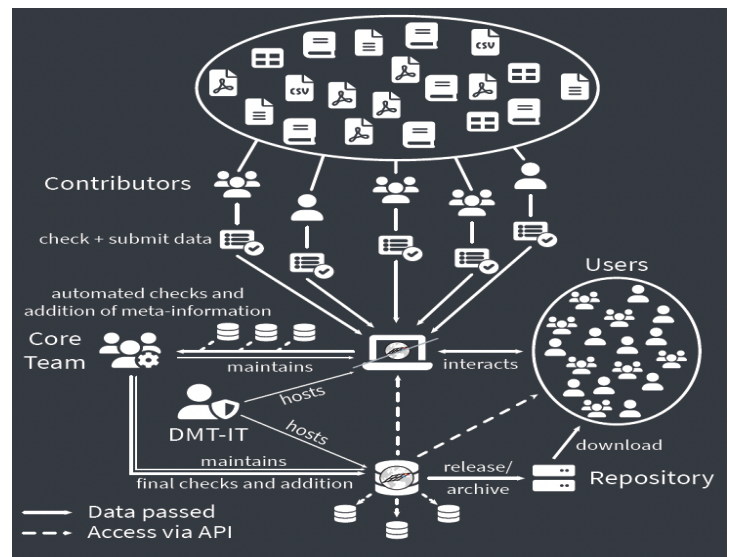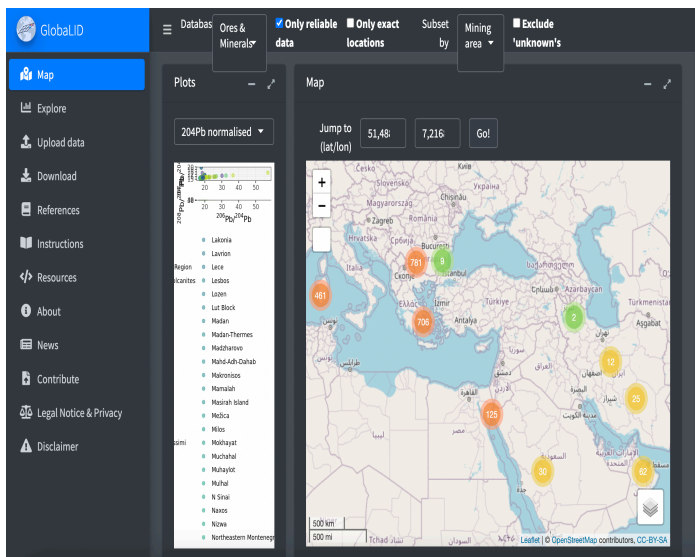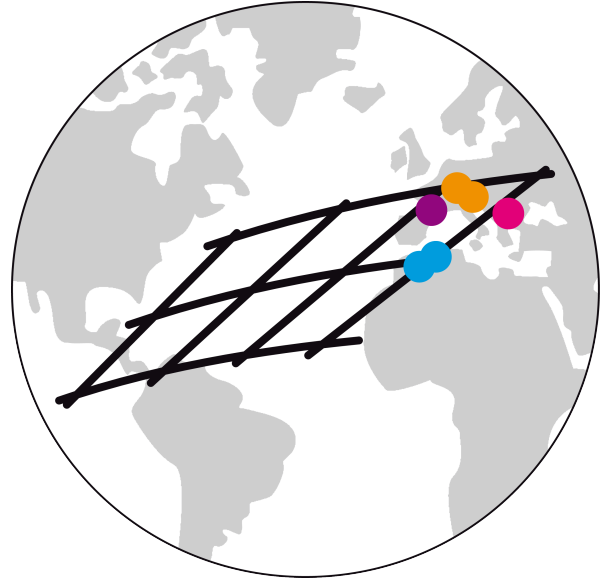# Many LIDs, but none matching the vessel

Developing a community standard for the publication and long-term archiving of lead isotope data in the archaeological sciences

