

# ESIP April 2016 Testbed Request for Proposals

## Introduction

The ESIP Testbed aims to support projects through the life cycle of Earth science informatics (software, data and process, etc...) development from incubator phase to prototype, maturity, infusion and sustaining. By applying clear assessment criteria and receiving community feedback at each stage of the project lifecycle, the Testbed can provide increased value, transparency and visibility to Earth science informatics projects.

The ESIP Testbed is managed by the Products & Services (P&S) committee. The P&S committee determines what stages of the lifecycle will be supported through the Testbed RFP process; see the [ESIP Testbed Crash Course](#) for more. At this point, the P&S Testbed is focusing primarily on projects in the incubation stage, as explained further in Section 1 below. As the Testbed matures, however, the P&S Committee will provide more detail in future solicitations on services and benefits that can be provided at each lifecycle stage. This RFP, as a result, is soliciting proposals for projects in the incubator stage of development. See Figure 1 below for further illustration of the ESIP Testbed and Evaluation stages.

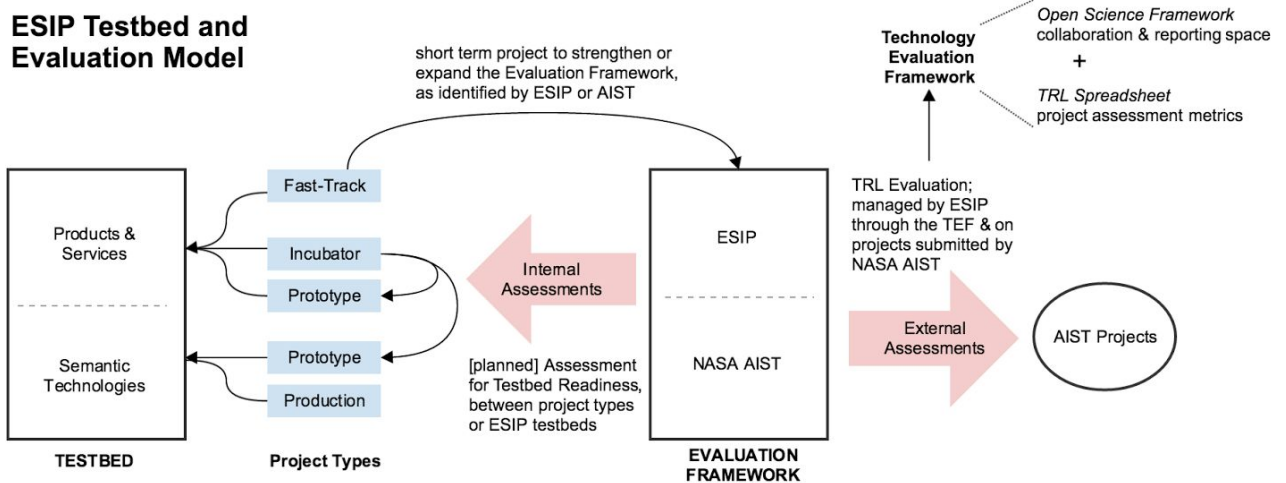


Figure 1. Overview of the ESIP Testbed and Evaluation structure. The current evaluation process occurs in ESIP's Technology Evaluation Framework (TEF), a combination of collaborative workspaces through the [Open Science Framework](#) and the [TRL Spreadsheet](#) fast-track project.

This RFP has the following sections; read each as you prepare to respond:

1. Incubation Projects
2. Prototype Projects
3. Past Testbed Projects
4. Resources for your Project
5. Reporting Requirements
6. How to Respond

## 1.0 Incubation Projects

Incubation projects lie in the realm of good ideas ready to be tried out. These projects are evaluated for P&S committee support funding based on three criteria: 1) innovation, 2) collaboration, and 3) the degree to which they provide value to the Earth science data community.

Incubation projects should prove out an idea, solicit feedback, innovate across clusters, communicate results, and be wrapped up over a 6 month timeframe. *Collaboration* is key. These projects should be sponsored by one or more ESIP Clusters or member organizations, and draw from expertise across the Federation. The project proposer should be affiliated with an ESIP member organization currently in good standing.

