

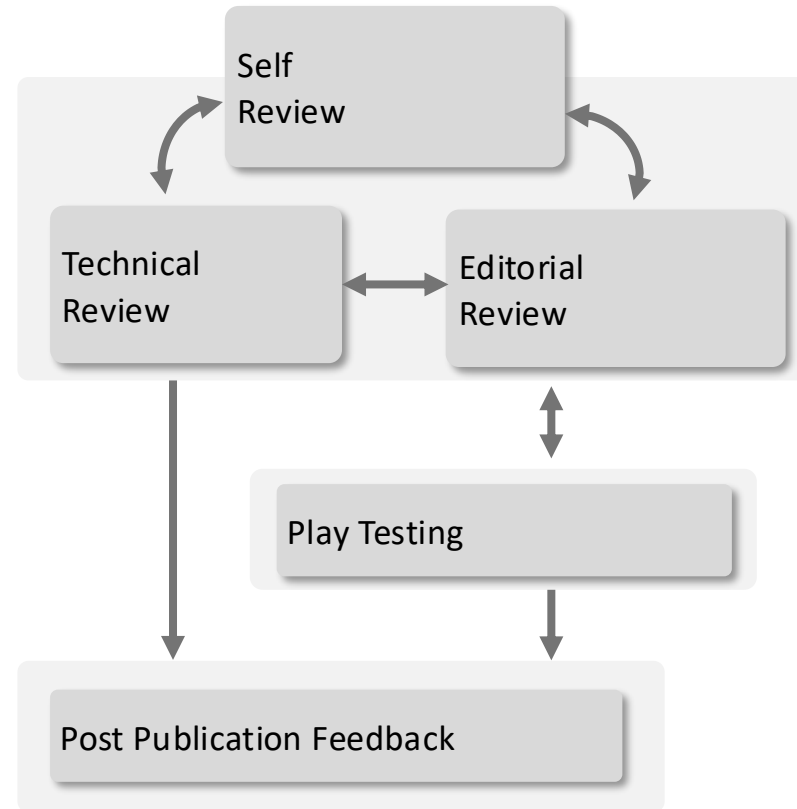
Malleable Interfaces for Reviewing Software Documentation

