

## Community Engagement for Developing the Principles and Practices of Agile Data Curation

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### Abstract

The combination of increasing demands for more systematic data management planning in support of effective in-project data management, research data sharing, and long-term preservation of discovery and access; increasing volumes of data being created and used in research; and research support budgets that aren't increasing in proportion to these demands is creating a situation in which greater efficiencies and product-centered research data management workflows and processes are needed. Taking inspiration from the principles and practices of agile software development, the presenters of this poster are working towards the development of three sets of interdependent products. First, a set of *core principles* that have broad support within the community will be identified and/or developed from existing statements of principles; solicited from the broad community of research data creators, curators, and users; and derived from implicit principles exemplified by specific research data projects that have achieved notable success in enabling efficient use, preservation, discovery and reuse. Second, building upon the case studies identified and reviewed as part of the aforementioned process of identifying core data management principles, additional case studies are being sought that demonstrate effective research data management practices that are aligned with the identified principles and have resulted in well structured, effectively preserved, and documented data sets that are well-positioned for discovery and reuse by diverse

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users. And third, the development of a collection of research data curation design patterns that can provide structured guidance to researchers and data curators in developing workflows that deliver incremental increases in research data value through time, both to the researchers who are creating and using data for the first time and for future users of those data.

This progression from values and principles through current exemplars to documented recommended practices *that are of sufficient specificity to be actionable* is anticipated to produce the theoretical *and* operational foundation needed for more efficient development and delivery of research data value. This greater efficiency has the potential to allow for the continued growth of the volume, diversity, and rate of creation within limited resources, while also enabling more effective collaboration among increasingly large and diverse research teams.

This poster will outline the progress to date in all three areas of the development of this model of *agile data curation*:

- Input received and existing principles examined thus far in developing a core set of values and principles upon which a set of data curation practices may be built
- Identification of exemplars of these values and principles - intentional or otherwise - for use in both illuminating these in practice
- Development of design patterns based upon the case studies that abstract elements from practice and present those elements to research teams and data curators in a structure that enables effective integration into their specific research scenario.

Finally, this presentation also provides an additional communication path between the team and a growing international community of data management and curation practitioners who are both contributing to and providing feedback on the concepts and materials being developed.