

# Grand Challenges

## Request for Proposals 2025

### Level 1: Developing Concept Teams

*Grand Challenges are problems of global, national, and regional significance that require researchers to work together across disciplinary boundaries to develop and implement solutions. Grand Challenges address problems that, when solved, have a significant positive impact on people and society. These challenges are large in scale, ambitious in scope, and multidisciplinary in nature. They have carefully developed goals that enable multiple paths towards solutions, and that are relevant across varied disciplines and communities.*

UNM's Grand Challenges program engages faculty, researchers, staff, and students across the University; grows and fosters a culture of collaboration and team research; increases team success by providing structured support and training; and continues to build UNM's capacity and reputation for discovery and innovation. Since the launch of the UNM Grand Challenges program in 2019 by President Garnett S. Stokes, Grand Challenges teams have achieved many of the program's goals, including greater interdisciplinary collaborations engaging researchers and students across UNM's campuses and the wider community. The program has also enabled a large increase in extramural funding – Grand Challenges teams have been associated with over \$100 million in external research funding awarded to UNM since 2019.

The Grand Challenges program consists of three levels: **Level 1** introduces new Grand Challenge teams to structured team building, visioning, and planning exercises; **Level 2** implements the teams' plans with a focus on answering critical research questions, building capacity for interdisciplinary research, and communicating opportunities and outcomes to the broader public; and **Level 3** moves teams towards large, sustainable research structures such as Centers or Institutes within the University. The process is flexible, allowing for multiple entry and exit points for teams and individuals.

**This Request for Proposals addresses Level 1** of the program, focusing on the development and support of interdisciplinary teams, giving them tools and resources to be competitive for significant funding in the next level of the program. Information about the current Grand Challenges as well as the focus and history of the Grand Challenges program is available on the Grand Challenges website ([grandchallenges.unm.edu](http://grandchallenges.unm.edu)).

#### **Description:**

This RFP solicits new proposals from interdisciplinary research teams for participation in **Level 1** of the Grand Challenges process. A cohort of 5-7 teams, each with diverse disciplinary expertise, will be competitively selected for the **one-year Level 1** program. Each team will receive up to \$8,000 across two semesters for team building, convening, and planning. Additional funding for specific team activities may be available during the term of the Level 1 program.

If selected, Level 1 teams will be provided with facilitation, mentoring, and program support provided by the Grand Challenges program and other UNM units including the Faculty Research Development Office (FRDO) and the Clinical and Translational Science Center (CTSC). *Teams must participate in monthly team building programming to develop their visions and plans with structured support.*

At the end of Level 1, teams are expected to have (1) clearly defined team member roles and responsibilities, a shared vision, and aspirational goals; (2) a 3- to 5-year roadmap for advancing research and innovation in their

chosen area of interest; and (3) identified external partners and resources needed to support the roadmap, including a funding plan to meet those needs. Through training and mentoring, teams are expected to complete Level 1 with an effective, structured process for convening and communicating.

In the Spring of 2026, Level 1 teams and other UNM interdisciplinary research teams will be invited to apply to **Level 2** of the Grand Challenges program. Level 2 will include a significant commitment of internal funding (i.e., projected \$200K across two years per team), with additional support structures for selected teams. We anticipate teams that successfully complete Level 1 will be poised to be highly competitive for the Level 2 portion of the reimagined Grand Challenges program.

### **Eligibility and Team Requirements:**

- **Conveners:** Each proposal must designate two to three lead conveners, who may be any UNM faculty or staff member eligible to serve as a PI according to UNM policies. The conveners serve as the main points of contact for the program and provide communications and logistical support for the team. An individual may be a convener for only one Level 1 proposal. Conveners must represent at least two department/units with distinct but complementary expertise.
- **Team Members:** All UNM faculty, researchers, post-docs, staff, and administrators are eligible to participate as members of Grand Challenge Level 1 teams. Inclusion of students is allowable and their participation in team building activities is strongly encouraged. Individuals may participate in multiple Level 1 teams.
- **External Partners:** Partnerships with external organizations, including other academic institutions and community organizations are strongly encouraged where these partnerships will promote the team goals. External partners are not required for the Level 1 proposal but plans to develop these partnerships should be described.
- **Team Composition:** The team composition and size should reflect the scope of the proposed challenge. It is natural for teams to grow and diversify as part of the Level 1 process. Teaming across UNM campuses is encouraged as well as intentional inclusion of team members from disciplines and perspectives that broaden the research program (e.g., Humanities, Arts, Business, and branch campuses). The team should demonstrate diversity across multiple dimensions including, but not limited to, discipline, faculty rank, and social identity. Teams are highly encouraged to engage junior faculty, postdocs, and student researchers.

