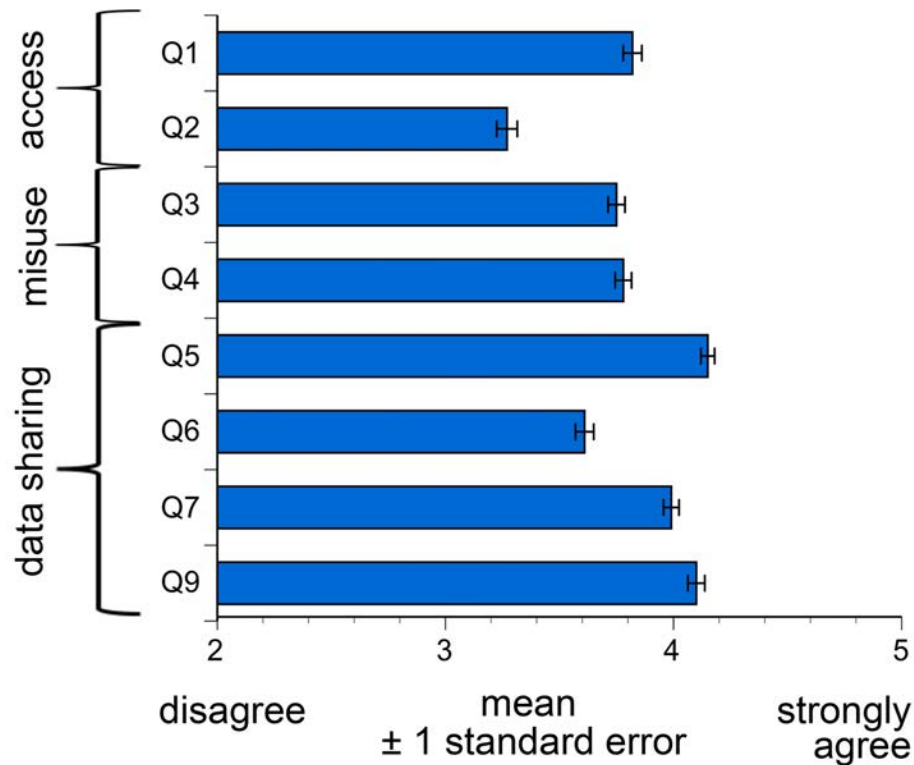
- collect data on the environment
- have valuable information
- work hard and often get paid little
- are often underfunded
- but they tend not to prioritise data standardisation, archiving etc.



Ecologists...have some ideas about data



Ecologists...have some ideas about data

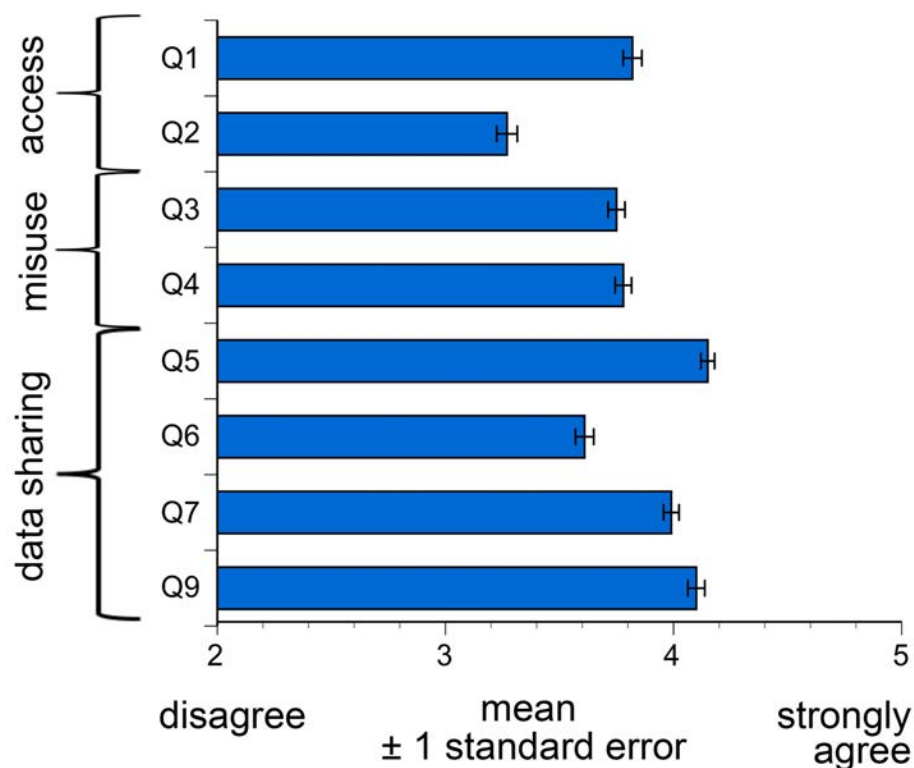


Lack of access

Q1 is a major impediment to progress in science.

Q2 has restricted my ability to answer scientific questions.

Ecologists...have some ideas about data



Lack of access

Q1 is a major impediment to progress in science.

Q2 has restricted my ability to answer scientific questions.

