

The Toolbox Dialogue Initiative Center: Harnessing the Power of Dialogue to Facilitate Innovative and Creative Solutions to Complex Problems

Strategic Plan Theme: Global Impact

Funding Level: Between \$1-5 million

Facility Needs: Adjustments to existing facilities will be needed

Submitting Unit: CAL/Center for Interdisciplinarity

Collaborating colleges/departments/units involved with this proposal.

College of Arts and Letters; Department of Philosophy

What is the proposal's big theme or idea?

We propose leveraging the work of the new Toolbox Dialogue Initiative (TDI) Center to multiply the global impact of interdisciplinary and transdisciplinary research at MSU. TDI Center uses philosophically structured dialogue to enhance the capacity of teams, organizations, and communities to collaborate effectively, harnessing the diversity of perspectives and expertise within these groups to change the way we approach complex problems. Building on successful partnerships with MSU-based units (e.g., BEACON), national agencies (e.g., NSF, NASA), and international organizations (e.g., the European Commission), *our big idea is to position TDI Center as a university-level unit to build collaborative capacity in units and research groups on campus so that MSU can expand its global status as a leader in addressing Grand Challenges.*

Addressing global Grand Challenges requires bringing together diverse stakeholders from academia, industry, policy, and civil society. Differences in values, language and beliefs often lead to deep divides among stakeholders that impede progress. It can take years, even decades, to bridge these divides. TDI Center uses the Toolbox dialogue method to bridge divides like these. The Toolbox dialogue method is a tested, evidence-informed approach designed to speed up the process of bridging divides by helping participants identify and acknowledge differences and similarities that were previously hidden from view. The structured dialogue-based approach makes differences a feature, not a bug. Difference is the point, but it takes work to make those differences add up to more than the sum of the parts. TDI helps collectives do that work more efficiently and effectively, serving as a catalyst for innovation.

TDI Center has been successful in problem spaces where scientific questions are paramount. Our work has gained the attention of several programs at NSF and NASA that have enlisted us to provide capacity building services to the research teams they fund. Our experience and reputation have led to increased demand from other R1 institutions aiming to increase their research funding and innovation. Because there is no other center like TDI Center in the world, demand for our services has been international.

To date, our on-campus partnerships have included departments, colleges, and research units. With support from the central administration, we can (a) partner with units across MSU, helping strengthen our institutional capacity to be research innovators and leaders locally, regionally, nationally, and internationally, and (b) expand our own internationally influential research on the role of structured dialogue in facilitating crossdisciplinary research, which grounds our facilitation efforts. With institutional support, we would also focus on designing alternative approaches that make structured dialogue more accessible, on- and off-campus, through trainings, online modules, an interactive app, and curricula.

What is the proposal's goal?

Primary goal: Strengthen MSU's position as a leader and premier partner in efforts to address global Grand Challenges by creating a University-level research and service center that leverages and expands the crossdisciplinary (i.e., inter- and transdisciplinary) facilitation and research efforts of the Toolbox Dialogue Initiative (TDI) Center.

Secondary goal #1: Increase the number of TDI Center personnel to support the development of new partnerships on-campus with departments, colleges, and other units and off-campus with national and international research organizations and funders, and to participate in an expanded effort to conduct research that provides an evidence base for the role of structured dialogue (e.g., the Toolbox dialogue method) in supporting collaborative research and practice.

Secondary goal #2: Increase the financial and logistical resources available to TDI Center to underwrite new partnerships on campus and off and help make the structured dialogue process scalable to a wider set of contexts and issues.

Secondary goal #3: Contribute to the Land Grant mission of MSU by developing collaborative capacity with community partners and regional stakeholders, and by expanding our ability to do inclusive and influential transdisciplinary research regionally, nationally, and internationally.

Define the significance, or impact of your big idea.

Global Grand Challenges such as climate change and food security qualify as existential crises, and the inability to harness different perspectives in creating inclusive common ground weakens our ability to respond to them. Failure to take meaningful action in response to climate change may mean the death of us, quite literally, and the inability to find common ground across differences is a significant obstacle to meaningful action. The Toolbox dialogue method is a tested approach to finding common ground in very diverse groups; our Big Idea would involve developing this method to strengthen MSU's position as a leader in responding to these challenges.

Effective responses to Grand Challenges require a diversity of perspectives, but the necessary heterogeneity can be an obstacle to effective teamwork. The Toolbox Dialogue Initiative (TDI) has been working to enhance communication and collaboration within heterogeneous groups for over fifteen years, developing a dialogue-based approach that supports integration of perspectives to increase chances of success.

TDI Center is now the central locus of this work, and it facilitates collaboration by creating trust and psychological safety, pushing past language barriers, creating common goals, defining common values, and creating cultures that are conducive to meaningful engagement. Our partners are a testament to our ongoing impact; they include three NSF programs (AccelNet, Convergence Accelerator, Growing Convergence Research), one NASA program (DRIVE Science Centers), several universities and colleges (e.g., Univ. of Georgia, Univ. of Tennessee, Purdue), and several NIH-funded CTSAs (e.g., Univ. of Wisconsin, Univ. of Michigan).

