

THE UNIVERSITY OF NEW MEXICO'S

Grand Challenges

Empowering our STATE of minds.

GRANDCHALLENGES.UNM.EDU

What are Grand Challenges?

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 multi-disciplinary. They have carefully developed goals that enable multiple paths towards solutions, and that are relevant across varied disciplines and communities.

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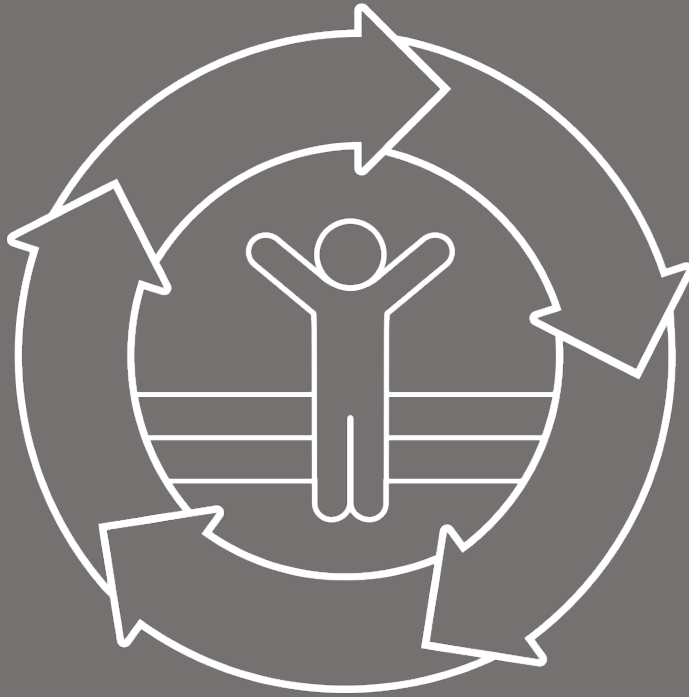
Grand Challenges at UNM

- President Garnett S. Stokes launched The University of New Mexico Grand Challenges initiative on Nov. 14, 2018.
- In early 2019, fourteen Grand Challenges proposals were received.
- President Stokes utilized reviews and the recommendations of the Grand Challenges Steering Committee to select three teams.

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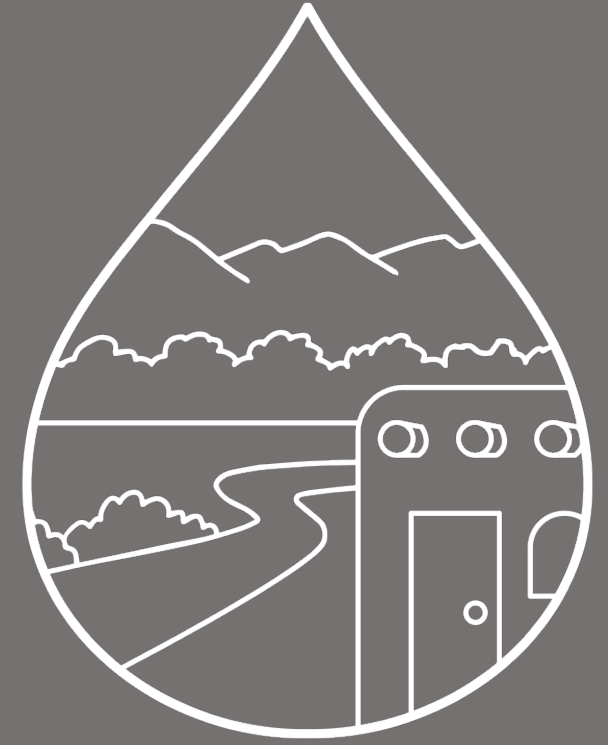
The first Grand Challenge teams



Successful Aging



**Substance Use
Disorders**



Sustainable Water

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Grand Challenges reimaged

- In 2021, UNM re-envisioned the Grand Challenges program to have even broader representation across the University. To achieve this, we increased our focus on using Team Science fundamentals to grow new interdisciplinary research teams with the potential to become Grand Challenges teams.
- The 3-level structure is meant to support those teams that are on track to build capacity and grow interdisciplinary research in their chosen area.
- There are intentionally designed on-and-off ramps that allow teams to exit the program when it no longer suits their needs or loop back around for additional team building when a team fundamentally changes membership or focus.