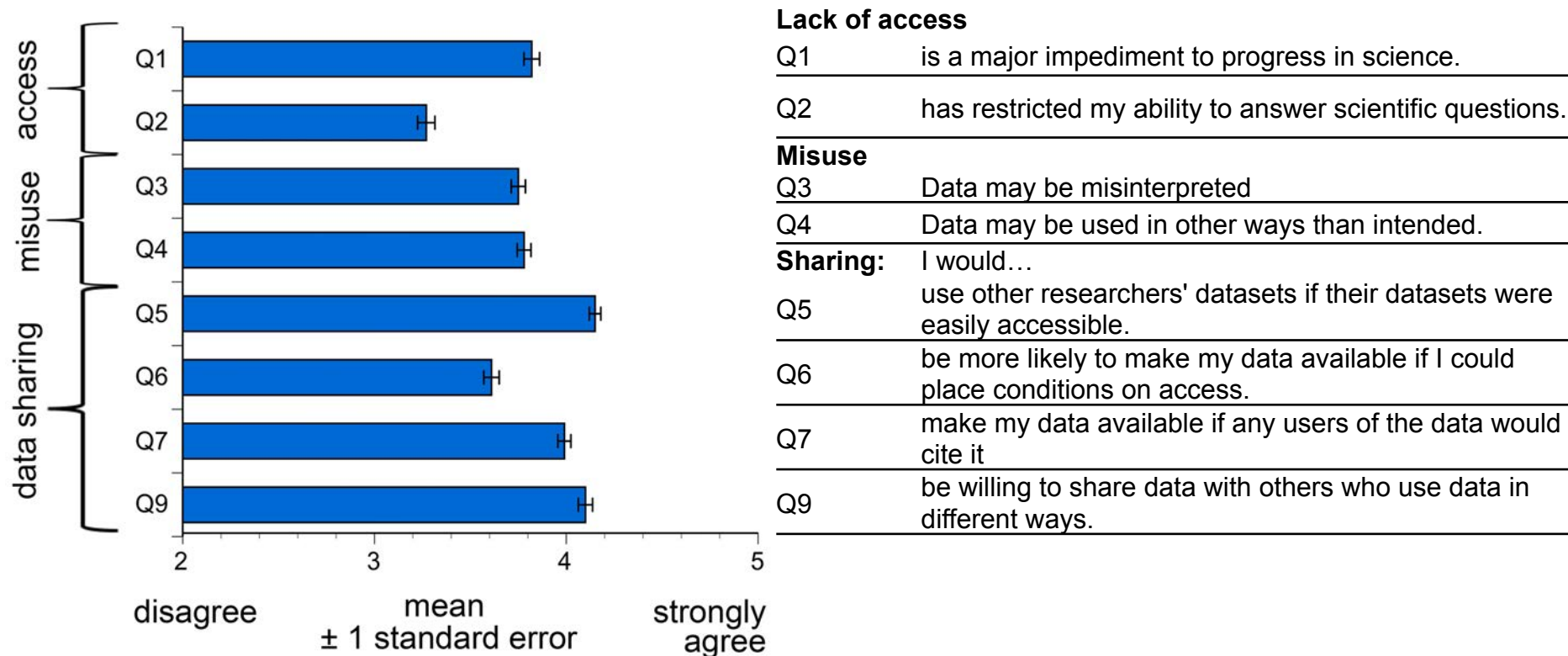
Misuse

Q3 Data may be misinterpreted

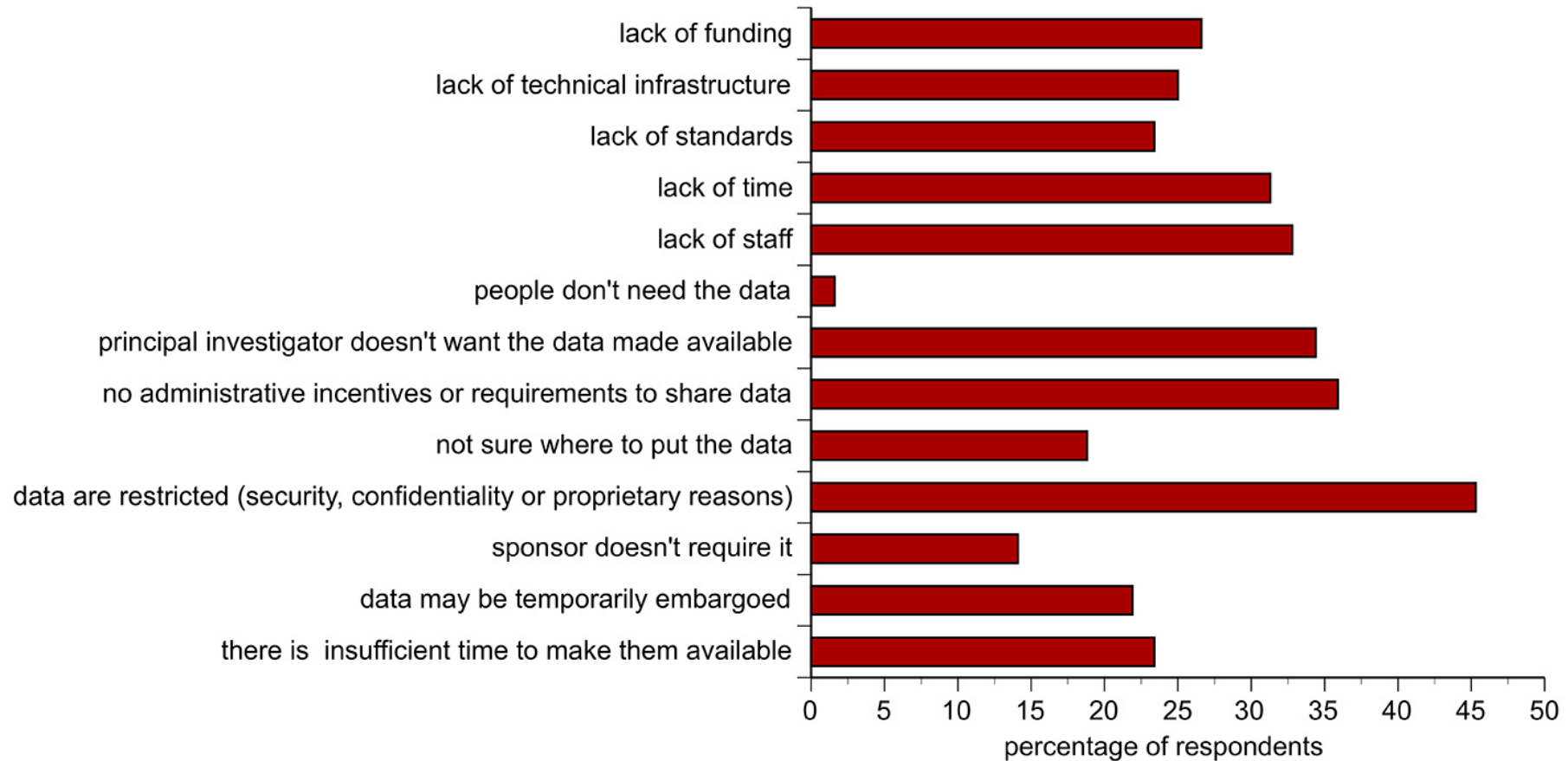
Q4 Data may be used in other ways than intended.