### 1.1 Incubation Project Ideas

Incubation projects provide proof-of-concept on new approaches to problems identified by the Earth science data community or by application of new technologies to those problems. Potential incubation projects could include, but are not limited to, those that:

- Implement demonstration technologies furthering goals of ESIP committees, clusters and working groups and (possibly) needing to use the ESIP Testbed resources and infrastructure.
- Build upon the initial research and work of a previous Testbed project.
- Provide an opportunity for a student to investigate an interesting problem.
- Investigate ideas related to other initiatives such as ESIP Summer/Winter Meeting themes, President Obama's [Climate Action Plan](#), or [Thriving Earth Exchange](#).
- An ESIP Fast-Track project (Section 1.2 below).

### 1.2 ESIP Fast-Track

An ESIP fast-track project has a relatively short project completion and reporting timeframe. In this RFP, we are soliciting fast-track ideas on how to strengthen or expand the capabilities of the current technology assessment platform.

Possible projects include, but are not limited to:

- Developing the procedures and infrastructure for managing the collaboration spaces, currently through the Open Science Framework, and artifacts generated during an evaluation round.
- Developing a product related to infusion potential of research projects that can serve as a building block for future implementation in the Technology Evaluation Framework. For this project possibility, we are looking for the development of a product that would facilitate the evaluation of a project from the perspective of a domain researcher as end user / evaluator. Potential products could be an annotated bibliography of relevant works, initial development of guidelines or recommended practices for evaluating usability, or the application of an existing set of recommended practices as metrics similar to the TRL Spreadsheet effort.

If you have an alternative idea, we encourage you to get in touch with Annie Burgess ([annieburgess@esipfed.org](mailto:annieburgess@esipfed.org)) before the submission deadline to discuss whether the idea fits with a currently recognized need for the Technology Evaluation Framework.

Accepted fast-track proposals will receive their funding by May 20, 2016, with final results due August 31, 2016. This schedule is different from the regular Incubation project schedule described in Section 5.3. A participant from each funded fast-track project will be required to attend this year's ESIP Summer Meeting in Durham, NC, either virtually or in-person.

## 2.0 Prototype Project Ideas

Prototype projects are aimed at developing a new feature or process for a project already past the incubation/proof-of-concept phase, i.e., at TRL 4-7. The guidelines described in Section 1.0 apply to these projects. The projects are expected to be completed within the six month time frame.

## 3.0 Past Testbed Projects

Read about past ESIP Testbed projects here in the ESIP wiki or Testbed project site: [http://wiki.esipfed.org/index.php/Past\\_Testbed\\_Tasks](http://wiki.esipfed.org/index.php/Past_Testbed_Tasks) or <http://testbed.esipfed.org/project>, respectively. Follow-on work from a previous Testbed Project can be a great way to continue the research begun in the Testbed and ESIP community. Examples of follow-on projects might be answering additional questions posed by the initial projects, building out interfaces or other technologies that leverage the projects, or other innovative work. If your solution is based on a previous Testbed project, explain how your solution uses the previous project's research and/or technology, and the ultimate benefit that your solution addresses.

## 2.1 Relationship of your Project to other Initiatives

The ESIP Summer Meeting theme is “Frontiers in Earth Sciences Big Data,” so your project might have a connection to this theme. If your project has a relationship to the Summer Meeting theme and/or other initiatives, please explain this in your proposal response.

## 3.0 Resources for your Project

### 3.1 Funding

ESIP can provide up to \$7,000 for any type of Incubation Project, including fast-track projects. Your RFP response should outline a budget, a breakdown for how requested funds will be used, and justification for the amount requested. Proposals are reviewed on a first-come basis; there is no guarantee that a project will be funded but the chances are better if submitted early. Of course, projects that require no funding are also welcome.

### 3.2 Testbed Portal

The Testbed Portal is the registry of the testbed projects, and provides a place for project documentation, content registration, and document sharing for your project work. The URL for the Testbed Portal is <http://testbed.esipfed.org>.

