STEP
SUSTAINABLE TOOLS
ECOSYSTEM PROJECT

Challenge 4: Management

August 16, 2023

Philip Carns (STEP deputy PI)
Argonne National Laboratory

Definition and background

From the proposal abstract:

"**The management challenge:** Building a sustainable tools ecosystem will require plans for organizing, operating budgets, community standards, technology tracking, workforce development with particular attention to promoting inclusive and equitable research (PIER)."

We touched on the management challenge in a brief full-group session at the East Coast town hall, and then explored it in more depth in the Midwest town hall.

This presentation will try to summarize some findings to date.

STEP: SUSTAINABLE TOOLS ECOSYSTEM PROJECT

Recurring issues and themes

- **Minimizing management overhead**
  - Don't let bureaucracy hinder productivity.
  - Maximize "bang for the buck" with reports, reviews, etc. that serve a dual purpose in promoting community sustainability.
- **Transparency**
  - Clear, well-defined, and public governance, guidelines, and metrics.
- **Inclusivity**
  - Insure fair representation across multiple dimensions.
  - Insure that all stakeholders have a voice.
- **Accountability and stewardship**
  - Be thoughtful about how to measure impact and be responsive to the needs of the community.

STEP SUSTAINABLE TOOLS ECOSYSTEM PROJECT

A high level view of STEP Management

There will be some duplication in this presentation.

Most of the management issues are cross cutting and touch on several related issues.

STEP
SUSTAINABLE TOOLS
ECOSYSTEM PROJECT

https://ascr-step.org

STEP: Management Challenge

Recommendations: project lifecycle management

- **Use a lightweight, structured proposal process** based on successful examples in other fields.
- **Submit functionality demos as the central evaluation artifact for quarterly project milestones.**
  - Emphasize sustainability via reproducible artifacts, not one-time reports.
- **Projects will have clearly defined durations** with documented policies for requesting extensions or changes in direction.
- **Semi-annual project PI meetings** will disseminate findings across projects and coordinate efforts.

STEP
SUSTAINABLE TOOLS
ECOSYSTEM PROJECT

https://ascr-step.org

STEP: Management Challenge

Recommendations: External reporting

- **Provide an annual report** summarizing the accomplishments and plans for all four initiatives.

- **Publish an annual report synopsis** on the website with full report available on request.

- **Assemble an external advisory board**, whose chief responsibility is to assemble once a year to assess annual report and provide feedback to both STEP and the DOE.

- **Publicly document the STEP Center code of conduct, assessment criteria, governance policies, management/staffing policies, and reporting artifacts.**

https://ascr-step.org

STEP: Management Challenge
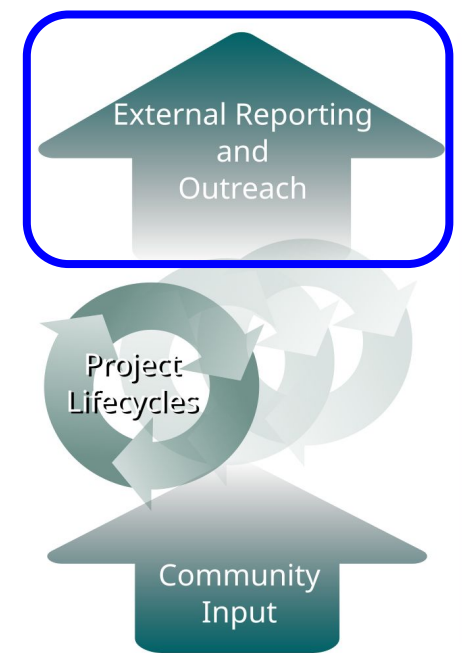
Recommendations: Outreach

- In addition to a formal annual report, the STEP Center will leverage its web presence to engage in ongoing reporting to the broader community to foster sustainability:

    – **Publish success stories**, demonstrating how sustainability challenges in the tools community are being addressed and how the work can be applied more broadly.

    – **Publish a curated list of HPC tools** meeting well-defined sustainability criteria to serve as a clearinghouse for users.

    – **Publish a continually-updated strategic plan** that highlights the key needs for sustainability in the tools ecosystem.

https://ascr-step.org

STEP: Management Challenge

# Recommendations: Leadership, engagement, and people

- **Any decisions regarding funding and overall direction will be made by a diverse board** based on documented guidelines.

- **Leverage existing, proven guidelines for diversity** (conferences, industry organizations, DOE guidelines, etc.).

- **The external advisory board will follow further additional guidelines to avoid conflicts of interest** and provide broad, big-picture perspectives (multi-agency, multi-background).

- **STEP must coordinate at a high level with complimentary activities** (especially, other sustainability seed projects) to maximize impact and limit overlap.

External Reporting and Outreach

Project Lifecycles

Community Input

Leadership, Engagement, and People

STEP
SUSTAINABLE TOOLS
ECOSYSTEM PROJECT

https://ascr-step.org

STEP: Management Challenge

Recommendations: External input

- STEP leadership will explicitly engage with non-tool-developer stakeholders, especially facility operators, system software developers, and application users via:
  - **Surveys and interviews** to identify gaps and needs.
  - **Identification of projects** that are "falling through the cracks".
  - **Identification of efforts that are candidates for external support**.
  - **Engagement at community events** (e.g., SC BoFs)
- The above resources will feed into the public strategic plan.
- Establish initial guidelines for external engagement/funding.

https://ascr-step.org

STEP: Management Challenge
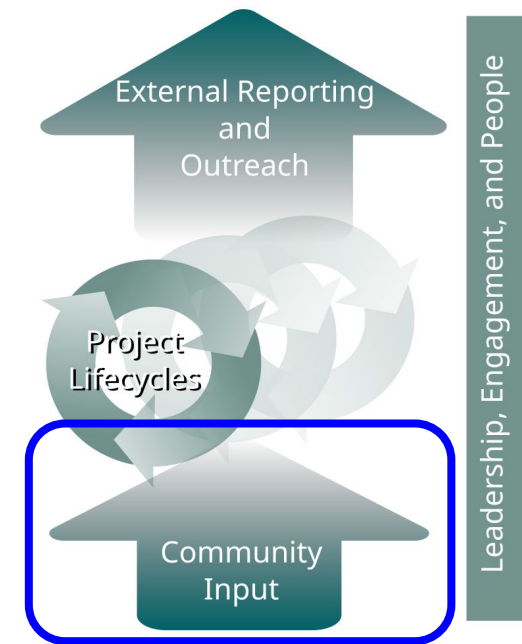
Recommendations: Management potpourri

- Rapid Response was consistently noted as the most challenging initiative in terms of management and reporting.
    - **Defer spinning up this initiative until year 2 or 3.**
    - **In the meantime, treat it as a vehicle for enacting changes in priority or scope** for existing projects.
    - **Once the initiative is fully realized, provide a clearly documented plan for how to use carryover funding**. For example: roll any leftover resources into the Community Activities initiative to host events.

- As the STEP Center matures, look for opportunities to provide explicit on-demand services to the community. Examples:
    - **Red team participation/expertise** in procurement and project planning
    - **Liaison services** for broad vendor interaction

STEP: Management Challenge

Management challenge breakout

Let's refine our plans, discuss priorities,
and figure out what we've missed!

Thank you in advance for your valuable time and help.

Questions or comments?

STEP
SUSTAINABLE TOOLS
ECOSYSTEM PROJECT