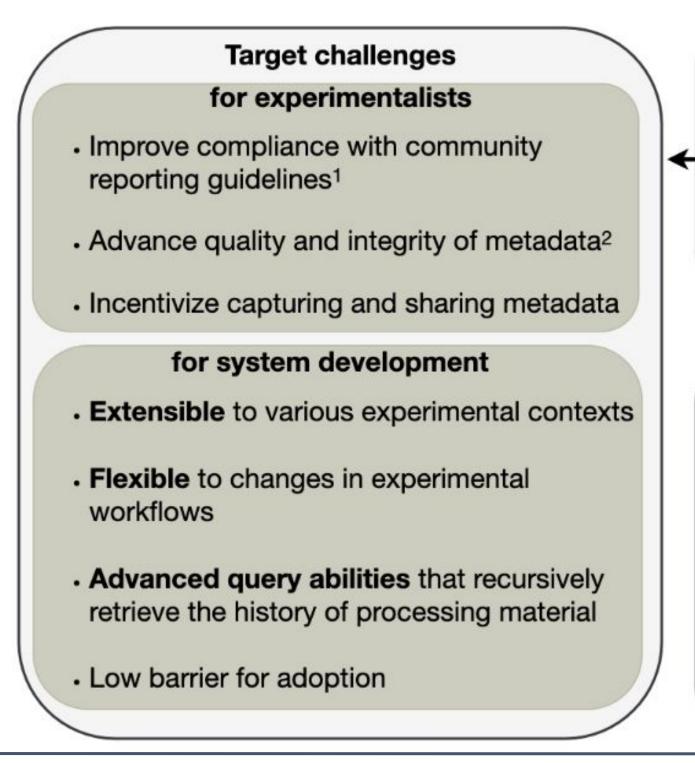
Integrating spreadsheets and databases to advance capturing complex metadata

Abigail E. Moore¹, Amanda O. Shaver¹, Brianna M. Garcia¹, Goncalo J. Gouveia¹ and Arthur S. Edison¹

Watch/listen to poster tour (60 sec)

Introduction



databases.

Benefits of metadata

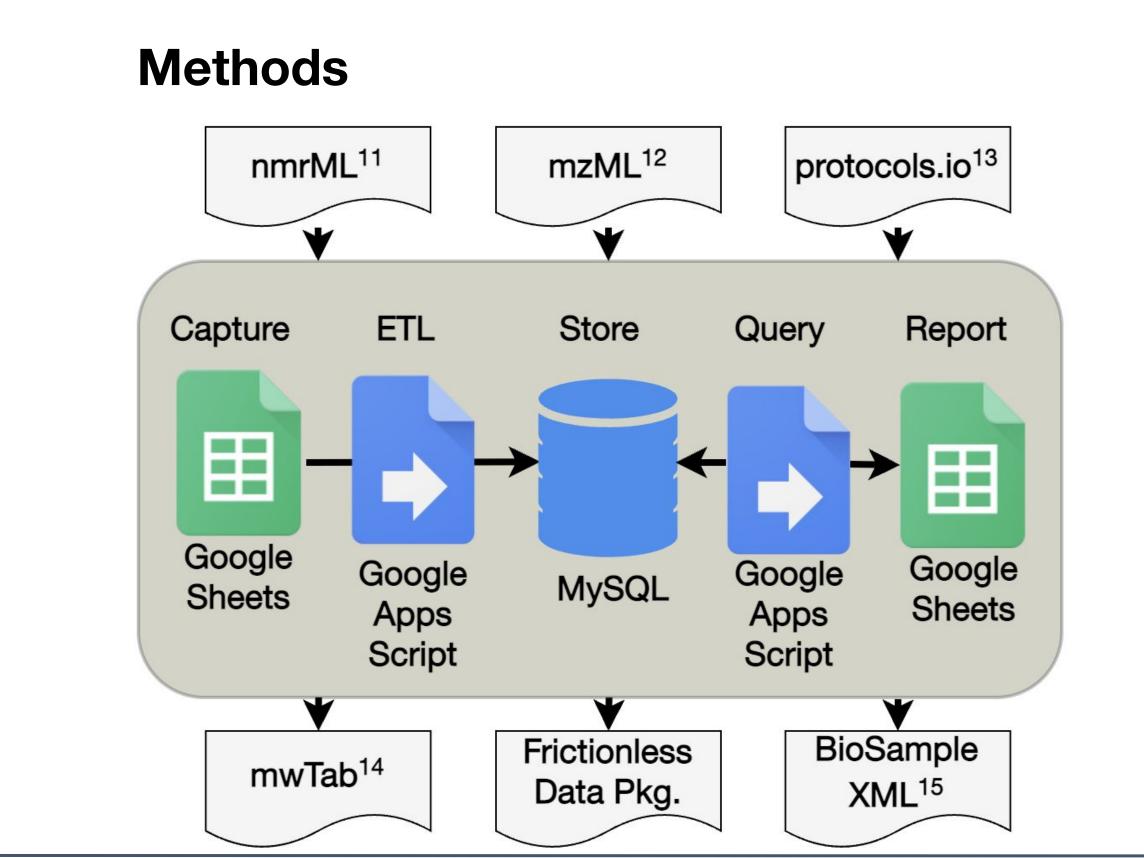
meta- and re- analyses and reproducibility^{3,4}

