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From: Faculty Research Development Office (FRDO)
Office of the Vice President for Research

Subject: Limited Competition: NSF, Building the Prototype Open Knowledge Network (NSF 23-571)

Date: 4/17/2023

Dear UNM Researchers,

The Proto-OKN program supports the creation of a prototype Open Knowledge Network—an interconnected network of knowledge graphs supporting a very broad range of application domains. Open access to shared information is essential for the development and evolution of artificial intelligence (AI) and AI-powered solutions needed to address the complex challenges facing the nation and the world.

Knowledge graphs, which represent relationships among real-world entities, provide a powerful approach for organizing, representing, integrating, reusing, and accessing data from multiple structured and unstructured sources using ontologies and ontology alignment. Currently, private-sector investments in knowledge graphs power numerous consumer applications including web search, e-commerce, banking, drug discovery, advertising, etc. Undertaking a similar but inclusive, open, and community-driven effort and making use of publicly available data holds the potential to create a platform that would empower government and non-government users—fueling evidence-based policymaking, continued strong economic growth, game-changing scientific breakthroughs, while addressing complex societal challenges from climate change to social equity.

Projects funded by this program will provide an essential public-data infrastructure to power the next information revolution similar to the Internet—transforming our ability to unlock actionable insights from data by semantically linking information about related entities. This solicitation will support research projects in the following categories:

Theme 1, Proto-OKN Use Cases: Projects will develop a knowledge graph or “node” of the Proto-OKN that will address specific use-case challenges using well-identified data sets and user-centric design to help ensure usability and sustainability. **Theme 1 proposals: 8-10 awards up to \$1.5M/3 years.**

Theme 2, Proto-OKN Fabric: Projects will develop and deploy the necessary technologies to provide an “interconnecting fabric” for the Proto-OKN, to help link knowledge graphs developed across Theme 1 projects. Teams will possess the necessary technical expertise, as well as a strong track record of successful collaborations with technical **and** non-technical partners. **Theme 2 proposals: 1-2 awards up to \$1.5M/2 years** with potential renewals up to \$2M/2 years. **Important:** Teams in Themes 1 & 2 will work in close collaboration on deploying use cases on the developed common implementation “fabric.”

Theme 3, Proto-OKN Education and Public Engagement: A single award will be made for creating educational materials and tools targeted to the range of constituents who are expected to be engaged

with the Proto-OKN: end-users, senior executives/decision-makers, technical developers, students at the (graduate, undergrad, middle & high school) and the public at large. The Theme 3 team will possess the expertise and experience necessary to produce education and training materials and public engagement content for a broad spectrum of partners. The Theme 3 grantee will work in close collaboration with Theme 1 and Theme 2 grantees to develop the educational, training, and outreach materials.

Theme 3 proposals: 1 award up to \$1.5M/ 3 years.

This is a limited competition. **Each institution is limited to ONE proposal.** Please submit your statement of interest (up to 1 page) by **NOON on Tuesday, May 2, 2023** via UNM's [InfoReady Review portal](#). The statement of interest should include: the selected theme, a brief project description, and the likely partners. No late submissions will be considered. Based on the e-mail responses received, the Limited Competition Management Team may announce a call for preproposals.

The NSF deadline is June 20, 2023. Go to <https://www.nsf.gov/pubs/2023/nsf23571/nsf23571.htm> for full details.

Should you have any questions please feel free to contact us at limited@unm.edu.

If you are affiliated with HSC, please contact HSC Limited Competitions for more information at HSC-LimitedComps@salud.unm.edu.