Ecologists...have some ideas about data



Publication impediments

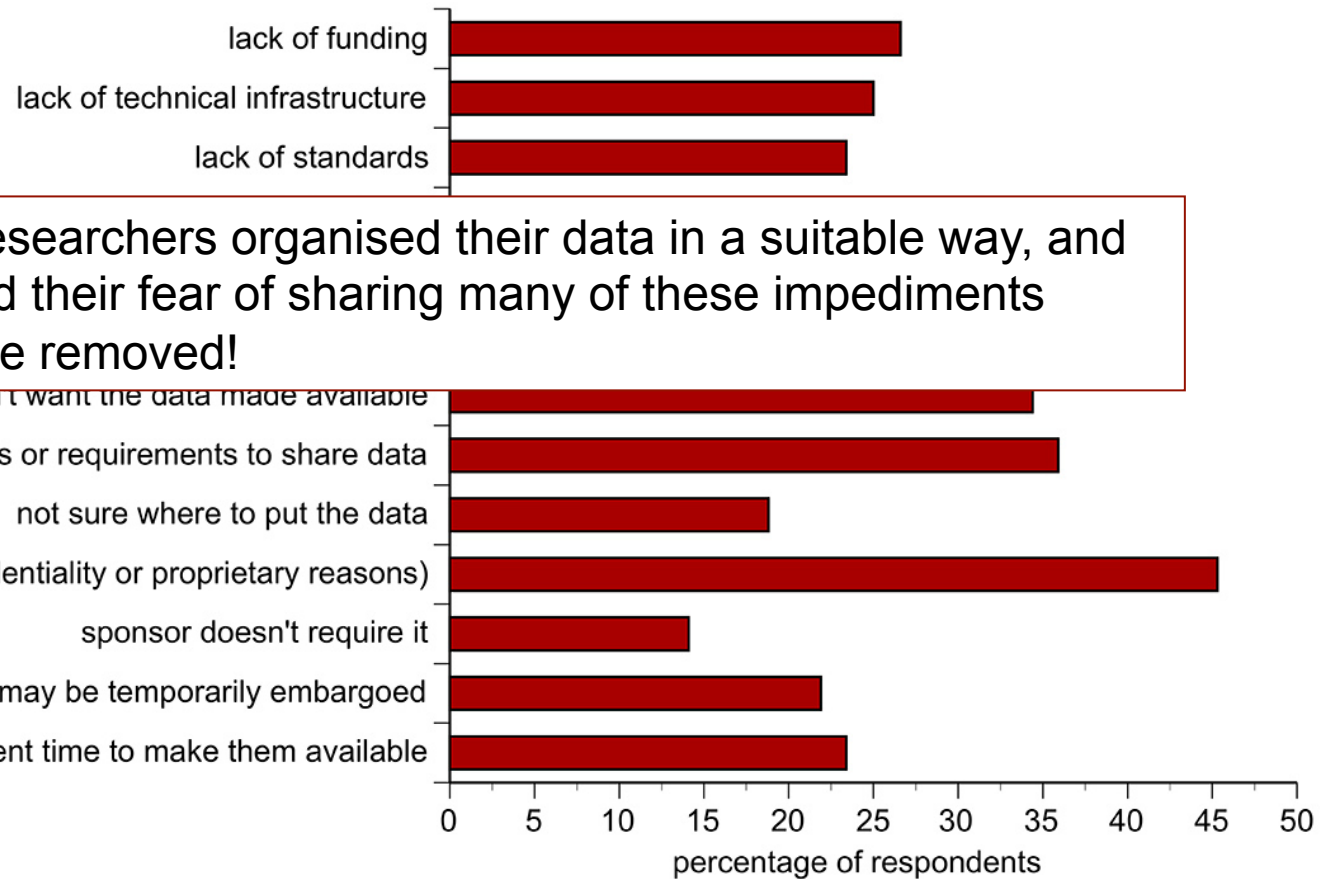


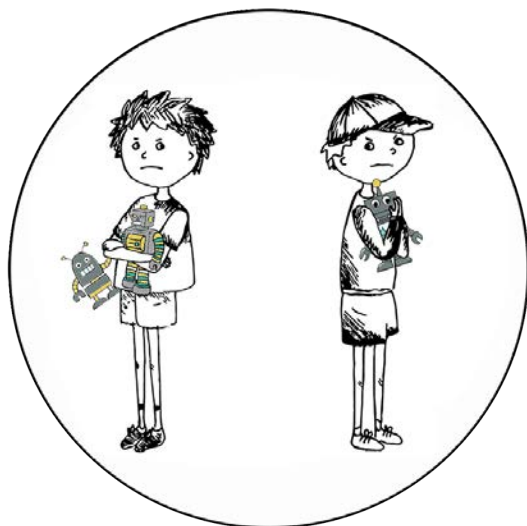
Un centre créé et développé par la FRB



Preparatory data : due to be updated!

Publication impediments





Changing culture and practice

Belief that the behaviour leads
to certain outcomes and
evaluations of these outcomes

Attitude toward the
behaviour

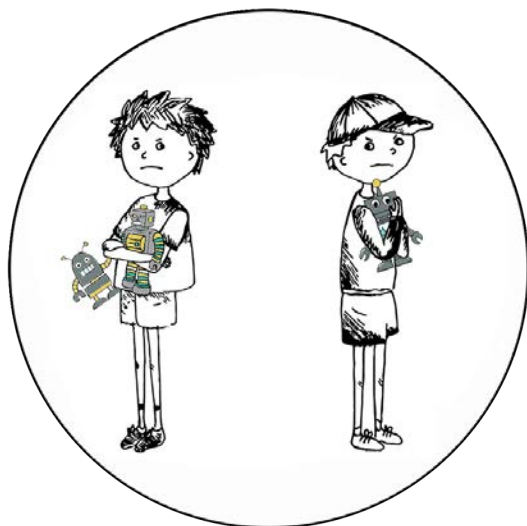
Relative importance of attitudinal
and normative considerations

Belief that specific
individuals or groups think
that he/she/they should or
should not perform the
behaviour, and their
motivation to comply

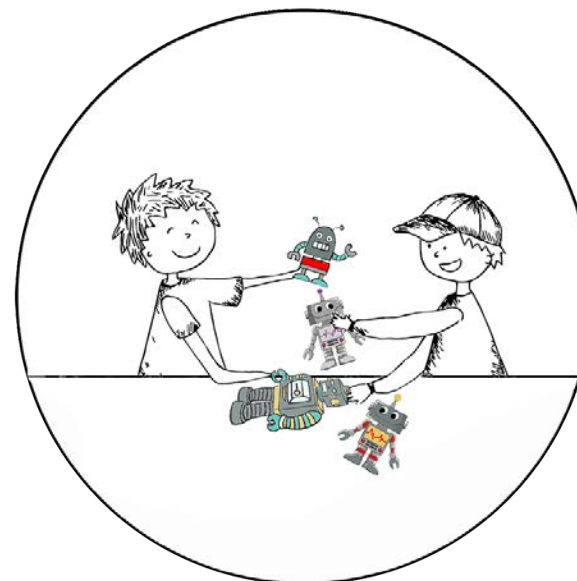
Subjective norm

Intention

Behaviour



Changing culture and practice



Belief that the behaviour leads
to certain outcomes and
evaluations of these outcomes

Attitude toward the
behaviour

Relative importance of attitudinal
and normative considerations

Intention

Behaviour

Belief that specific
individuals or groups think
that he/she/they should or
should not perform the
behaviour, and their
motivation to comply