Avinash Bhat

Software Technology Lab, McGill University

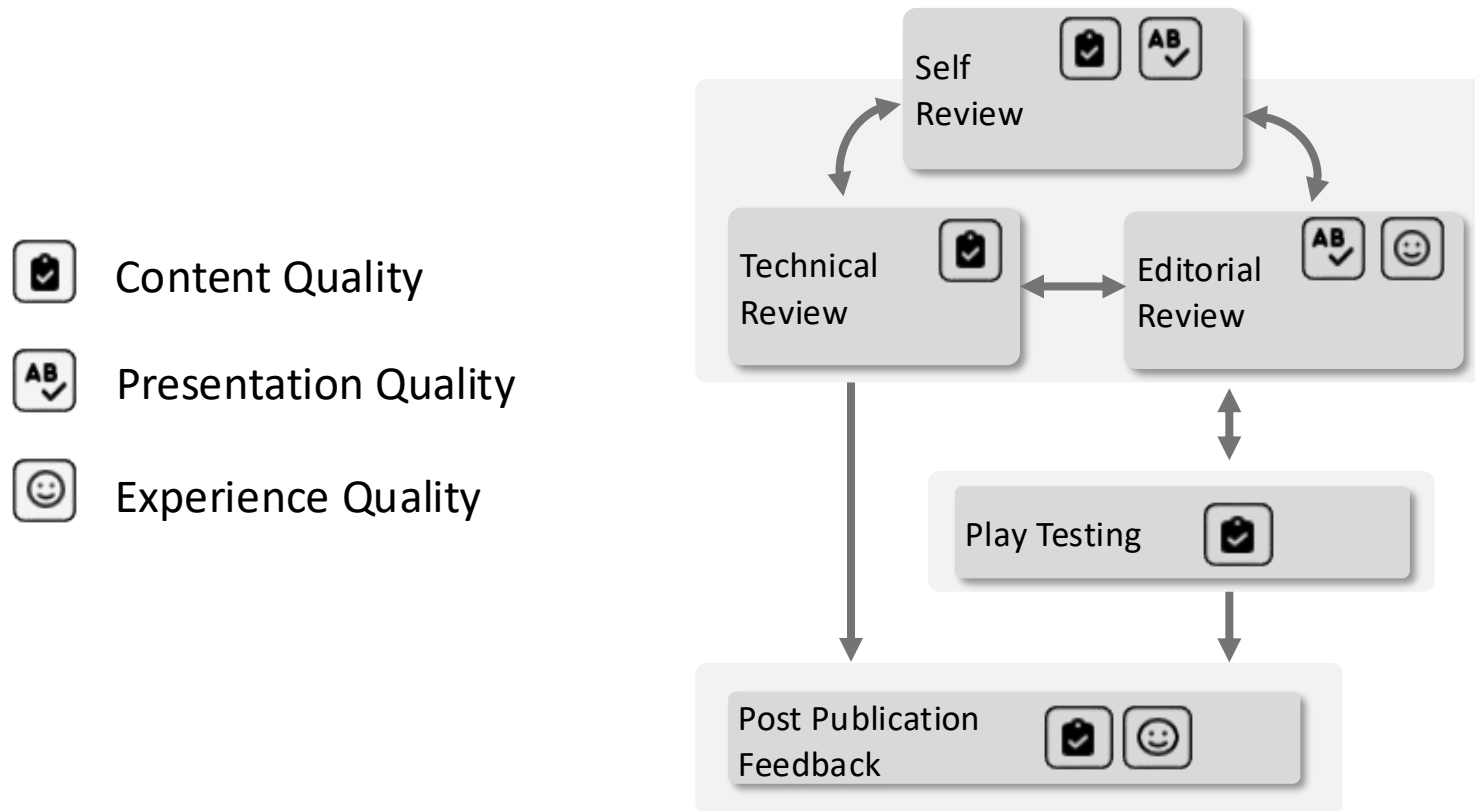
avinashbhat.github.io

The documentation review process consists of **five stages**...



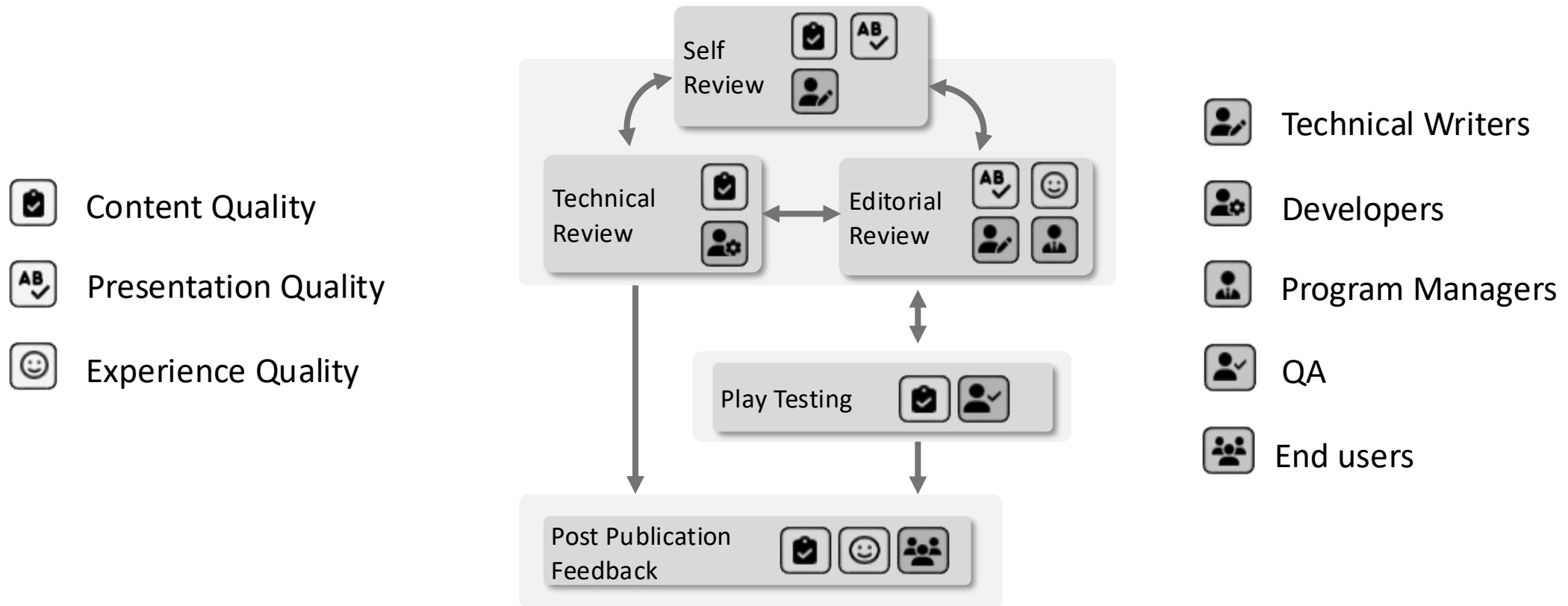
“A Second Set of Eyes”: The Process and Challenges of Software Documentation Review.
Avinash Bhat, Ian Arawjo, Disha Shrivastava, Jin L.C. Guo (*Under Review*)

The documentation review process consists of five stages, each evaluating one or more of the **three quality aspects**...



