



The Emerging DOE Software Sustainability Initiative

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Scientific Software and the People Who Make It Happen: Building Communities of Practice

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Overview

- DOE-ASCR is concerned with post ECP sustainability of software
 - Huge investments
 - Change in perception
 - Explicit instead of implicit
- Intent is to get a broad community input
- Funded six seedlings for planning sustainability organizations
 - Three seedlings have specific community focus
 - Three take a broader view

COLABS

OSSF

PESO

S4PST

STEP

SWAS

Some or all may be funded to form organizations

<https://lssw.io/SeedProjects.html>



U.S. DEPARTMENT OF
ENERGY

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Science

Broader View Seedlings

Common Sustainability Services:

- infrastructure (such as CI/CD)
- software engineering training and education
- standards and guidelines

COLABS: Collaboration for Better Software (for Science)

- Matrixed RSEs providing services above
- Services at different granularity, include embedding personnel

PESO: Toward a Post-ECP Software-Sustainability Organization

- Libraries and tools
- Project based approach – conduit of funding to projects

OSSF: Open Scientific Software Foundation

- Additional Services
 - Marketing/sponsorship/fundraising activities
 - Sustainability funding for projects
 - FAIR data and DOI minting
 - badging and incentives
 - legal and IP advice



Community Focussed Seedlings

S4PST : Sustainability for Node Level Programming Systems and Tools

- Coordinated ecosystem for compilers, abstractions, libraries, and tools for node level programming
- Similar to PESO but for a specific community

STEP : Sustainable Tools Ecosystem Project

- Co-design with hardware vendors
- Participating projects directly funded – participate in co-design with STEP

SWAS – Center for Sustaining Workflows and Application Services

- Software and services for complex workflows
- Similar to STEP -- projects directly funded