

Public Education & Outreach (Engagement)

Community Engagement Frontier Workshop

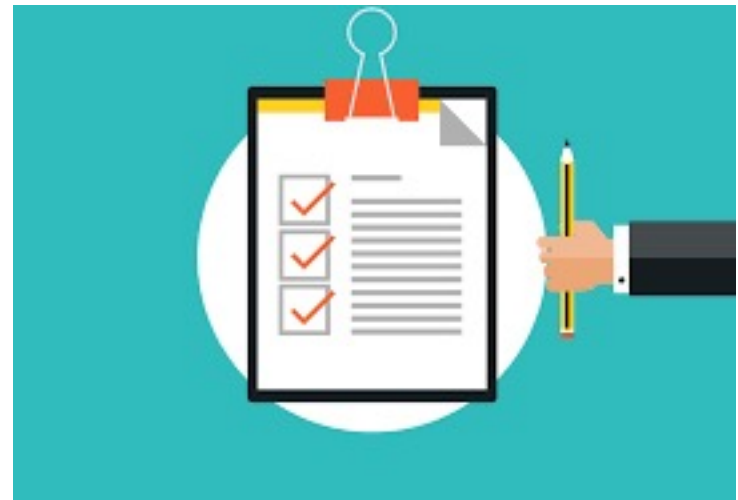
Friday, October 29

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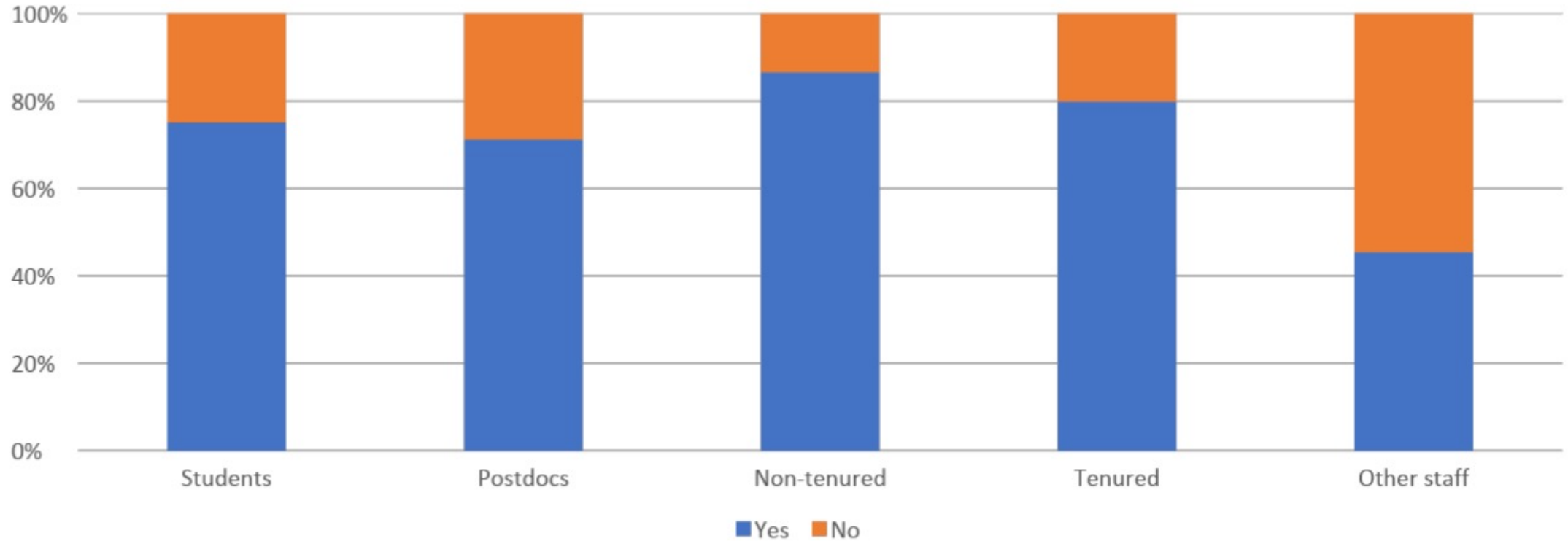
Goals for our 30 minutes together

- Provide you with a brief report on the general work of the group
 - Engagement Survey Results
 - Report on some of the themed meetings of our group
- Walk through our outline for one of our primary contributed papers on structural changes to encourage public engagement
 - Get your feedback!
- Discuss opportunities for engagement and training over the Snowmass process

Survey Results



Have you participated in engagement in the past two years?