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L1: Development & Conceptualization
L2: Implementation
L3: Translation

*In 2022, UNM announced 10 new Level 1 Concept Teams

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What happens at Level 1?

Teams receive training, mentoring, and other support to develop their teams, build strategic plans for reaching their chosen Grand Challenge goals, and to develop an implementation plan that includes funding goals. This 'ground up' approach supports researchers as they work to define the challenges and the solutions that are most impactful to them and to the state.

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The first Level 1 teams

- In 2022, ten teams were given \$5,000 to support their participation in a yearlong program to help them develop as teams, create plans, and prepare to apply for additional funding.
- The challenges chosen by those teams were STEM Education, Data Science Education, Child Health and Maltreatment, Just Transition to Green Energy, Housing Justice, Basic Needs in Higher Education, Mental Health and Suicide Prevention, Culturally Responsive Literacy, Sustainable Space Research, and Indigenous Child Development.

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The first Level 2 teams

In 2023, three teams were given \$200,000 over two years to jump start their implementation plans.

Teams were not required to have participated in Level 1 in order to apply for Level 2, but all three teams funded had completed Level 1 of the program.

The three teams are in their second/final year of support. All have received numerous external grants, including federal, state, county, and foundation funds.

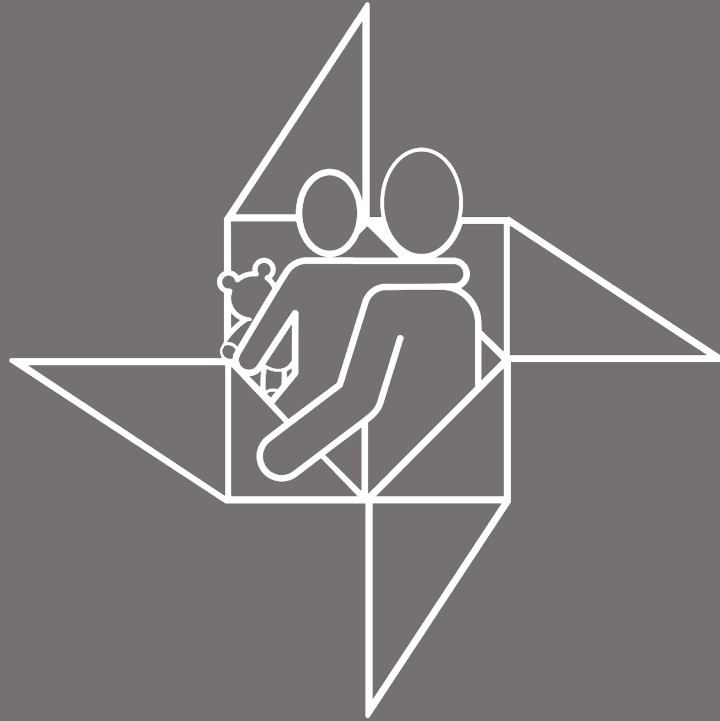
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Level 2 teams



**Just Transition to
Green Energy**



Child Health



**Sustainable Space
Research**

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Level 1 program 2025-2026

- 5-7 teams will receive up to \$8,000 to support their participation in the program in academic year 2025-2026
- At the end of Level 1, teams are expected to have
 - clearly defined team member roles and responsibilities, a shared vision, and aspirational goals;
 - a 3- to 5-year roadmap for advancing research and innovation in their chosen area of interest; and
 - 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.

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Level 1 participant expectations

- 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.

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Level 1 convener expectations

- 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.

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Level 1 application (1/3)

- **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.
- **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.

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Level 1 application (2/3)

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?
 - (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?
 - (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?

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Level 1 application (3/3)

Attach a document (3 pages maximum) with the following items, continued:

- **Funding (0.5-page):** Where appropriate, list identified or potential future funding opportunities for the team.
- **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?

Additional Attachments

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

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Level 1 RFP and deadline

- The full RFP can be found at <https://grandchallenges.unm.edu/updates/index.html>
- Email grandchallenges@unm.edu if you would like the RFP emailed directly to you
- The deadline to apply is January 31, 2025.

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Grand Challenges Level 1 program

**What questions
do you have?**

Tracy Wenzl, Sr Program Manager, grandchallenges@unm.edu
Faculty Research Development Office, frdo@unm.edu

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