Rationale for Research

• DCC Lifecycle Model has play an important role in digital curation from both theoretical and practical perspective

• Context and environment – particularly related to data – have changed notably since the inception of the model
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- Consideration of data in terms of scope, complexity, and machine actionable nature (especially as it relates to connections between data archives and high performance computing)
- Assessing impact of machine learning for data processing and analytics
- Casting the Lifecycle model in terms of the growing movement of integrated research workflows
- Accounting for algorithmic bias, particularly as it relates to issues of diversity and inclusion
Goal and Methodology

• **Recommendations** for next steps – not a new version of the model (if that’s even necessary)

• **Review** of lifecycle models – both content and research
  • Interviews with **DCC staff** and analysis of documentation including original (Sarah Higgins) paper and subsequent **DCC reports**

• I am not representing the DCC – findings and recommendations from my, Carole Palmer’s and Rainbow Huang’s (both University of Washington) **synthesis**
Original DCC Lifecycle Model

• Motivated by desire to organize DCC website materials (and associated requests)

• Based on archival science principles – possible connections to the OAIS reference model

• Adapted to multiple purposes – some of which have been unintended or unplanned

• Pedagogical applications were perhaps most (pleasantly) surprising

• Guide for both institutions and researchers for conversation
Recommendations

• Adopt a more process oriented approach accounting for workflows, sheer curation, and agile software development practices

• Modular approach – focus on most relevant components for context or domain rather than entire lifecycle

• Decision tree approach – extend lifecycle with framework for researchers and curators to make specific interventions

• While there are some initial resources (e.g., values levers, data sheets) for considering algorithmic bias, there remains much to explore

• Incorporate data science principles...
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