Effective communication is critical at all stages of a project, but especially at the beginning of an endeavor when the nature of the work is defined. Dialogue is a mode of communication that facilitates deep engagement and creates conditions for the development of innovative ideas. By emphasizing dialogue, a project can create a communication culture that encourages creativity, innovation, and risk-taking and supports psychological safety, reflexivity, and perspective taking. A dialogical communication culture can provide the foundation for integrating multiple perspectives, which aids in the identification of and response to complex problems.

But while dialogical communication is especially well-suited to opening space for meaningful responses to global Grand Challenges, it is hard won and by no means a given in a project. Developing dialogical communication strategically and efficiently is what TDI Center does best. We have done this in a few different areas (team science, RCR, DEI, etc.) and we are positioned to expand into other areas and topics. The Toolbox dialogue method can benefit people from different backgrounds and with different perspectives who need to come together, leverage their differences, and integrate their perspectives to get things done.

Who will be impacted?

The impact of a university-level TDI Center will be felt on and off MSU's campus. On campus, TDI Center can add value to any heterogeneous group that wishes to improve its collaborative capacity, including research teams, departments, colleges, and other units. (Our decision to submit this proposal with only our current home units as partners reflects our wish to remain maximally available to on-campus partners.) We will focus primarily on research teams. Researchers will have access to TDI Center's expertise in team functioning at all stages of the research process—from initial team formation and identification of a research question to the writing of grant proposals and the work undertaken once funded. Effective dialogue among collaborators supports innovation and leads to opportunities for further involvement and development of researchers at all career stages. With institutional support, TDI Center will also evaluate these partnerships and conduct research that refines the capacity-building power of the Toolbox dialogue method.

Access to capacity-building expertise utilized by NSF, NASA, and many others will strengthen the ability of MSU-based research and practice teams to compete for funding and enhance our institutional ability to reach the \$1B/year funding target. Our work can amplify and support the activities of research development staff across campus; by working in partnership with these professionals, we can augment current support for research teams. Providing faculty with increased support MSU will also enhance our institutional ability to recruit and retain top faculty.

Off campus, the impact of our proposed center will be felt in two ways. First, it will be a force amplifier for MSU's impact nationally and internationally. With our current work ranging from supporting multi-institutional efforts to increasing diversity in US science to aiding development of socially responsible environmental policies for the European Union, we have experience in adjusting the scale and scope of our work to meet the demands of new domains. With additional resources, we could expand the direct social impact of our work, helping to increase diversity and design responsible policy. TDI Center's impact on such diverse problem spaces would be a boon to MSU. Second, support for this proposal would provide tools and insights to MSU partners in Extension, Outreach and Engagement, AgBioResearch, and elsewhere. Building strong relationships with community stakeholders requires effective dialogue and the trust, reflexivity, and transparency that it engenders, and TDI Center has experience in fostering such dialogue. Based on previous conversations with our colleagues in MSU Extension, we know that they also face an increased demand for their facilitation and training services. An expanded TDI Center not only reaches a larger audience, but it also puts a new tool in the hands of MSU Extension professionals who support the Land Grant mission.

What does sustainability for your proposal look like?

A sustainable TDI Center would be a thriving service and research center that would have a portfolio of research partners, including many partners at MSU, and a portfolio of community partners that would use our services. We would be nimble and capable of responding to requests to help build collaborative capacity for academic and non-academic partnerships, and we would be an acknowledged global leader in finding collaborative paths that lead to innovative and inclusive solutions that leverage different perspectives. Sustainability would be reflected in an expanded, university-level TDI Center that had three teams: (a) a facilitation team that designed and delivered capacity-building workshops for partners, (b) a research team that systematically evaluated the impact of our work and structured dialogue more generally, and (c) a development team that explored new avenues for our work and developed new relationships with potential partners. The facilitation and research teams would collaborate to ensure that what is discovered by the research team supports continual enhancement of our facilitation efforts. TDI Center is already established with support from the College of Arts and Letters and the Department of Philosophy, and it is currently working at capacity. Although we have never advertised our services, we have more work than we can manage, including work with very high-profile clients (e.g., NSF, NASA). If we are supported by MSU to pursue our Big Idea, we would be able to expand our efforts to build collaborative capacity in research and practice teams at federal agencies and other partners and stabilize our operation so that we can increase the capacity-building services we offer to faculty and teams at MSU in support of the university's research mission. Additional resources would also enable us to continue conducting research to establish an evidence base that supports our work and demonstrates the relevance of the Toolbox dialogue method to global Grand Challenges. In sum, sustainability would be a university-level service and research center that contributes to

MSU's research mission, expands MSU's international leadership in addressing global grand challenges, and has an international reputation as a center that builds collaborative, crossdisciplinary capacity.