Designing HPC Software for People

Scientific Achievement

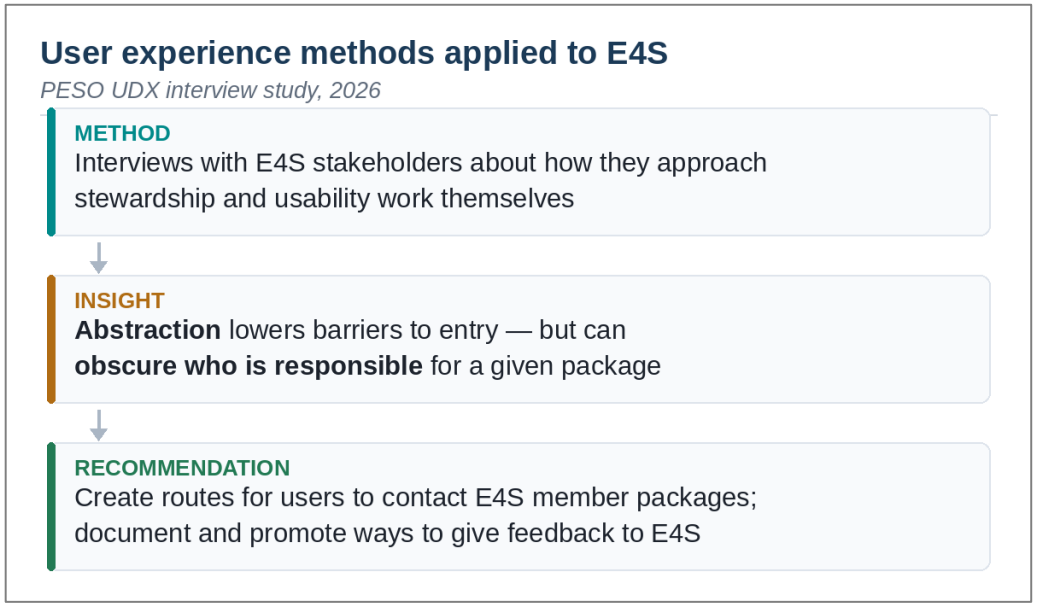
- **PESO UDX:** user experience methods applied to PESO and CASS software
- Interviews asked how E4S stakeholders approach stewardship and usability work
- **Finding: abstraction lowers barriers but can obscure who is responsible**
- Recommendation: create routes for users to reach E4S member packages

Significance and Impact

- Usability problems hinder adoption and make development unnecessarily difficult
- Findings feed back into E4S, showing users the teams behind each package
- CASS and The Good Docs Project pair technical writers with software teams
- **PESO's strategy is to empower and assist developers, not work around them**

Technical Approach

- Interviews, heuristic evaluations, and collaborative exercises as assessment tools
- Heuristic evaluation checks a tool against Nielsen's ten usability principles
- UDX webinars and discussion hours alternate monthly, upskilling the community
- Talks archived on the CASS channel; slides in the UX in Science Zenodo community



PESO's UDX work turns user experience methods into concrete changes to scientific software. Interviews with E4S stakeholders about how they approach stewardship found that abstraction, while it lowers barriers to entry, can leave users unsure who is responsible for a given package — and yielded specific recommendations for restoring those connections.

Community resources extend the same work. UDX webinars run the first Tuesday of odd months and discussion hours the first Tuesday of even months, with past talks archived at go.lbl.gov/udx-webinars and slides deposited in the UX in Science Zenodo community.

PESO
https://pesoproject.org

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Stewarding and advancing the current and future ecosystem of HPC-AI computing software

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UDX webinars: https://go.lbl.gov/udx-webinars
PESO: https://pesoproject.org CASS: https://cass.community