

ACCESS EAB Suggestions

based on In-person Meeting 2023-12-05 @ San Diego Supercomputer Center

Meeting Specifics: <https://access-ci.atlassian.net/wiki/spaces/ACP/pages/371425282/2023-12-05+ACCESS+EAB+Meeting+Agenda+Summary>

Draft Procedure: Every participating EAB member shared at least one, at most three suggestions (for the service teams) of top priority in their respective opinions shortly after the meeting. The EAB chair consolidated all inputs into a list of suggestions. We intended to prioritize through voting, if the initial number of unique suggestions was greater than 10. For this meeting, our suggestions revolved around 9 unique themes to start with, hence, voting was not needed. The recommendations are ordered according to how many EAB members have prioritized mentioning it as one of their own top-3 recommendations. The recommendations that more members have mentioned come earlier, and the ones that fewer members have mentioned come later, while the ordering should not be overly interpreted, as many recommendations have been mentioned by the same or very similar number(s) of EAB members. The draft was shared with the entire EAB for approvals on 1/23/2024, and finalized on 1/27/2024 with all EAB members approved.

EAB Members Participated in This Report: Dana Brunson, ~~Roy Chartier (EAB co-chair)~~, Yanni Chen, Jing Gao (EAB chair), William Lai (RAC), ~~Bronson Messer II~~, Tabitha Samuel, Olga Scrivner, Eva Siegmann (RP Forum Chair), Robert Sinkovits, Jorge Vinals, and Jason Williams (RAC)

Recommendations for Service Teams

We thank all teams for a productive meeting and an important project! We appreciate your aspiration and effort, and treasure the opportunity to be part of your journey. The following comments are only meant to be constructive. Let us know if we could offer any clarification or context.

* **Better coordination among service teams and avoid siloed efforts.** Although the service teams are independent awards, they need to work together. This governance structure (with independent awards for service tracks, coordinating center, etc.) is not unique for a cyberinfrastructure project of this scope and scale. While it does have some benefits, in past experience there are several important risks, which are rarely shared openly, and which must be carefully managed. One of these risks is that this structure—despite everyone’s good intentions— fosters duplicated efforts and failure to deliver a unified and seamless user experience. In past experience, this structure also rewards focus on individual team deliverables rather than project-wide performance. In presentations at this meeting, we already saw evidence to raise concerns for these risks, such as, duplicated efforts (e.g., three of the five teams developed their own solutions for resource selection), and failure to optimally perform as one overarching team (e.g., critical cross-award efforts are happening informally rather than being fully documented and resourced). The ACCESS executive committee and NSF need to design better incentives

for the teams to (1) contribute to the success of other awardees, and (2) be rewarded for joint cohesion across the awards.

The sustainability of cross-team communication mechanisms will be critical to consider. For example, while the repeated developments of resource selection tools were not ideal, they seem to reflect three interpretations of how best to serve the community, with each likely appealing to different types of users. When merging these efforts, it's important to strategize on what modifications would coordinate the service in a way that better supports the greater community than the sum of the three distinct efforts. For another example, to implement better coordination, ACCESS as a whole will need to internally identify gaps in the delivery of services between different teams and how different teams can work cohesively to address these gaps. This was much easier to do in XSEDE – since it was a single leadership structure, it was easier to direct sub-groups to address specific tasks. With multiple leadership teams in ACCESS, maintaining sustainable, smooth communication flows naturally will take much more effort, yet it is necessary for the overarching success of ACCESS. We recognize the challenge and reiterate the importance of creative adjustments to the project's incentive structure.

* **Prioritization is an imperative for ACCESS as a whole.** The ACCESS-wide goals already developed are necessary for prioritization but insufficient. ACCESS needs to clearly define WHO it serves (perhaps through personas), WHAT it can deliver (an inventory of its assets and value propositions), and HOW these two can realistically connect (a set of values that guide the decision making to generate a map connecting the WHO and the WHAT). Structures such as logic models (<https://www.cdc.gov/evaluation/steps/step2/index.htm> and <https://www.evaluationnetway.com/>) or a theory of change (<https://unsdg.un.org/sites/default/files/UNDG-UNDAF-Companion-Pieces-7-Theory-of-Change.pdf>) can be helpful. The most important way they help is to make it easier for all project contributors to align their visions and to articulate WHY ACCESS EXISTS. If people (internal or external) don't know why ACCESS exists and how it helps them, the project will fail. Use the WHY to clarify expectations and center efforts. Without such an anchor, it's easy to generate "busy work". Following the project-wide prioritization, each service team should explicitly state their goals and metrics accordingly, while monitoring their success and adjusting the goals and plans over time.