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The documentation review process consists of five stages, each evaluating one or more of the three quality aspects and involving **different practitioner roles**.



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Problem #1

Existing review interfaces **do not account** for specific review stages.

“Technical writers have unmet needs because we’re not software developers and we can’t make tools, so we have to rely on developers to make tools for us.”

— *An anonymous technical writer [1]*

1. Do LLMs Meet the Needs of Software Tutorial Writers? Opportunities and Design Implications.
Avinash Bhat, Disha Shrivastava, Jin L.C. Guo. (*DIS 2024*)

“Technical writers have unmet needs because we’re not software developers and we can’t make tools, so we have to rely on developers to make tools for us.”

— *An anonymous technical writer [1]*

“Long term, if we implemented something like docs as code, I feel like it would depend too much on me, so it would not be maintainable.”

— *Another anonymous technical writer [2]*

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Problem #2

Practitioners **depend on developers** to build and maintain documentation tools.

Goal

A documentation review environment in which every practitioner, not just developers, can work collaboratively.

A documentation review environment in which every practitioner, not just developers, can work collaboratively.



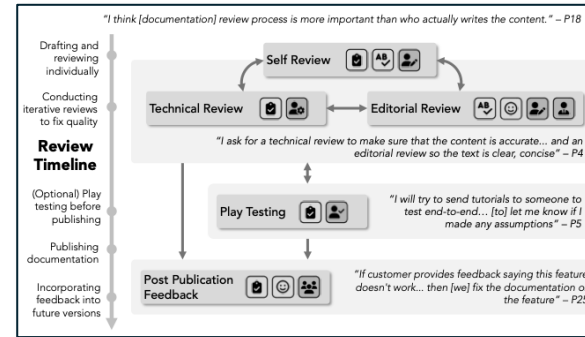
Malleability

Users should be able to **reshape** their tools to fit their work, rather than adapting their work to fit the tools.

<https://malleable.systems>

Designing and Programming Malleable Software. Philip Tchemavskij. (*Ph.D. Dissertation. Université Paris Saclay. 2019*)

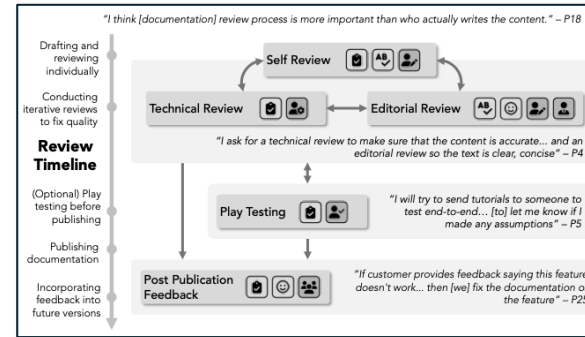
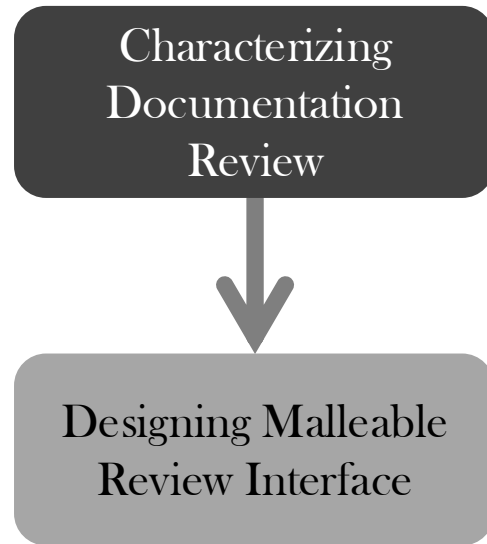
Characterizing Documentation Review