### 3.3 Testbed Cloud Servers

If you need a location to host your project for development, testing, and/or user feedback, the Testbed can provide cloud server instances for you to use. Include in your proposal a plan for how you will use the cloud server and what it contributes to your project. The cloud instance can remain up for the initial project timeframe, but plans should be made to migrate your project to another environment after the duration of your project in keeping with project lifecycle expectations. Your proposed budget should include estimated costs and duration for running the cloud server instance, what type of cloud resource you need, and the plan for user feedback and access of the resource. Where there is collaborative development, team members can share an instance password.

### 3.5 ESIP GitHub Repository

Code for testbed projects should be archived in GitHub and included in the ESIP GitHub organization at <https://github.com/orgs/ESIPFed>. This is a public GitHub organization but you will need to be a member of the organization to create a repository here. Please contact Annie Burgess ([annieburgess@esipfed.org](mailto:annieburgess@esipfed.org)) with your GitHub username for access.

## 3.6 GoToMeeting

If you would like to set up regularly scheduled or group calls, contact ESIP ([staff@esipfed.org](mailto:staff@esipfed.org)) for GoToMeeting access.

## 3.7 Meeting Space

ESIP also provides breakout session capabilities at the twice annual ESIP meetings to be used for planning sessions, feedback and presentation of your work, and other project-related meetings. Annie Burgess is also the contact for submitting a meeting session idea.

## 4.0 Reporting Requirements

Projects chosen for award will be expected to do the following as part of Reporting Requirements:

- Create a project page on the Testbed Portal (<http://testbed.esipfed.org>) that explains what your project will achieve, your project plan, and timeline.
- Define when and how your project will be concluded; if longer term sustainability is a goal, please describe why it would be maintained in the Testbed longer than the project duration.
- During or at the conclusion of your project, post any resultant code and/or a snapshot of the Azure or Amazon instance to the ESIP GitHub organization repository, and place the link on your project page in the Testbed Portal.
- You will be asked to present your project progress at Product & Services meeting calls at its halfway point, and also upon its completion.
- Presentations/Posters at ESIP Summer and/or Winter meetings are highly encouraged. Specifically, we encourage (and require for fast-track awardees) participation at the ESIP Summer Meeting.

## 5.0 How to Propose

### 5.1 Document Guidelines

A proposal should be 3 pages in length or fewer and should specify:

1. Project description, and if applicable how project fits in with previous Testbed work, other initiatives, or is a response to the fast-track call;
2. Supporting ESIP Cluster(s) or Group(s), and how your project relates to the work and/or needs of those groups;
3. The ultimate benefit that your solution brings to the ESIP community (not needed for fast-track proposals);
4. Project plan, budget, and timeline;
5. Names and descriptions of roles for team members;

6. If you plan to use cloud server resources, indicate what kind of instance you need, how you plan to use it, and the cost to run the instance for the duration of your project.

## 5.2 Submission Instructions

Proposals may be submitted by any ESIP member organization, an individual within such an organization, or a team of such individuals. Civil servants are restricted from receiving ESIP funds. The proposal should include a CV for any participants (not part of the 3 page proposal). Proposals or inquiries should be sent to the ESIP Testbed Configuration Board at [tcb@esipfed.org](mailto:tcb@esipfed.org) for vetting.

## 5.3 Schedule

Incubation projects, with the exception of fast-track projects, are intended to be roughly 6 months in duration. You can conceptualize the project's scheduling and reporting out as follows; please consider this as you propose your project plan:

- Project award about one week after close of RFP
- Present project plan at next ESIP meeting (in this case, the Summer Meeting)
- Post-meeting: work on project, report out at intervals
- Present project results at following ESIP meeting (in this case, the Winter Meeting)

## 5.4 Deadlines

Proposals may be submitted during and up to the consideration deadline for this RFP, the deadline is on or before May 13, 2016. Proposals are reviewed on a first-come basis; there is no guarantee that a project will be funded but one's chances are better if submitted early. Another call for incubation projects is planned for October 2016.