MSU Science Communication Training Center

***Strategic Plan Theme*: Global Impact**

***Funding Level*: Between $1-5 million**

***Facility Needs*: Adjustments to existing facilities will be needed**

***Submitting Unit*: College of Communication Arts and Sciences**

Collaborating colleges/departments/units involved with this proposal.

Health and Risk Communication Center (CAS); Knight Center for Environmental Journalism (CAS); Lyman Briggs College: History, Philosophy, & Sociology of Science; University Outreach and Engagement; College of Natural Science; College of Veterinary Medicine; College of Human Medicine; College of Human Medicine; Undergraduate Education; University Communications; MSU Museum; MSU Libraries; MSU Science Communication (Student Group)

What is the proposal's big theme or idea?

We are proposing an MSU Science Communication Training Center that will ensure that the MSU scientific community can engage society in ways that allow our scholarship to have the greatest possible impact. The Training Center will provide MSU experts with meaningful opportunities to (1) engage with a range of diverse perspectives, and (2) develop their capacity to share scientific insights in responsible, respectful, equitable, and effective ways. MSU's experts and extension heritage give us unique insight into how to provide MSU scientists of all ages with innovative communication training opportunities. Research led by MSU faculty has also shown that most scientists in the United States are eager to engage with people beyond campus but that most communication training efforts provide scientists with only individual-level, tactical communication skills (e.g., clear writing and speaking). Our extension and community-engaged learning experience, however, tells us that we need our communication efforts to reflect a commitment to collaboration, a deep respect for others, and evidence-based practice. We cannot simply rely on individual scientists working and communicating in isolation and without access to communication support. Whereas existing trainer organizations tend to focus on tactical skills, the MSU Science Communication Training Center will equally emphasize evidence-based, ethical, and collaborative communication strategy. Basic skills need to be part of communication training but giving scientists skills without guidance on how to use those skills risks wasting resources and having unintended consequences (e.g., trust-destroying communication). In sum, the MSU Science Communication Training Center's unique combination of science communication research and training will establish MSU as an international leader in discovering ways to prepare scientists of all ages to communicate ethically and effectively.

What is the proposal's goal?

The MSU Science Communication Training Center will provide ... • .... MSU scientists—understood broadly to include students, staff, and faculty from the natural, physical, and social sciences—with unparalleled communication training, including experiential learning opportunities with MSU informal education venues and events. • ... MSU researchers with unique opportunities to study the impact of science communication training on scientists and explore scientists' communication needs in the context of public perceptions of science. • ... early-career scientists at MSU with timely insight into science communication and other engagement/boundary-spanning professions, including the potential value of graduate-level training in specific communication fields.

These interrelated goals will be met through training, research, and convenings. • Training would include relatively low-contact activities (e.g., stand-alone workshops), modest activities (e.g., a sequence of workshops, participation in ongoing workgroups, individual for-credit courses and non-transcriptable certificates for students), and intensive academic training (e.g., transcriptable certifications, minors, specializations, degrees, post-docs). • Research would focus on the effectiveness of training practices and scientists' perspectives about communication experiences and needs. • Convenings (e.g., symposia, conferences) would bring together actors from across MSU and its partnering institutions to explore opportunities for collaboration and to share insights on science communication topics.

Example initial training activities could focus on (a) strategy for science communication as engagement, (b) ethical and philosophical considerations for science communication as engagement, (b) writing for engagement, (c) public speaking for engagement, (d) social media for engagement, and (e) arts and humanities approaches to engagement. We would also seek to develop undergraduate and graduate-level courses on these topics as early as possible as we work towards complete programs.

Define the significance, or impact of your big idea.

Communities everywhere benefit when they trust the insights produced by scientists at places such as MSU. Similarly, scientific communities benefit when they have access to the insights and perspectives of diverse communities. Scientists at MSU can help realize these twin benefits of communication by taking responsibility for building genuine, equitable relationships of trust with a diverse range of individuals and communities. Few institutions in society are as trusted as science, but we cannot take this trust for granted as it appears to be eroding in some groups and contexts. More positively, there is an opportunity to collaborate in ways that build trust. Doing so can help realize the societal benefits MSU's science as we expand our research expenditures to $1 billion by 2030. MSU faculty, staff, and students have developed a wide range of science communication activities (e.g., the MSU Science Festival), organizations (e.g., MSU SciComm), venues (MSU Museum, Abrams Planetarium, Science Gallery Detroit) and research expertise (e.g., faculty in the Health and Rick Communication Center, the Knight Center for Environmental Journalism, and Lyman Briggs' History, Philosophy & Sociology of Science program) but our efforts could benefit from a greater capacity to train potential communicators and find opportunities for collaboration. Support from the Provost's office would allow us to earn a place at the forefront of science communication theory and practice and help ensure the impact of MSU's scientific endeavors. To ensure a meaningful impact, key principles upon which the proposed center could be built include the following. • A commitment to diversity, equity, and inclusion will be integrated into all activities. This principle reflects a recognition that scientists' communication choices can create both risks and benefits to individuals and communities. Similarly, it will be important to be intentional in ensuring diversity, equity, and inclusion in training access and that training itself reflects DEI principles. • To ensure positive impact, all training will be grounded in both the social science of communication effectiveness as well as key issues raised by critical scholarship on current and historical relationships between science and society. • Evaluation will be built into all activities to both find ways to improve communication and to ensure scientists receive credit for positive impact. • All training will be focused on helping scientists communicate in ways that ensure all participants in a communication activity (including scientists) can meaningfully engage on scientific topics. Training will not focus on the hidden use of cognitive biases (i.e., nudges) to affect others' behavior. • Science communication often requires collaboration between scientists, as well as with professional communicators, artists, community leaders, policymakers, artists, and others. Collaboration will therefore be emphasized in all training activities.

Who will be impacted?

• The local, regional, national, and international communities where we live and work: Will have access to researchers who communicate in ways that strengthen relationships, seek to address community and societal priorities, and build on societal insights. • Undergraduate and graduate science students: Will have access to courses that can help them communicate more effectively and introduce new career paths, including for-credit courses and transcriptable certificates. • Researchers: Will be trained to communicate more effectively through workshops, working groups, experiential learning, and symposia. This will enhance both their potential for personal and collective impact, as well as the overall reputation of MSU in ways

that lead to new opportunities for global impact. Scientists at various career stages may have different audience-specific goals and opportunities. They therefore need different strategies and require different types of support. • Professional communicators: All colleges at MSU invest heavily in communication. Improving training for communicators and helping scientists work with professional communicators can make MSU stand out amongst its peers.

What does sustainability for your proposal look like?

The Training Center could generate several different sources of revenue, including: • Extramural funding from federal funders and private foundations • Sub-awards or payment for services from MSU organizations (e.g., as part of broader impact budgets or as part of center grants), as well partner organizations. • Support from alumni who want to see MSU playing a key role in strengthening the relationships between science and society • Enhancing the success of MSU grant proposals for projects that require knowledge distribution strategies. The initial focus (years 1-2) would be on coordinating existing resources to convene symposia, develop workshops and opportunities for experiential learning, and provide individual classes for undergraduate and graduate students. The need for dedicated faculty and staff would increase as instructional and research programming expands. There would also be opportunities for doctoral-level research assistants and postdoctoral researchers. By year 5, we will have a comprehensive program of workshops and experiential learning opportunities, along with associated research, as well as transcriptable certifications, minors, specializations, and degrees.