analytical data and physical material

view of experimentation

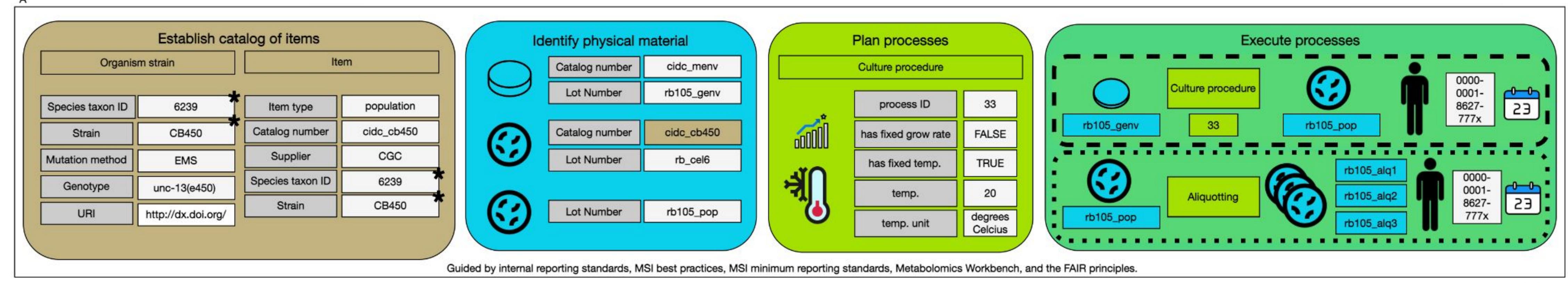
¹University of Georgia, Athens, GA 30605, USA LiteLIMS metadata management system

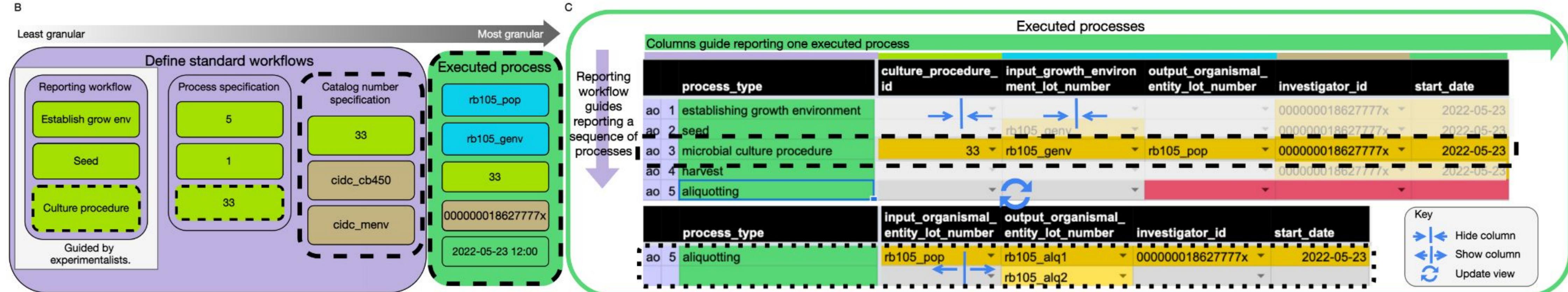
Reporting guideline sources Metadata describe the contexts of experiments with details of research goals **MSI** minimum MSI best FAIR and design, material, processes, events, and results among other entities. principles4 standards5 LiteLIMS joins the familiarity of spreadsheets with the power of relational **Metabolomics** CIDC-UGA Researcher Workbench⁷ Scope Metabolomics study workflow · Promote long-term usability of methods, Material management Experimental Subject and sample tracking Discover history of processing material Inventory management Workflow management Enhance study continuity and share unified Lab execution Result input → Data analysis → Interpretation Render FAIR analytical data, enable novel, processing Report generation



Results

LiteLIMS enables capturing conceptual entities, physical material, planned processes, and standard workflows via five Sheets. A) Create catalog of items, material IDs, planned processes details of activities in four Sheets. B) Define a reporting workflow, a sequence of processes, in a fifth Sheet. C) Auto-populate reporting workflows via menu (not shown) to consistently and flexibly report activities. Reflect one-to-many relationships with mini tables (dotted box). Change the visibility to columns relevant to the current activities (dark blue icons). Regard incomplete, required fields (red).





Key references

- 1. Spicer et al. Sci. Data. 2011, 4, 170137.
- 2. Gonçalves & Musen. Sci. Data. 2019, 6, 190021.
- 3. Elberskirch et al. Nanomat. 2022, 12, 1053.

Complete references

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