

Open Digital Infrastructure in Astrophysics

Questions

- What is the relationship between money and sustainability for community-driven, open-knowledge software instruments that enable transformative research in astronomy?
- At what points in a software instrument's lifecycle does an injection of financial resources help or hurt?
- Are science driven software instruments sustainable for the long term, say the next 40 years?

Methodology

- 17 software projects cover 18 high-value topics on science capability, developer model, target community, bibliometrics, funding profile, and sustainability efforts.

Findings

- There is not a one-size-fits-all answer for nurturing a culture of free, open-source, open-knowledge software instruments.
- Distinguish between funding innovation driven research and funding maintenance and community support, both are needed.
- The report offers advice and 21 questions that a potential funder may want to see addressed when considering support of a specific software project.

“Figuring out how to support digital infrastructure may seem daunting, but there are plenty of reasons to see the road ahead as an opportunity.”

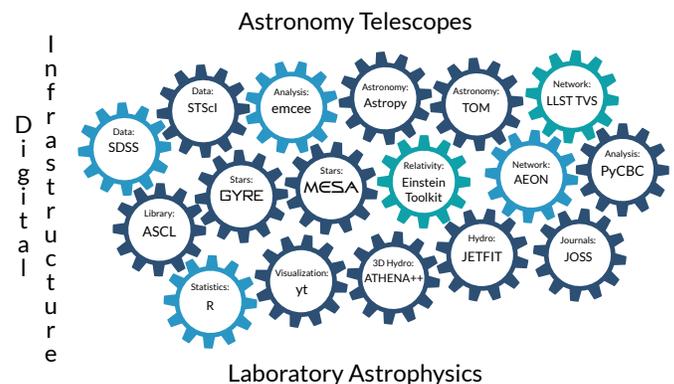
Nadia Eghbal in Roads And Bridges: The Unseen Labor Behind Our Digital Infrastructure

Recommendations

- Consider the creation of a “Digital Infrastructure Fellows” program.
- Each Fellow would be funded for 3-5 years at the institution that makes the most sense for the digital infrastructure project(s).
- A Fellows program is a direct and concrete solution to the questions and findings of the project report.

Learn more

You can read the full report [here](#). Please reach out to Frank Timmes at ftimmes@gmail.com with any questions.



The “Open Digital Infrastructure in Astrophysics” workshop was held June 4 - 5, 2019 at the Kavli Institute for Theoretical Physics at UC Santa Barbara, http://cococubed.asu.edu/digital_infrastructure_astronomy/. This workshop formed the basis for a 21 page report published in January 2020 by the American Astronomical Society, <https://ui.adsabs.harvard.edu/abs/2020BAAS...52a0201T/abstract>.