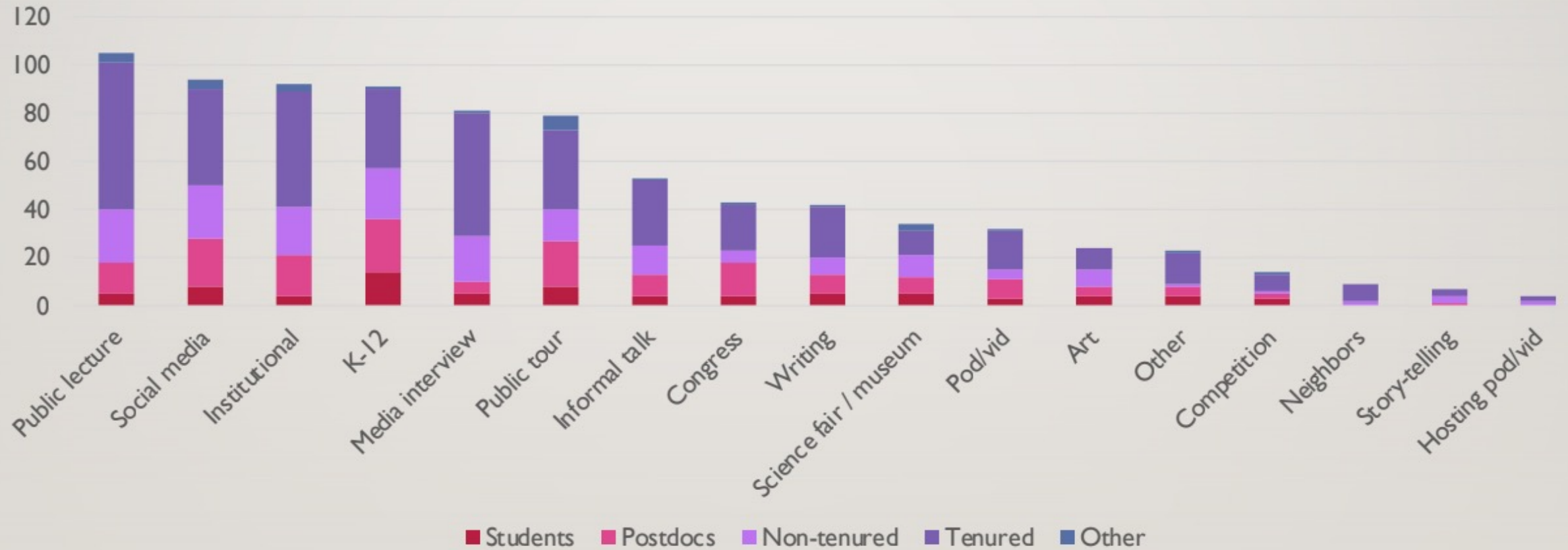


We surveyed the community to understand
how much EPO work people are doing
what their motivations are
what roadblocks they face.

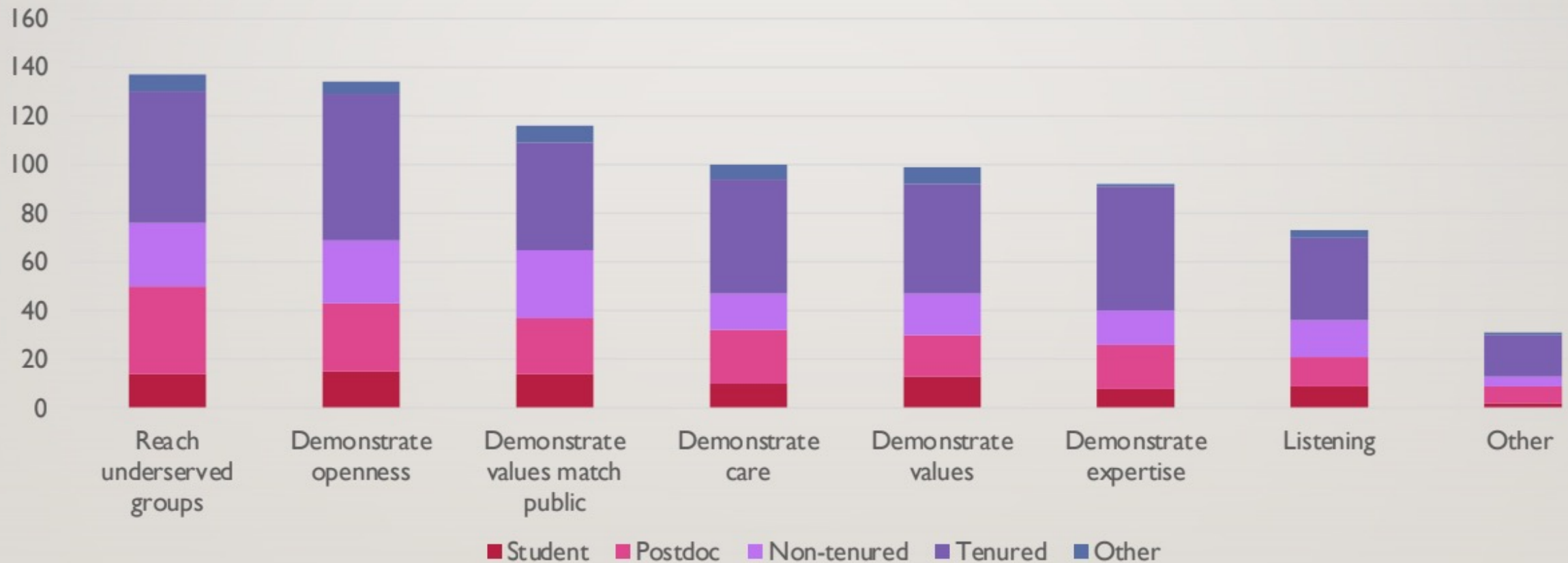
Received approximately
280 survey responses