Subjective norm

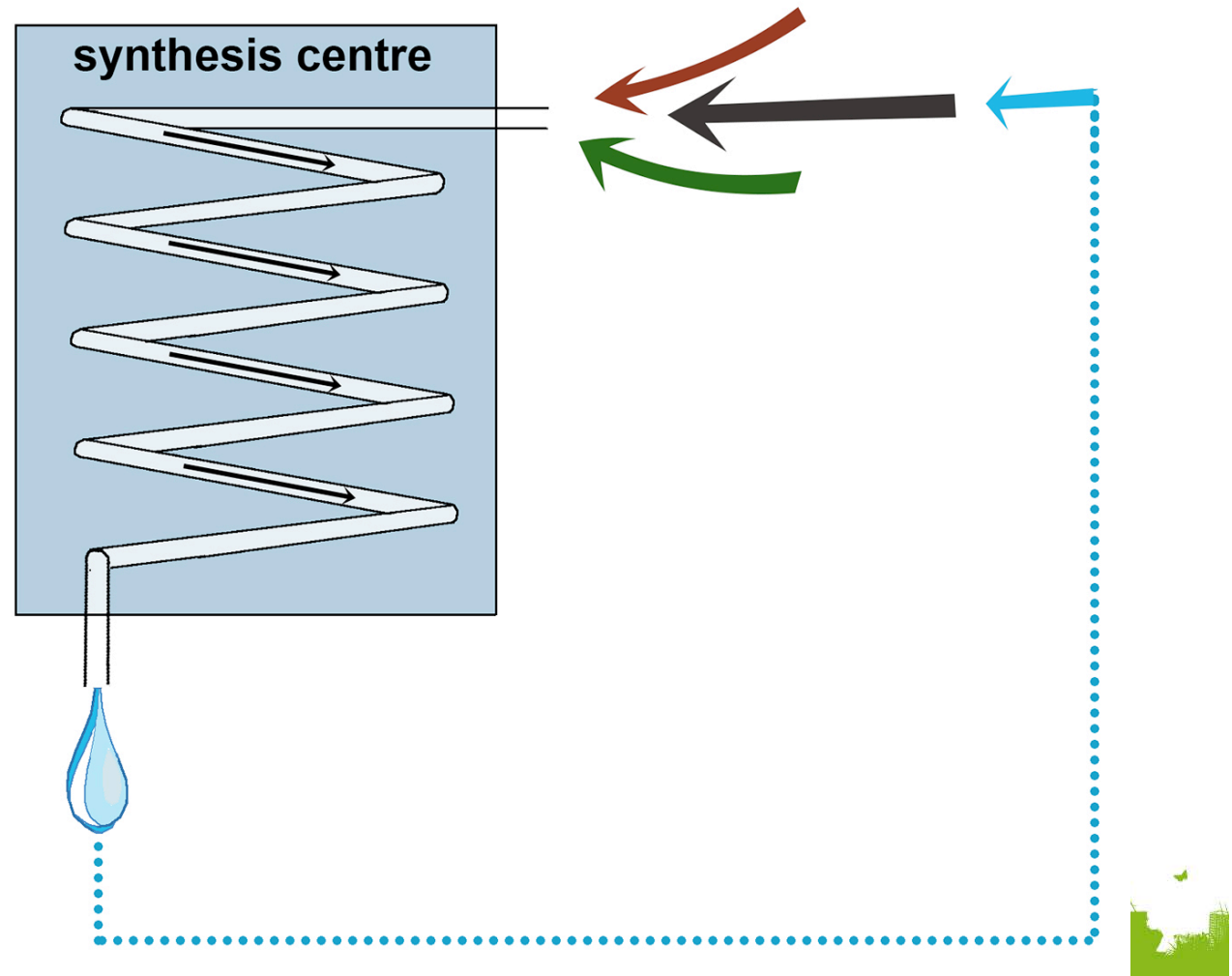
This talk

- Ecologists
- Synthesis centres
- A new tool

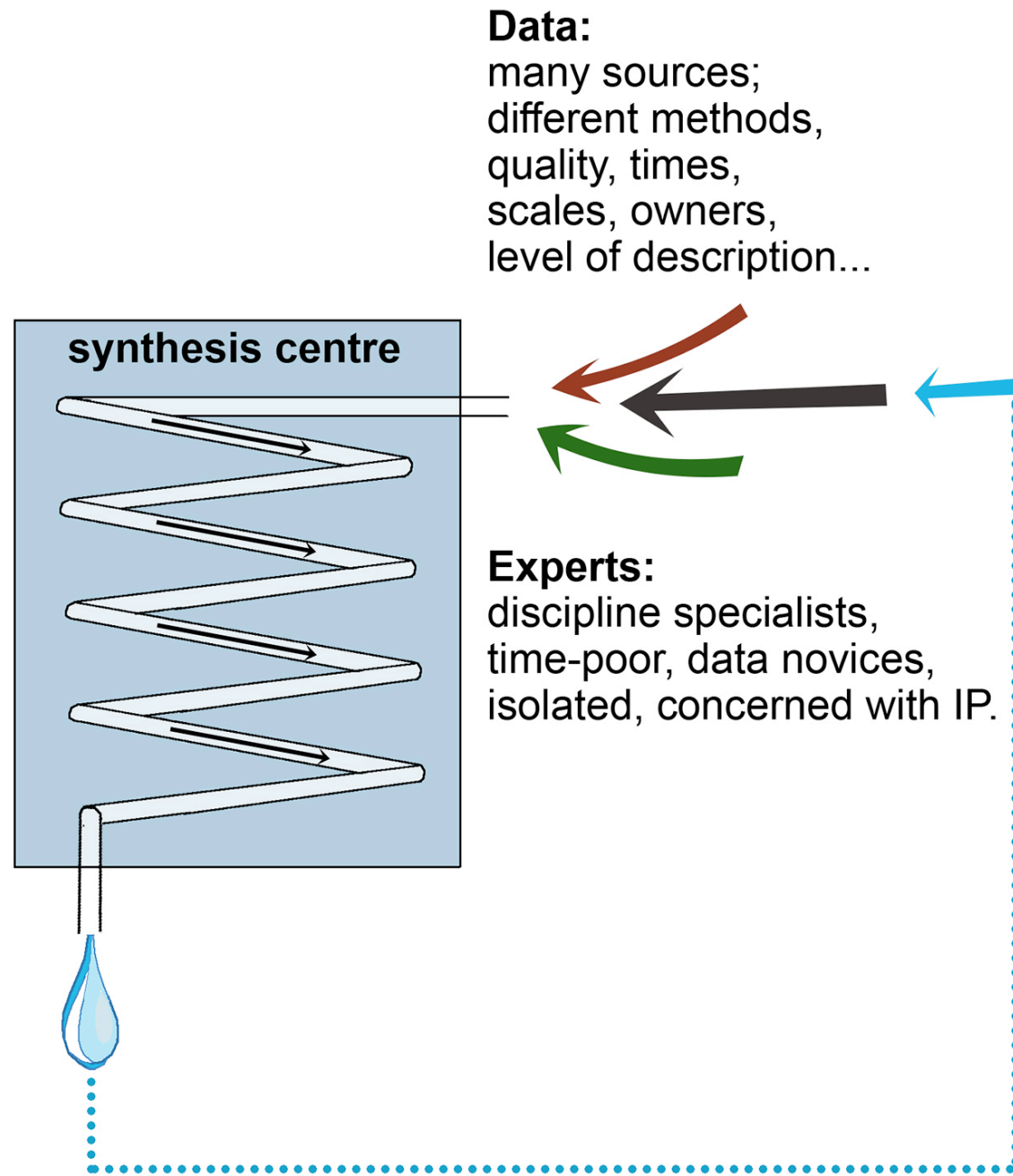


An engineered microcosm

Data:
many sources;
different methods,
quality, times,
scales, owners,
level of description...

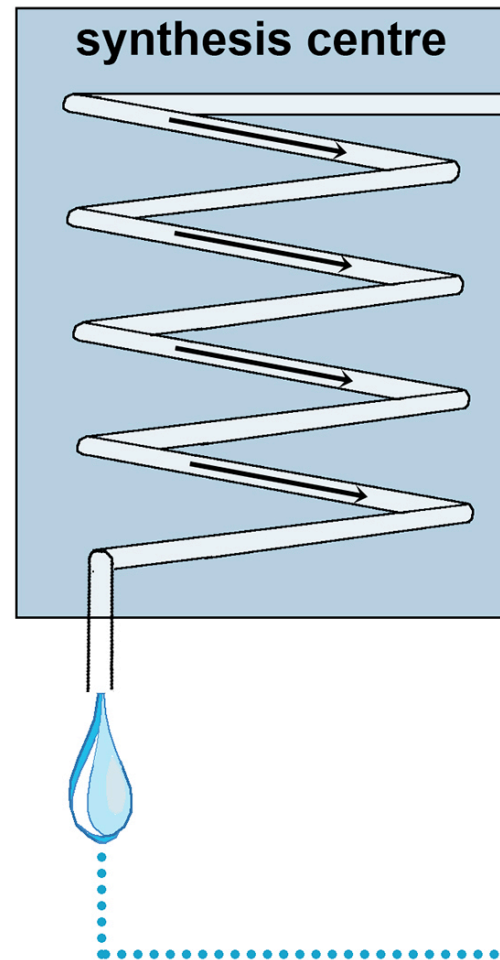


An engineered microcosm



An engineered microcosm

transdisciplinary
supra-national,
cross-organisational,
multi-scale analysis and
synthesis of
existing data

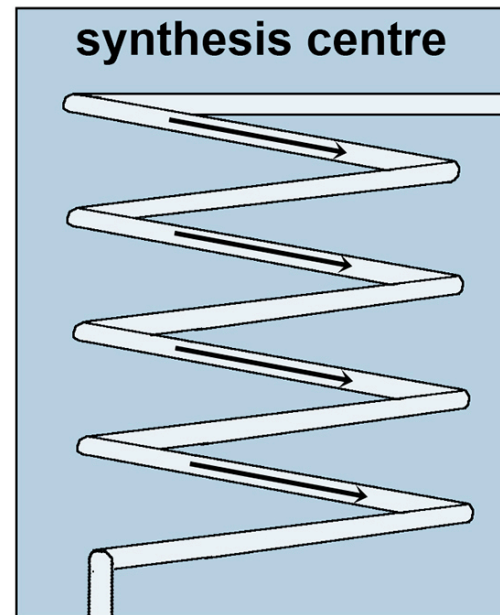


Data:
many sources;
different methods,
quality, times,
scales, owners,
level of description...

Experts:
discipline specialists,
time-poor, data novices,
isolated, concerned with IP.