### **Participant Expectations:**

Level 1 team members are expected to:

- Gather as a full team at least once a month, with individual or subgroup activities expected between meetings.
- Participate in monthly team building activities provided by the Grand Challenges program to support the larger aims of the Level 1 cohort. Each team is expected to attend the monthly team building activities as a team to participate in planning exercises that will result in the development of a shared vision, aspirational goals, key research questions, a 3-5-year roadmap that works toward the aspirational goals, and a funding plan by the completion of the one-year program.

- Be a constructive member of the team and the Level 1 cohort, supporting data collection and reporting requests from the OVPR and the President's office, as well as participating in presentations or other media about team goals and accomplishments.

Additionally, Team Conveners are expected to:

- Prepare a brief midpoint and a final report for the Steering Committee, providing data and progress reports. Teams may be asked to present their team's goals, accomplishments, challenges, etc. to the committee and/or at public events such as Grand Challenges Day.
- Manage the team's Level 1 budget and provide quarterly updates on a provided template.

Teams will be encouraged to participate in the Science of Team Science (SciTS) team's study, which seeks to improve team interactions and to learn more about how to improve and enhance the Grand Challenges initiative.

## **REVIEW PROCESS**

Each Level 1 proposal will be evaluated by a team of reviewers, who will make recommendations to UNM Leadership.

### **Review Criteria**

#### **1. Grand Challenge Concept Relevance and Research Potential**

- Research in the proposed challenge area has strong potential to create local, national, or global impact.
- The identified challenge is relevant to the State of New Mexico and its citizens.
- The topic is a research and innovation area of high priority to the University, the State of New Mexico and/or Federal funding agencies, with strong potential for extramural funding to enhance the capacity and reputation of UNM as a research leader.
- The challenge is of sufficient size and scope to benefit from interdisciplinary research approaches.
- The team's proposed research approach is appropriate for the problem.
- Now is the right time to pursue this challenge.

#### **2. Interdisciplinary Nature of the Grand Challenge Concept and Team Qualifications**

- The nature of the challenge to be pursued requires an interdisciplinary, team approach.
- The team demonstrates sufficient background and experience within the selected research areas and includes members with a track record of securing research funding.
- An appropriate starting team has been assembled with highly qualified conveners and team members holding expertise in relevant areas. In addition, missing expertise, personnel, or disciplines, and a plan for team development have been identified.
- The team's membership intentionally broadens participation and includes representatives from multiple academic disciplines and multiple segments of the University.
- Teams may build on existing successful collaborations, but proposals must demonstrate that the team is developing a significant new direction involving new partnerships.

### 3. Team Fit to the Level 1 Grand Challenge Program

- The team is expected to benefit from the activities, services, resources, and support that will be provided during the **Level 1** Grand Challenge program.
- Participation in the program is likely to move the team and their research forward beyond where it would be otherwise.
- The proposal increases cross-disciplinary collaboration, student engagement with research, engages the community, and is aligned with UNM strategic priorities and plans.
- The team’s proposed research approach is appropriate for the problem.
- Although teams are encouraged to include outreach, advocacy, and educational components, the central basis for the proposal is to develop one or more innovative **research** agendas.
- Although specific goals may not be fully fleshed out for this team at time of submission, the proposal makes a clear and compelling statement of the overall concept and general approach that the team will take.
- The approach is ambitious enough to be recognized as a “Grand Challenge” but feasible, with the potential to create tangible impacts.
- The research has high probability of generating transformative educational opportunities for UNM students.