Roadblocks reported included lack of:
time, access, opportunities, training, results

WHAT KIND OF ENGAGEMENT HAVE YOU PARTICIPATED IN?



WHAT IS IMPORTANT FOR YOU TO ACCOMPLISH IN ENGAGEMENT?



Some Comments...

“Academic physics is extremely competitive. If (especially junior) scientists aren’t focusing on research, they won’t survive.”

“It appears as though outreach is perceived as a ‘distraction’ from research, such that participating in outreach may jeopardize or have negative consequences on a physicist’s promotion evaluation.”

“We need a system that rewards the time spent in science communication... Young folks cannot spend the time needed for training and efficient outreach if the field doesn’t value outreach in terms of career opportunities. We should not be put in the position to choose between spending time engaging with the public/wider community and ‘doing real science.’”

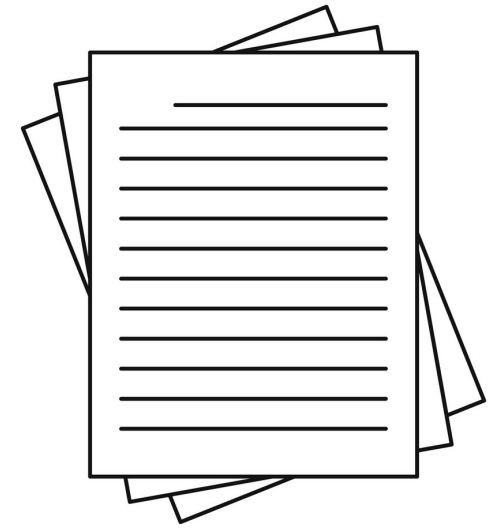
“The community needs to value it more, and start to see it as a part of a scientist’s job description, and not just something especially motivated people do in their free time.”

“Make it a more normal part of the physics experience so that people have the tools and comfort to be able to do more outreach.”

Dedicated Meetings

Topical Meetings

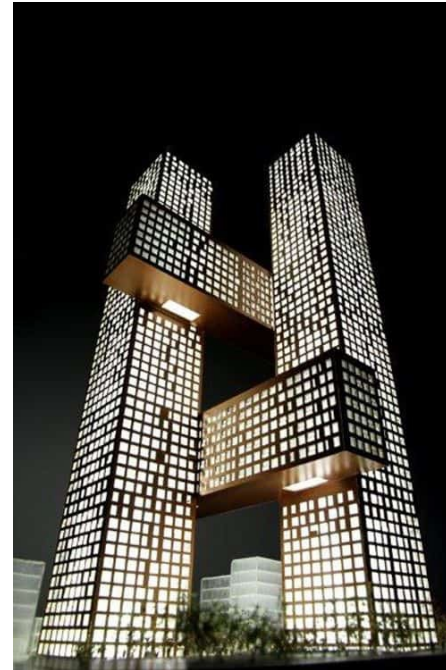
- Coordination of collaborations using cosmic ray physics in public engagement, from smart phones to distributed detector arrays
- In-depth dive into Art-Science collaborations
 - residencies, sculpture, music, dance
 - discussion of best-practices for partnerships
- APS President Jim Gates discussed his work in education with the group
- We plan additional interactions with APS and funding agencies via invitations to discussion in meetings
- We have been through a strategic planning workshop, led by Kathryn, to help focus us on our goals and identify strategies to realize them



Contributed Paper Outline

Contributed Paper Outline (under construction!)