* **Have project-wide external reviews periodically.** Having external, professional experts evaluate both outcomes and procedures for projects of this magnitude is common practice and necessary. External evaluation professionals can also help facilitate the design and implementation of solutions to our concerns raised in other suggestions in this report. Furthermore, such reviews can help NSF evaluate funding utilization, scientific contribution, and broader impacts, in a timely fashion.

We especially recommend an external evaluation of the ACCESS webpages. The current site has a lot of information needed for new users, existing users, RPs, and others. But, for people not already familiar with the program, it is hard to navigate. We recommend inviting people, who are not familiar with ACCESS, to review the website and share feedback. This is also related to ongoing discussions in the RP forum: having a webinar (including recording it and putting it online) targeting new users and researchers interested in ACCESS. The webinar could do a live showcase of how to use the website to get started with ACCESS (e.g., create an account, submit an allocation request, choose a resource, ... and all the steps in between).

* **We would like to meet individually with each service team/awardee as well as NSF.** We want to independently hear the different perspectives, and provide actionable suggestions, particularly for

cross-team coordination and project-wide prioritization. Optimally these individual breakout sessions would be held at our next meeting.

* **Community development is an area that will particularly benefit from cross-team cooperation.** It is related to user support, DEI, broader impacts, and metrics development. We recommend a more proactive approach to attract domain researchers, professionals, and students eager to learn about HPC. For instance, a special call for volunteers to set up a booth/table at an annual professional meeting of a discipline, to help connect ACCESS with new communities. By initiating in-person gatherings with new communities (especially accompanied with small rewards / allocation points to the volunteers / leaders), ACCESS as a resource can be increasingly distributed to underrepresented institutions, disciplines, professions, and users (e.g., independent researchers). Such gatherings might grow in scale over time, and some might eventually become national conferences.

* **Jumpstart the Computational Science Support Network (CSSN) with cross-team cooperation.** The CSSN has potential to be one of the most impactful ACCESS initiatives. But the current approach to the CSSN (including activities such as joining affinity groups or contributing to the knowledge base) is too passive. One observation is that the affinity groups need either a more coordinated approach to nucleate active communities, or the resources used to sustain this infrastructure should be re-tasked to something else delivering more critical impacts (e.g., the CSSN). Although the NSF solicitation made the CSSN the responsibility of the User Support team, ACCESS may want to consider making this a project-wide effort involving all ACCESS awardees, but ultimately led by User Support. We recommend developing a collective plan across awards, and soliciting community inputs through webinars, focus groups, or the formation of a CSSN council.

* **Additional engagement between the EC and the RAC for the purpose of community engagement** would likely result in better cross-discipline adoption instead of the current strategy of engagement at long-standing XSEDE/ACCESS conferences (e.g., PEARC/SC). This could be done in conjunction with expanding the CSSN program. We also briefly discussed the possibility of student/postdoc travel grants that could be offered to RAC members for the purposes of presenting ACCESS at diverse scientific conferences outside the usual community.

* **Provide a clearing house for training.** One serious gap in ACCESS is the lack of support for training. While the resource providers and academic supercomputing centers individually offer excellent training, they are currently working in isolation. Capabilities that were provided under XSEDE such as a training calendar, registration system and mailing lists would be of tremendous value to the ACCESS users. ACCESS could take things one step further and track individuals' training history. This information could be used by both the trainees to monitor their own progress and by ACCESS to look for trends (e.g., users who took introduction to deep learning went on to request time on GPU resources) or develop training roadmaps. It is also advisable that ACCESS consider possibilities to collaborate with other active NSF training awards, such as those through the NSF CyberTraining program.

* **For future meetings, please present questions / goals / focus areas at the beginning of each conversation, when possible.** Considering the very limited time of our meetings, this will help us focus our discussions and feedback on the team's needs.