An engineered microcosm

transdisciplinary
supra-national,
cross-organisational,
multi-scale analysis and
synthesis of
existing data

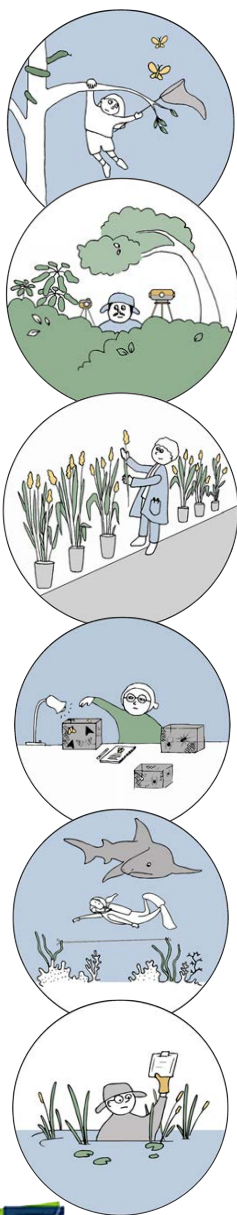


synthesis centre

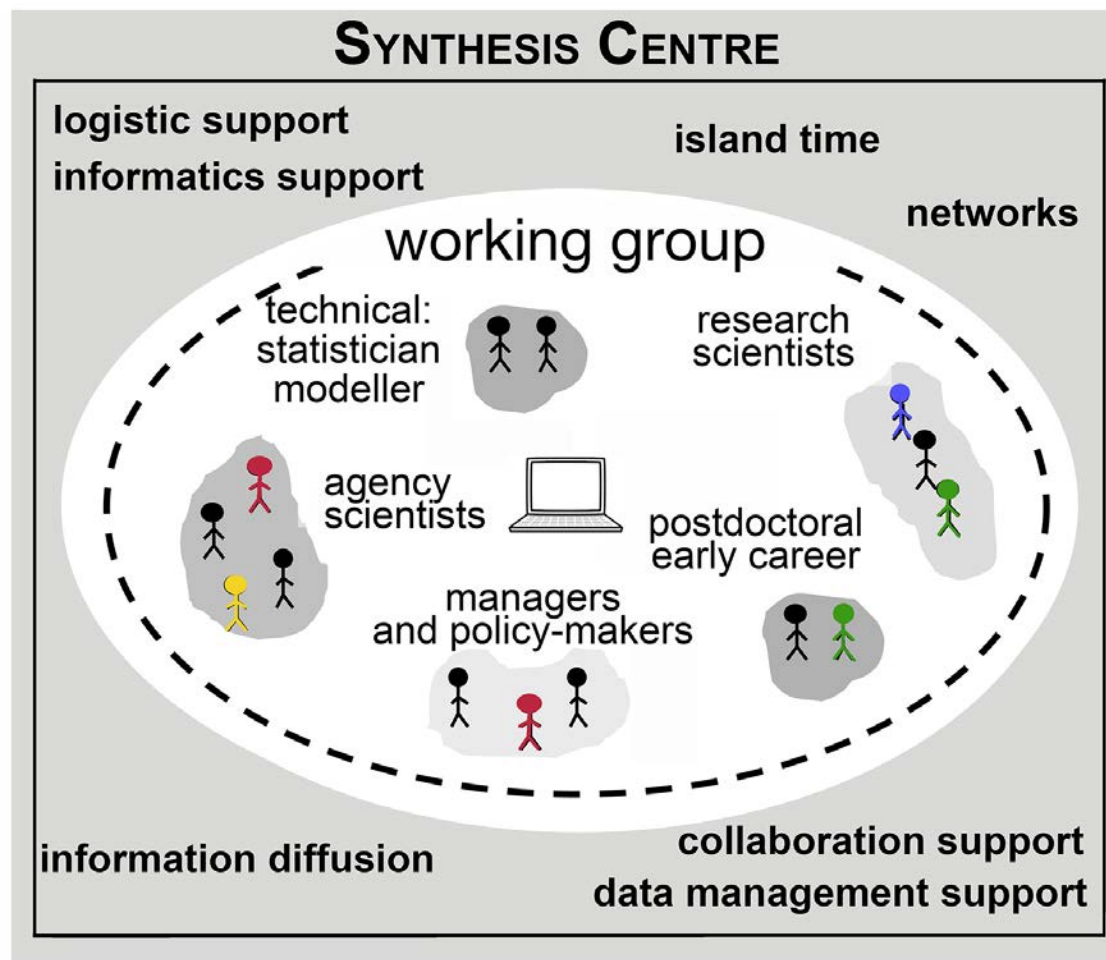
Data:
many sources;
different methods,
quality, times,
scales, owners,
level of description...

Experts:
discipline specialists,
time-poor, data novices,
isolated, concerned with IP.

Output: insights, wisdom, probity,
data for the future

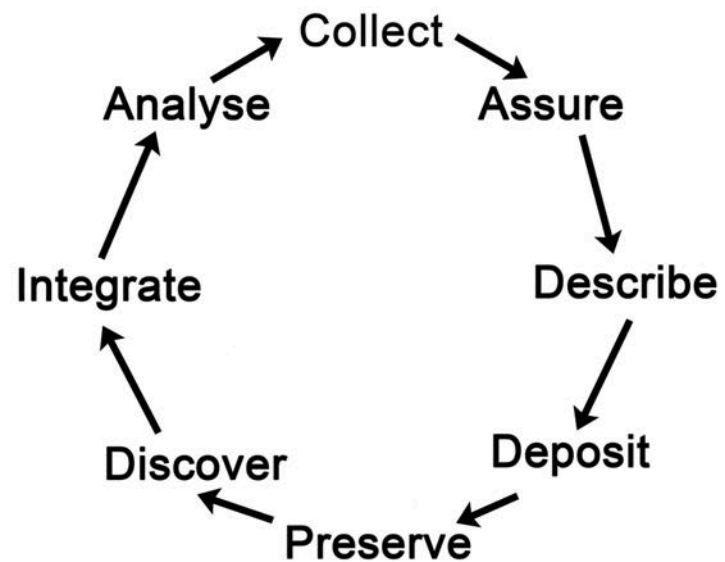


Un centre créé et développé par la FRB

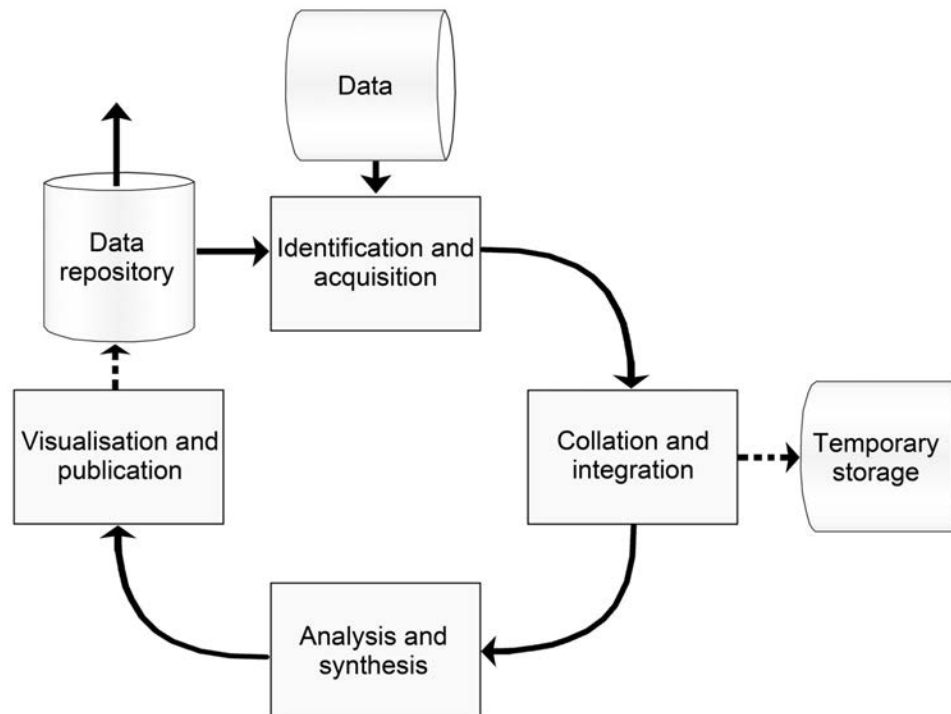


Adapted from Specht 2017, Pp. 469-488. In, *Terrestrial Ecosystem Research Infrastructures*. CRC Press