A brainstorming workshop

Bochum, Deutsches Bergbau-Museum Bochum

February 8-10, 2023

->Register here: https://archmetaldbm.github.io/workshop/

Day 1: Key talks + 1st plenary discussion

Wednesday: February 8, 2023

<u>Morning session: Key talks</u>

- 9:00-9:15 - S. Klein, Bochum

  Welcome

- 9:15-9:45 - S. Klein, Bochum, Th. Rose, K. Westner, Y.-K. Hsu, Bochum

  GlobaLID – Vision of the core team, introduction to the app and discovered challenges

- 9:45-10:15 - Z. Stos-Gale, Gothenburg

  Crossing boundaries: 40 years of lead isotope research in archaeology

- 10:15 – 10:45 - G. Artioli, Padua

  Existing lead isotope databases (preliminary title)

- 10:45-11:15 - F. Albarède, Lyon

  Geological/geochemical pitfalls (preliminary title)

COFFEE BREAK

- 11:45-12:15 D. Killick / V. Renson / J. Stephens, Tucson/Arizona

  Lead Isotopes on Archaeological Materials in North American Laboratories

- 12:15-12:45 – D. Berger, Mannheim

  Lead isotopes in tin ingots (preliminary title)

- 12:45-13:15 - D. Wigg-Wolf, Frankfurt a.M.

  Application of lead isotopes for provenance studies in numismatics

- 13:15-13:45 – R. Liu, London

  Understanding the social roles of metal in early Chinese Bronze Age: a perspective from highly radiogenic lead

LUNCH BREAK

<u>15:00-16:30 - Late afternoon session: Plenary discussion</u>

Current methodological challenges for lead isotopy; existing approaches to a community standard; pro and cons of a community standard.

Day 2: Round tables - Discussion

Thursday, February 9, 2023

9:00-16:00 Morning/afternoon session (Coffee and lunch breaks will be announced spontaneously)

Round table for the discussion of three aspects

Tandem moderation (Natural scientist + archaeologist) is envisaged

1. Round table: Which data and meta-information is crucial?

    Introductory talk: I. Villa, Bern: **Pb from the millimeter to the planet: what else is usually forgotten?**

    a. Analytical data

    b. Geological materials

    c. Artefacts – and which ones are suitable as reference data?

    d. By-products (e.g., slags, prills, ores from excavation sites)

2. Round table: Standardization of databases

    Introductory talk: K. Elger, Potsdam

    a. Interconnectivity between different databases: Each group deploys their own data online and develops an API to link other databases. Alternatively, each contributes data to a central database (like GlobaLID) so that all data can be accessed at once?

    b. Unique resource identifier (URI) and controlled vocabularies and terminologies; adoption of unique identifier, such as the IGSN for geological samples. Use of thesauri, ontologies, standardized mineral abbreviations, geological period information, geological time period vs. orogenic events from e.g., USGS, EarthChem databases.

3. Round table: Statistics and visualisation

    Introductory talk: P. Degryse, Leiden/Leuven: **Perspectives on data dots, biplots, ellipses and model ages**

    Visualization, statistic and processing tools, methods, reporting – what is really useful and needed by the community? What is required, what would be nice-to-have? What is proper reporting?

WORKSHOP DINNER

Day 3: Plenary discussion, Evaluation of round table results, Final discussion

Friday, February 10, 2023

9.00-13:00 Morning session

Impulse talk: Chr. Keller/Berlin, NFDI4Objects

Presentation of the three round table discussions in the plenary and discussion.

SHORT COFFEE BREAK - will be announced spontaneously

Return to the roundtables: Define the discussed standards, taking into account the feedback from the plenary.

LUNCH BREAK

14:30-16:00 Afternoon session

Final plenary: Summary of the second round of roundtables. Discussion about how to proceed, e.g., follow-up meetings, roadmap to the publication and establishment of the community standard, extension to other methods and materials.

16:00 Closing of the workshop, takeaways and farewell