- Title: **Structural changes for public engagement with particle physics and particle physics communication**
- Introduction/Motivation
- Within Particle Physics Community
 - Research Groups
 - Experimental Collaborations
 - Conferences
- Within Institutions
 - Colleges/Universities
 - Department/School/Division
 - College/University Leadership
 - National Labs
 - Communications & Education Offices
 - Lab Leadership
 - Government
 - Office of Science and Technology Policy (OSTP)
 - Congress
 - Funding Agencies
 - DOE
 - NSF
 - Foundations
 - Professional Societies
 - AAAS
 - APS
 - DPF



The Research Group...



- Structural Changes within Research Groups. Group leaders can:
 - Provide your mentees with time to do public engagement. Acknowledge that this time could mean fewer hours devoted to research, but if the project is well-matched with the trainee, they may find it energizing!
 - Provide funding. There may be travel required, or supplies.
 - Provide opportunities and training. Your mentees may not know how to get started!
 - Demonstrate the importance of public engagement by taking part in these activities yourself! They may do what you do, not what you say.
 - Debrief with mentees - what went well, what could improve? This reinforces the idea that engagement skills can be learned.

Of course, many factors conspire against group leaders being able to take these steps above...
Additional structural changes are needed!

Experimental Collaborations



- Encode outreach in the Constitution
 - The leadership of collaborations can change and priorities of leaders can change.
- Identify an individual or individuals who will take leadership roles
 - Somebody needs to be responsible!
 - This team should work with the collaboration management and members.
- Identify a funding stream
 - Could be from a project office, an earmark from funding agencies, or a tax on institutes

Might be more applicable to larger collaborations...

Conferences



- Our large conferences represent significant opportunities
- At least one public lecture should be included
 - Select a speaker appropriate for a large audience with some communication experience
- Other events (physics slams, links with local colleges/high schools) have also been quite successful
- The conference itself can include training
- The conference program can include special sessions (with trainings) such as a lightning round of 2 - 5 minute presentations

Colleges and Universities



- Reward Public Engagement in hiring and promotion
 - Ask about it, in addition to research and teaching!
- Highlight Public Engagement work done by people at your institution
- Provide partnerships between communications offices and researchers on campus
 - The communications office has access to alumni and the local communities, a much broader reach than an individual researcher has access to.
- Provide funding streams for public engagement

High-quality public engagement can work in support of the mission of the institution and strengthen local arrangements

National Laboratories



- Laboratory management must:
 - value a pronounced public presence for the institution and the research that is performed as part of its mission.
 - encourage staff and users to speak about the technology and science being developed and employed at the laboratory
 - reward public engagement work, and acknowledge it as providing a valuable service to the laboratory
- Ensure the Communications Office is well staffed and well funded.
- The Communications Office should
 - identify and recruit people with a passion and talent for public engagement
 - regularly offer training

Government



- Office of Science and Technology Policy (OSTP)
 - In their advising of the executive branch, OSTP can have a significant influence on the priorities of the administration and possibilities for carrying out those priorities
 - OSTP should recognize the importance of having active scientific researchers participate in public education and engagement, which could result in an emphasis on these activities throughout the budget process
- Congress
 - Provide funds for workforce development with training programs that include public education and engagement from scientists.
 - Maintain a focus on diversifying the workforce, with support for programs that are targeted to reach groups that are under-represented in STEM.
 - Expand funding for the National Science Foundation and the Office of Science in the Department of Energy, creating space in those budgets for public education and engagement activities.

What other aspects of our government should we be thinking about? Can we have partnerships with CEF6?

Funding Agencies

- Department of Energy
 - The DOE can play an important role in promoting a sustainable culture of science engagement by particle physicists by providing funds, opportunities and requirements for public engagement
- National Science Foundation
 - The NSF already has education, including public education, in its scope
 - Additional funding opportunities would push this further
 - There is potential for more partnerships between divisions in NSF, with a strong educational focus that MPS could benefit from if we were paired together

Professional Societies

- AAAS and APS
 - Professional societies should create an enabling environment for sustainable science engagement
 - Continuations and expansions of the trainings offered in public engagement
- DPF
 - Adopt the Public Education and Engagement recommendations from Snowmass that we are in the midst of developing
 - Assist the particle physics community in implementing the recommendations
 - Maintain an EPO presence at DPF meetings
 - Reward effective engagement efforts by members through highlights to the community, awards, and fellowships

Future Steps and your Feedback

What's next?

- We have an outline and initial rough text for our “Structural Changes” contributed paper. **What are we missing?**
- We have interests in additional contributed papers
 - modes of public engagement
 - best practices for reaching people from groups that are under-represented in physics
- We have regular meetings on Tuesday at 3pm Central. Join us!