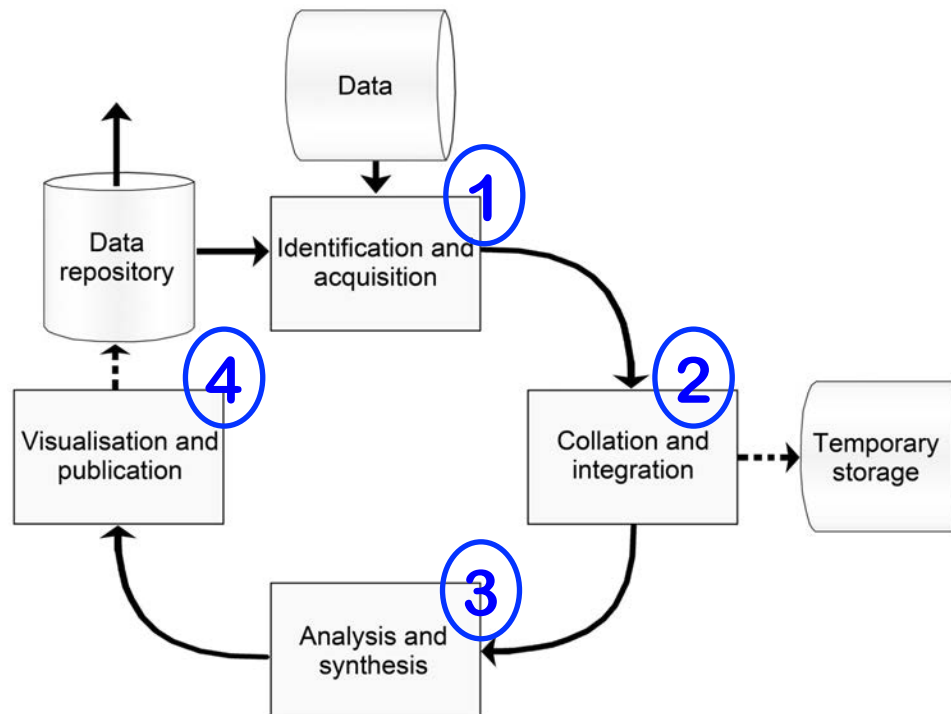
Data workflow



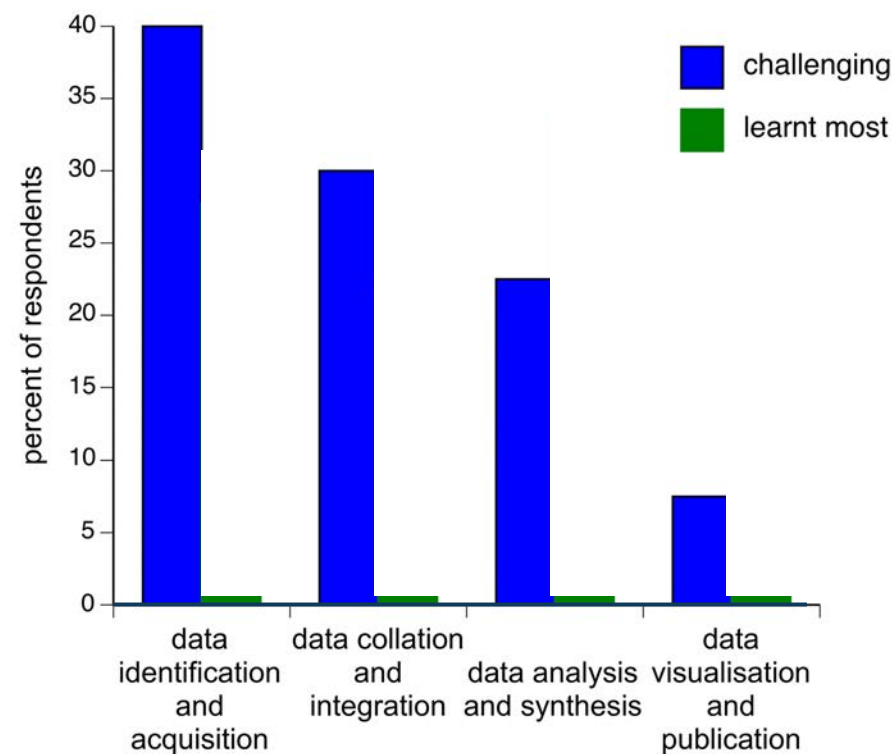
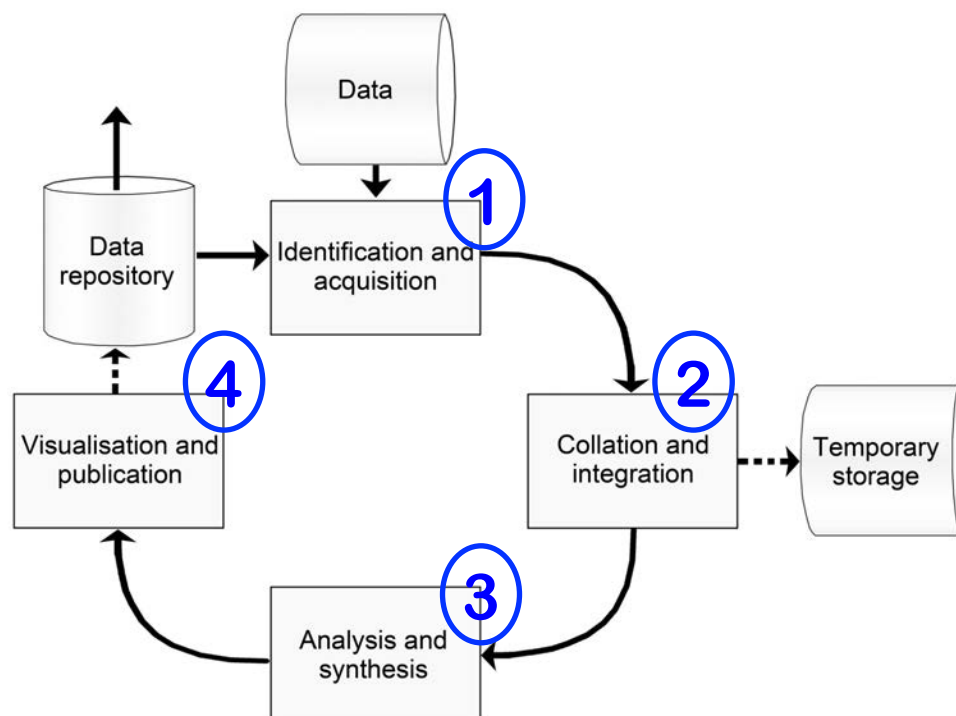
Data workflow