1. Process Model (Interview Study)

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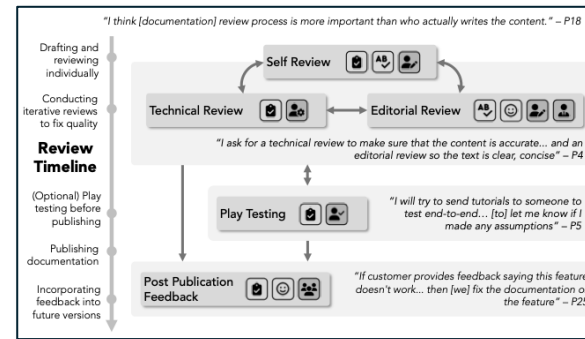
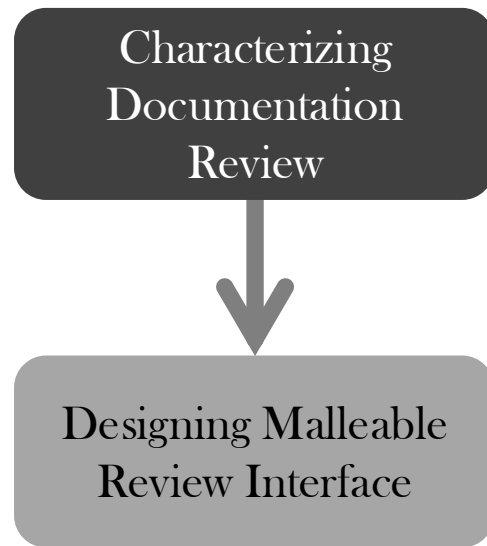


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2. System (Observation Study & Design Workshops)



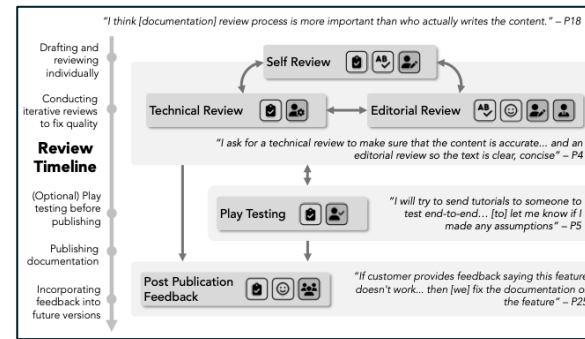
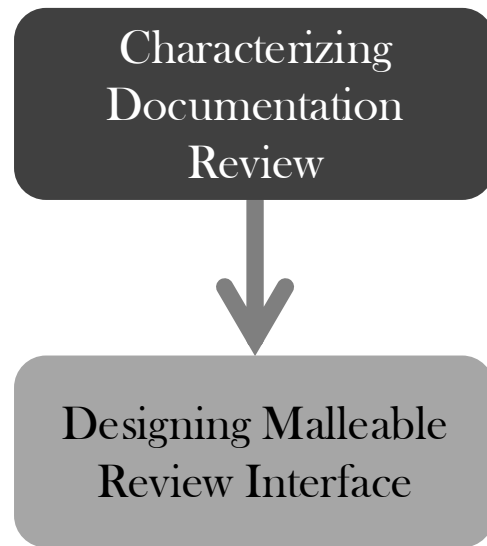
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Need #1: Present information and interactions relevant to the reviewer as they review **individually**...



