Broader Impacts Writing Guide

Use the four prompts below to draft the broader impacts of your research for the NSF proposal and other federal grant funding agencies where narratives are informed beyond intellectual merit.

1. Target Audience, Engagement, and Alignment

Write a clear description identifying the target audience in your research. Be certain to include precise details about the needs and interests of your selected participants using the information below.

- Specify the demographics of your target audience.
- State whether their participation is scheduled or random.
- Share the duration and location/s for engaging your target audience.
- State how many in your target audience will participate in your project.
- Provide a brief statement on the needs and interests of your target audience.
- Describe the mechanisms involved (tools, processes, or strategies employed) in the participation of your target audience.
- Ensure the engagement of your target audience aligns with your project objectives.

Research Project Objectives and Evidence

Outline 3-5 <u>SMART</u> objectives (Specific, Measurable, Achievable, Relevant, Time-Bound) for your research project's broader impact. To do this, substantively draw upon your prior experience and subject area relevant to the peer-reviewed literature cited in your proposal's bibliography and incorporate these criteria accordingly.

- List the performance indicators that will measure your objectives' broader impact.
- Identify the effective practices and relevant knowledge leveraging said objectives.
- Demonstrate appropriate evidence supporting your research's broader impact.
- Highlight at any level the use of STEM education and educator development.
- Point to any increased public literacy and public engagement with STEM.

2. Research Project Innovation and Alignment with NSF Target Outcomes

Elaborate on how the deliverables in your research project will facilitate broader impacts to the field by integrating the following into your response.

- How are your broader impacts aligned with NSF Target Outcomes?
- How would implementing a diverse, globally competitive STEM workforce work?
- How is increasing partnerships between academia and other industries ideal?
- Explain what the benefits to individuals in society will be.

3. Partnership and Partnership Needs

Discuss the role your internal and external partners will play in your research project. Describe the added value their alliance brings to your work and provide objective evidence of the mutual understanding for how their documented participation in your partnership will be managed. Moreover, use the information below to show precisely how equitable, fair planning and budgeting of the partnership will govern how the partners will contribute to the proposed outcomes.

- Improved national security.
- Use of science and technology to inform public policy.
- Increased economic competitiveness of the United States.
- Enhanced infrastructure for research, education, facilities, instrumentation, and networks.

References

- 1. *Aris broader impacts toolkit*. ARIS Broader Impacts Toolkit Rutgers University. (2023). https://aris.marine.rutgers.edu/index.php
- 2. National Science Foundation. (n.d.). *Broader impacts*. NSF. https://new.nsf.gov/funding/learn/broader-impacts
- 3. OCTRI Research Hub (n.d.). *Establishing Your S.M.A.R.T. Objectives*. https://www.ohsu.edu/sites/default/files/2018-12/S-M-A-R-T-101-final.pdf