#### Key Dates

Release of RFP:	11/12/24
Application system opens:	12/1/24
Program Information Session:	January 2025 (TBD)
Application Deadline:	1/31/25
Decisions no later than:	3/31/25

#### ADDITIONAL RESOURCES AND INFORMATION

An information session will be held in January 2025 (TBD). Submit questions to: [grandchallenges@unm.edu](mailto:grandchallenges@unm.edu). Please visit [grandchallenges.unm.edu](http://grandchallenges.unm.edu) for additional information.

[The Faculty Research Development Office \(FRDO\)](#) can assist with identifying collaborators and funding opportunities.

**Application:** The following application materials should be submitted through [UNM's InfoReady System](#)

**Title** – Title or keywords describing the Concept Team's Challenge

**Conveners** – Identify the name, rank/title, department, and email of the 2-3 leads who will serve as the team conveners.

**Team members** – Identify team members who will support the program (name, rank/title, department and email). It is expected that the team will comprise at least four faculty, staff, administrators from at least two disciplines or areas of expertise. Cross-campus collaborations are encouraged. If the team will benefit from inclusion of community partners, list the individual or organization that will participate and their role on the team. Note: the team does not need to be complete at the time of application; identify additional expertise needed in the self-assessment portion (see below).

**Budget** – Submit a budget for up to \$8,000 for FY26 (July 2025-June 2026) with a justification explaining what each budget line supports. Appropriate budget items include expenses for convening, team building, effort coordination, participant incentives, and pilot data collection and analysis.

**Attach a document (3-pages maximum) with the following items:**

**Description (2 pages):** Answer the following questions in your description (refer to the criteria for specifics to include):

**(1) What Grand Challenge are you proposing to address, and how will your research address the challenge? Why is this challenge important to New Mexico, the nation, and/or the world?**

Include a discussion of the topic's timeliness and relevance to the State of New Mexico and beyond; who will be impacted if your team is successful? How does the proposed research align with UNM, local, state, federal and/or global strategic priorities? If this area is not currently identified as a priority by UNM, provide background for why it should be considered a priority area for future research and innovation. How will you approach this problem from a research perspective?

**(2) What makes this team the right team to address the problem? What will expertise from different disciplines allow you to do that you could not do within a single discipline?**

Describe why an interdisciplinary team research approach is appropriate and the ways in which the expertise of the team members and resources at UNM will contribute to the anticipated outcomes. Explain how the team's membership intentionally broadens participation and includes representatives from multiple academic disciplines and multiple segments of the University. Identify missing expertise, personnel, or disciplines, and a plan for team development.

**(3) What supports do you anticipate needing to form a successful interdisciplinary research team? How will your team leverage the Level 1 program resources to move towards Level 2 funding (or equivalent) after a year?**

Explain the team's innovative research agenda; although specific goals may not be fully fleshed out, the proposal makes a clear and compelling statement of the overall concept and general approach that the team will take. The approach should be ambitious enough to be recognized as a "Grand Challenge" but feasible, with the potential to create tangible impacts. How does your plan increase cross-disciplinary

collaboration, create transformative educational opportunities for UNM students, and engage the community?

**Funding (0.5-page):** Where appropriate, list identified or potential future funding opportunities for the team. This is not meant to be a comprehensive listing nor does every team member need to have a track record of funding. How would participation in the Grand Challenges program assist the team in securing future funding?

**Leadership plan (0.5-page):** How will the team benefit from the activities, services, resources, and support that will be provided during the **Level 1** Grand Challenge program? How will your team be organized, what is the management structure, and how will you communicate with each other? How does your team plan to reach and engage new members? If selected to participate, what additional areas of expertise or additional resources are required to make your team successful?

**Additional Attachments**

2-page biosketch for each of the team conveners ([NSF format preferred](#), but not required)

**Deadline:** We anticipate that [InfoReady](#) will open for applications on 12/1/24. The Level 1 Grand Challenge application is due on 1/31/25. Decisions will be made as soon as possible and no later than 3/31/25.