Planning Your Broader Impacts Activities

According to National Science Foundation, broader impacts are the societal impact of the proposal and "may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to the project (NSF, 2020 PAPPG pp 44)."[1]

Suggested areas provided by NSF include, but are not limited to:

- full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM)
- improved STEM education and educator development at any level
- increased public scientific literacy and public engagement with science and technology improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce
- increased partnerships between academia, industry, and others
- improved national security
- increased economic competitiveness of the U.S.
- use of science and technology to inform public policy
- and enhanced infrastructure for research and education

You can also find some useful tips from NSF[2].

Overall Timeline

In order to plan meaningful Broader Impacts activities, it is critical that you start planning early! Ideally, planning should start **at least 3 months** before the proposal is due. This will allow you sufficient time to brainstorm ideas and modify after talking with potential collaboration partners.

Please see the document "CEC Education Outreach and Broader Impacts" for available outreach activities currently available at the College of Engineering and Computing (CEC).

The Planning Process

While every situation is unique, the suggested steps below are designed to help you thoroughly, but quickly, brainstorm, select, and plan for appropriate Broader Impacts activities.

A. See What's Been Done *Get some context for what's possible by familiarizing yourself with Broader Impacts activities that other researchers have already done.*

- Several documents from the NSF contain examples of what researchers nationwide have done for Broader Impacts (some content may be outdated, but still useful for generating ideas):

  - NSF Perspectives on Broader Impacts document (pp. 7-11)

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[1] Please see original from https://researchinsociety.org/broader-impacts/

[2] https://beta.nsf.gov/science-matters/nsf-101-five-tips-your-broader-impacts-statement

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B. Assess Your Goals and Capabilities *Take time to determine what you hope to get out of the Broader Impacts activities as well as the specific, unique capabilities or resources you and/or your lab possess.*

- Are there any particular social outcomes you are especially passionate about?

- Is there a particular audience you would like to reach or a particular format of activity or communication that you would like to gain experience in?

- Realistically, how much time do you have to devote to Broader Impacts activities over the course of your grant?

- Do you and/or members of your lab have any unique skills or access to any unique resources that could be used?

C. Take Stock of Existing Programs, Partners, and Resources *This is critical if you'd like to avoid reinventing the wheel with your Broader Impacts activities!*

Go to our CEC's Education Outreach and Broader Impacts link to see descriptions of existing offices and programs at the University of South Carolina with whom you could potentially partner or collaborate. This list is just a starting resource, you should evaluate other connections you personally have for potential partnership opportunities.

D. Generate a List of Feasible Ideas *Use your knowledge of what's been done, what your goals are, and the existing Broader Impacts infrastructure at the University of South Carolina to make a list of feasible ideas and what each requires.*

A. Choose Prioritization Criteria *Figure out what matters most to you (time commitment? relevance to your research?) so that you can narrow down your list of ideas.*

Example Criteria:

- Your level of interest in the idea (you'll be doing this for a few years)

- How much the idea aligns with mutual goals between you and priority partners

- How much the idea aligns with priorities of your department and/or CEC

- The level of effort the idea will require to execute

- Ability of the idea to further your brand/reputation in your field

- Strength of the idea's connection to your research

- How measurable or significant of an impact the idea could produce

- How unique or creative is the idea

- How sustainable is the idea

B. Use Prioritization Criteria to Select an Idea *Eliminate ideas from your list that do not align well with the criteria that are most important to you.*

NSF-funded researchers often execute several different types of Broader Impacts activities simultaneously. (For example, creating an online resource for other researchers in their field while also mentoring undergraduates during summer research experiences and volunteering at K-12 engineering and computing events.) This means that you don't need to necessarily narrow your ideas down to just one.

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Before you begin writing your Broader Impacts sections, it is critical to define the key implementation details for your proposed Broader Impacts activities. Use the guiding questions below to help define these details.

A. Articulate WHAT You Are Doing

- What are the goals of your Broader Impacts activities?

- What discrete activities will you be executing?

- What past work or established approaches are these activities based from?

B. Articulate WHY You Chose Your Proposed Activities

- How does this connect to you research and experiences?

- What resources and/or skills do you or your partners have that uniquely qualify you to do this?

- What socially relevant outcomes could result from this work?

C. Articulate HOW You Will EXECUTE These Activities

- What is the overall timeline for these activities? Key milestones?

- What funding/resources will these activities require and how will those resources be acquired?

- Who will support or staff these activities?

D. Articulate HOW You Will ASSESS Your Success

- What method of assessment will you be using and who will conduct the assessment?

- When/how frequently will data be captured for the assessment?

- How will assessment data be captured, conducted, and analyzed?