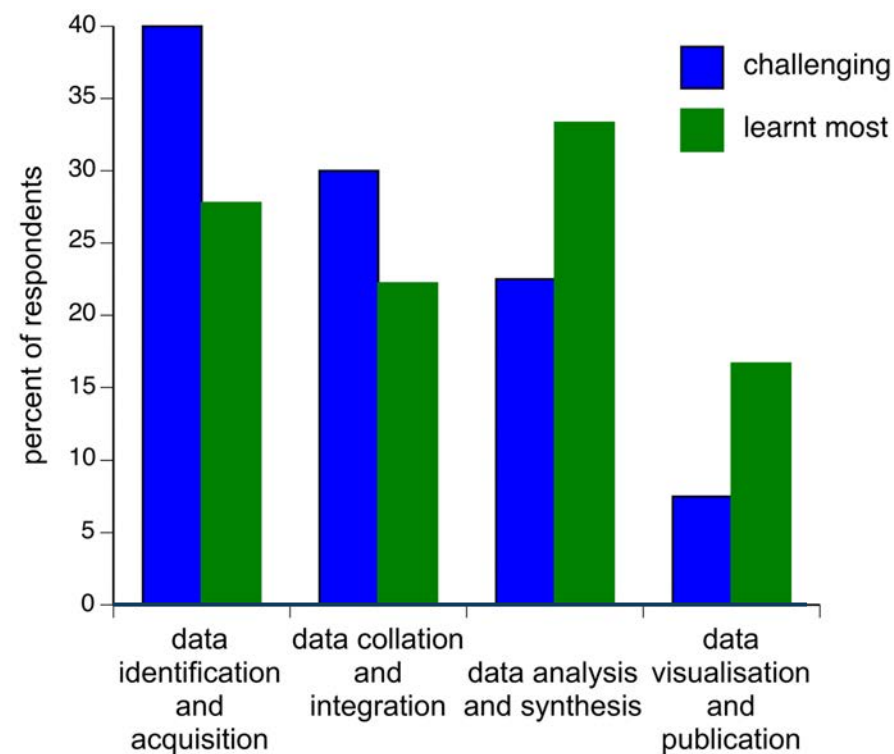
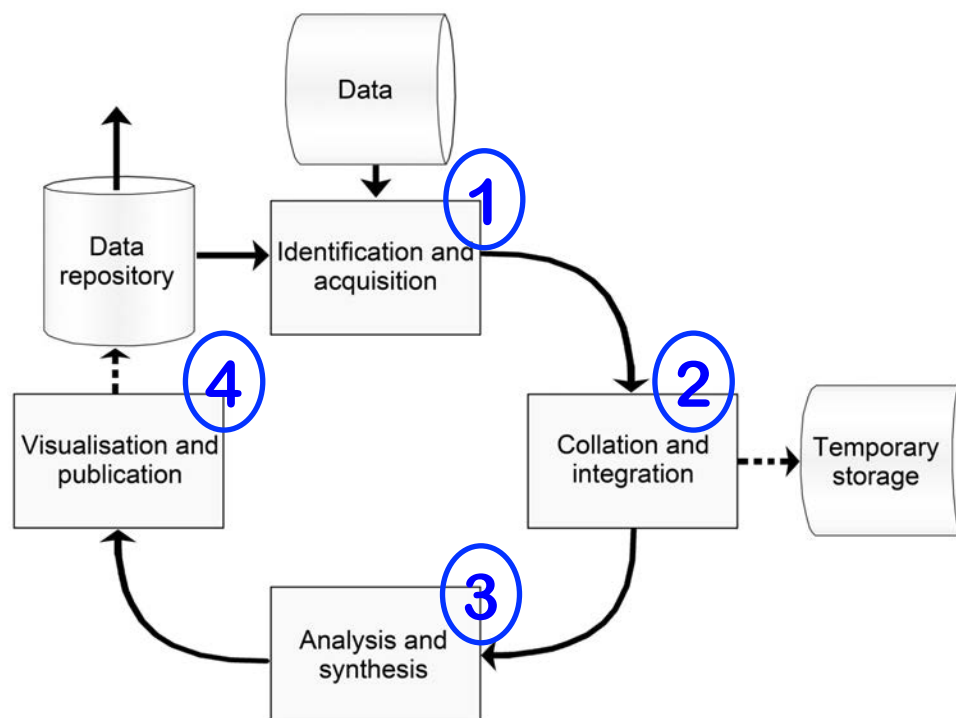
Data workflow



Data workflow



Data workflow

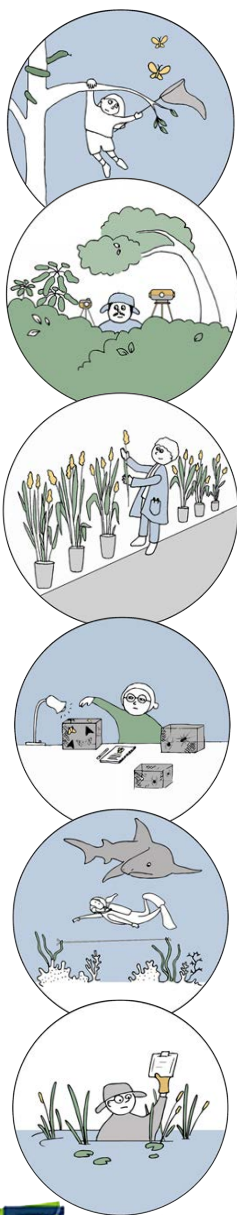




This talk

- Ecologists
- Synthesis centres
- A new tool

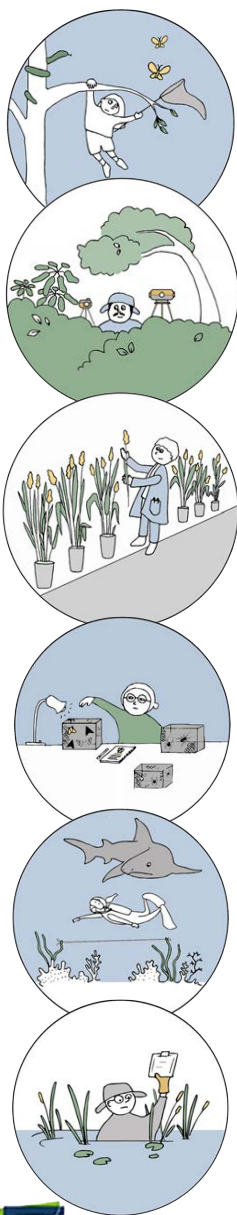




The CESAB Thesauform

- An on-line tool to assist domain specialists define the terms they are using to manage and describe their data: as they create them, as they access them, and as they deposit them.