1. Process Model (Interview Study)

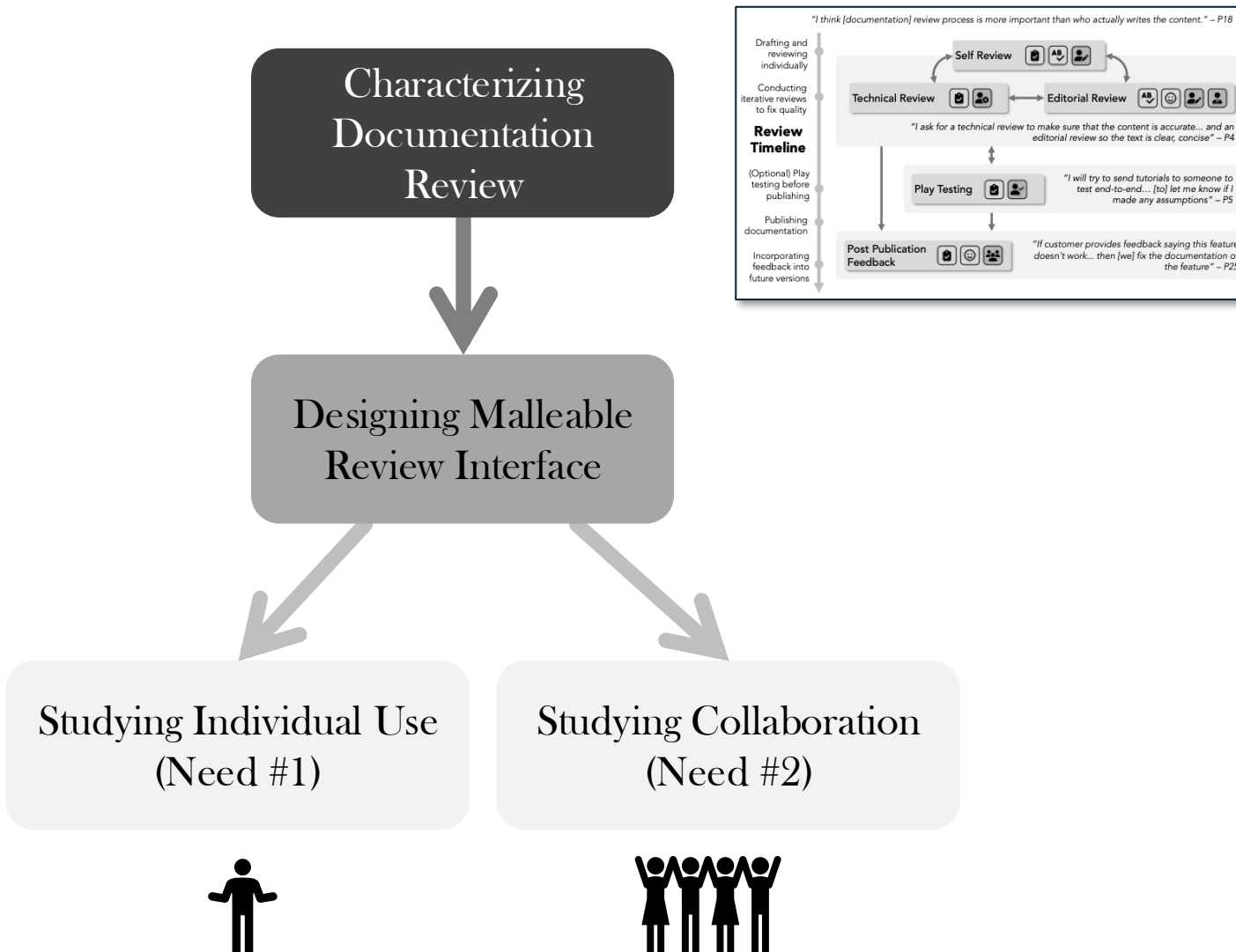
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Need #1: Present information and interactions relevant to the reviewer as they review individually...

Need #2: ... while surfacing and resolving competing feedback when reviewers work **together**.



1. Process Model (Interview Study)

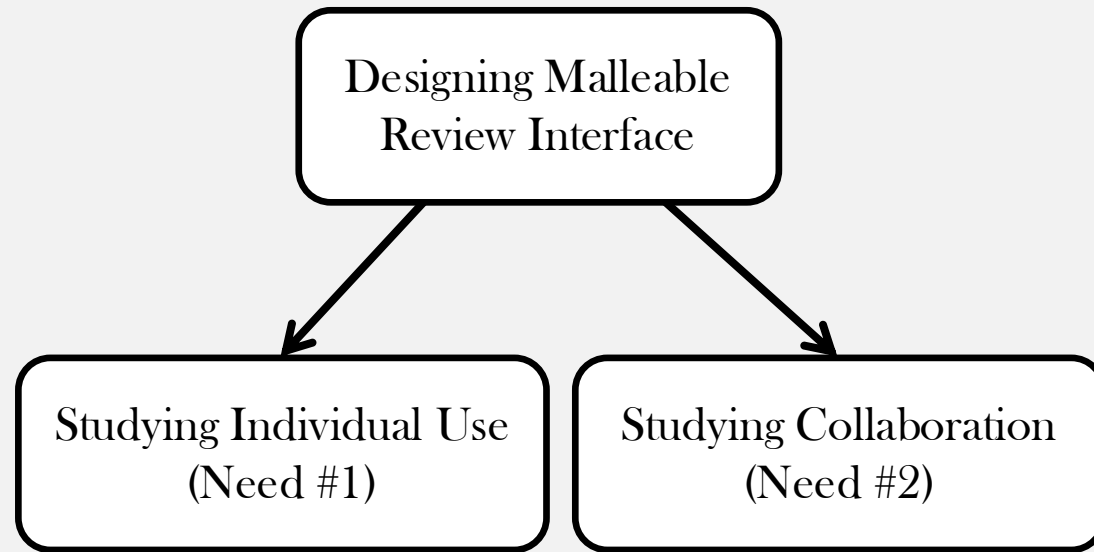
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3. Evaluation + Design Implications (Lab & Field Studies)

Looking for **feedback/opinions on upcoming phases.**



2. System (Observation Study & Design Workshops)

3. Evaluation + Design Implications (Lab & Field Studies)

Open for collaborations/discussions!