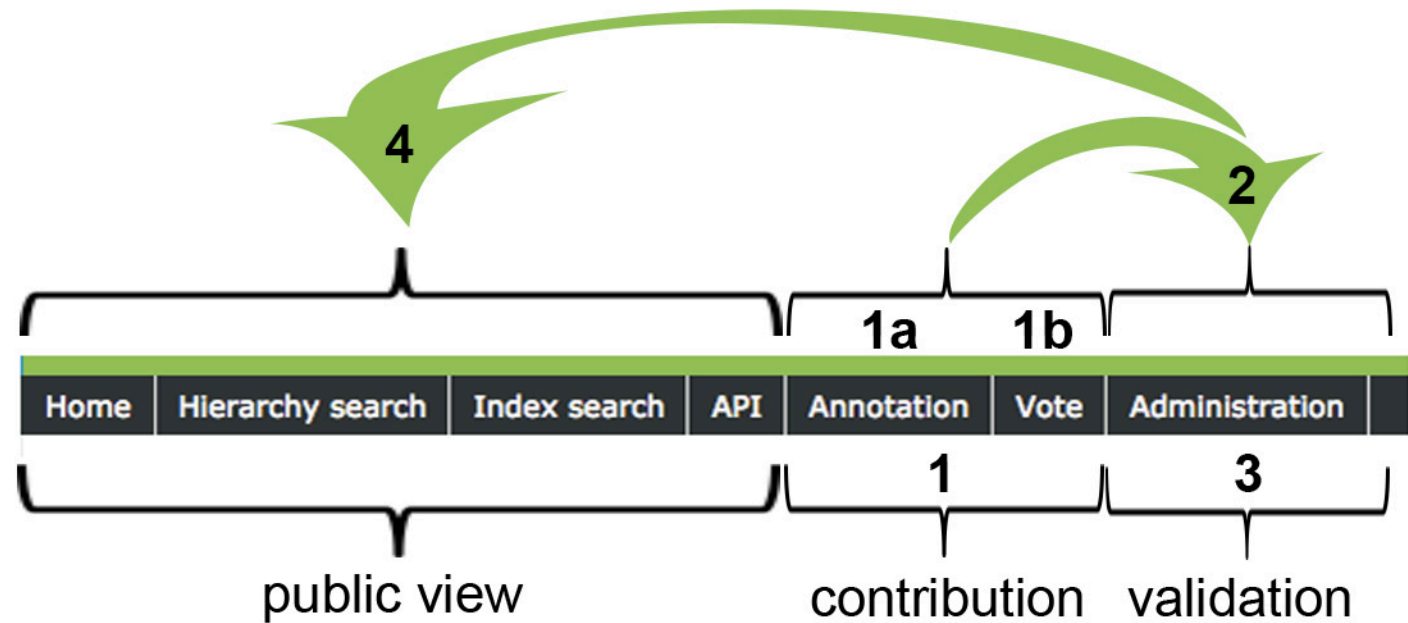
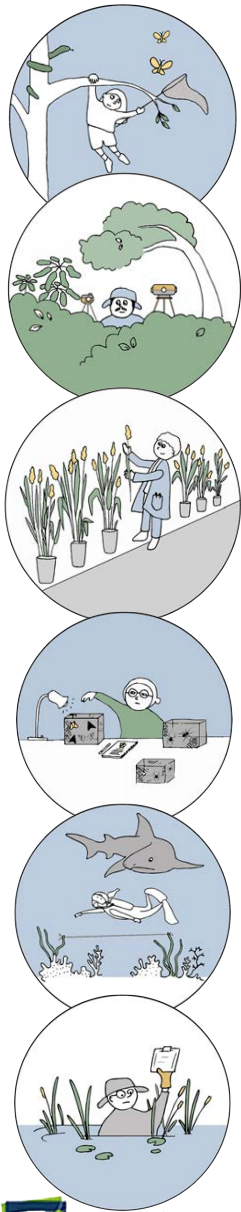


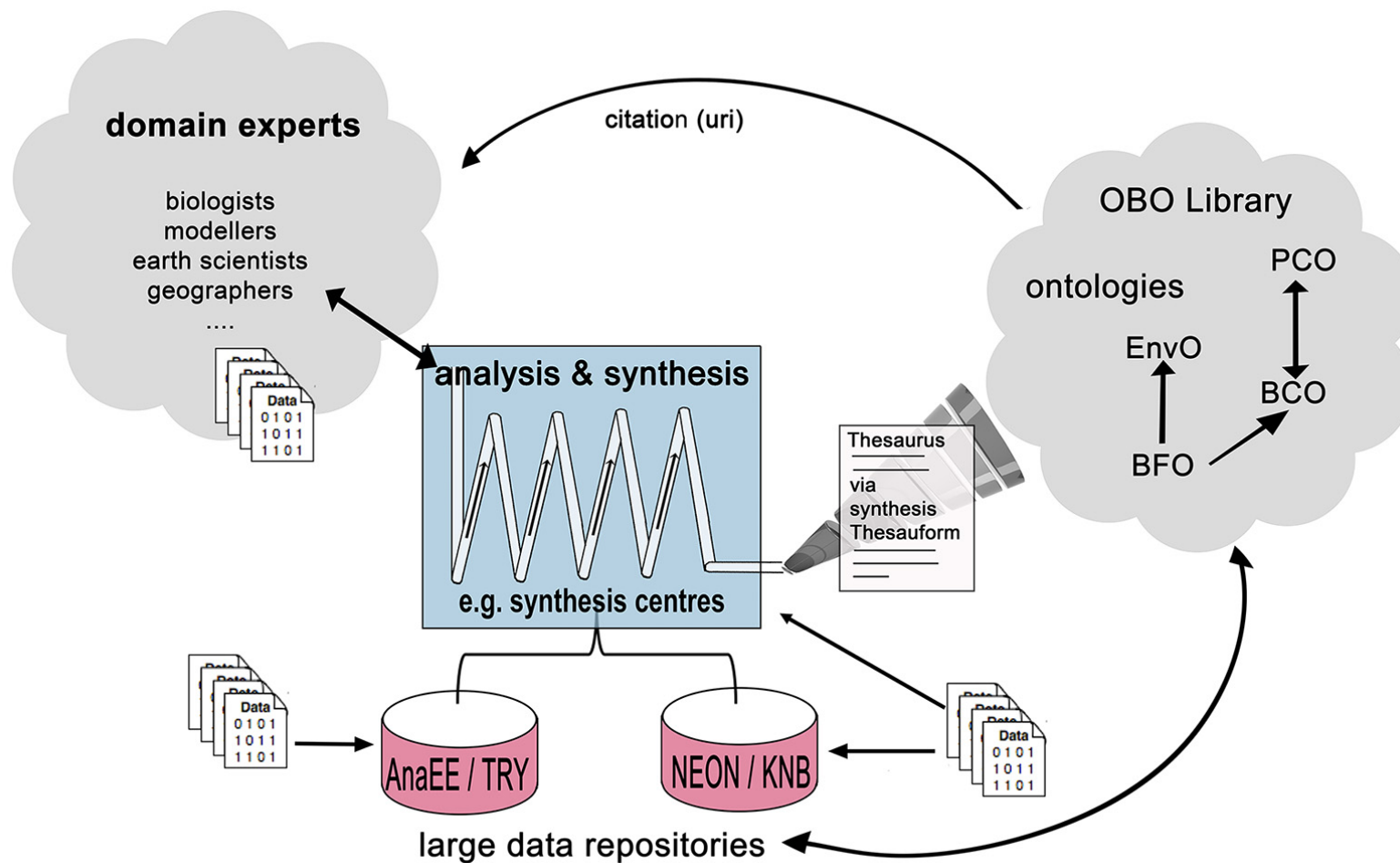
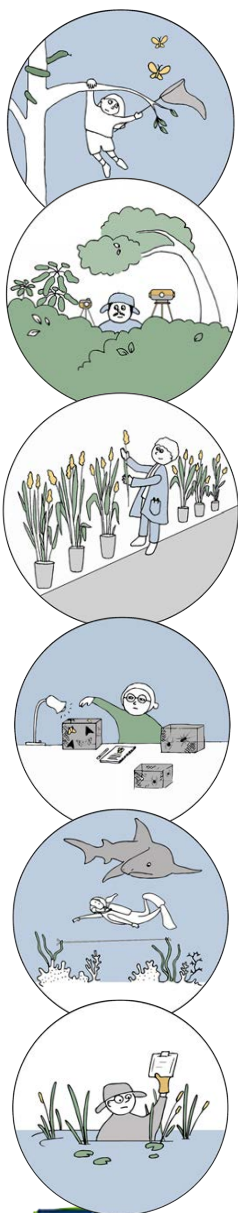
The CESAB Thesauform

- An on-line tool to assist domain specialists define the terms they are using to manage and describe their data: as they create them, as they access them, and as they deposit them.
- To encourage them to:
 - organise their data better
 - standardise their terminology,
 - look outside their immediate team, and contribute to global ontologies.
- Link : <https://www.youtube.com/watch?v=Bp5M8rsu0XE>



The CESAB Thesauform





Acknowledgements

This concept was initiated by Marie-Angelique Laporte (Biodiversity International), alongside Isabelle Mougenot (University of Montpellier) and Eric Garnier (CEFE-CNRS). Versions of her initial concept appear in the Thesaurus of Plant Characteristics and the T-Sita for soil macroinvertebrate traits.

Baptiste Laporte (CESAB-FRB) has been fundamental to the further development of the tool you have seen today.

