The Oak Ridge Institute at the University of Tennessee is an inspired idea that will meet head-on one of the most strategic needs of our country by creating a pipeline of American-trained scientists and engineers to help the United States compete in the global economy.

- Senator Lamar Alexander
Generational Challenge

How does Tennessee become the “go to” destination for top-level talent development and discovery?

Leverage Tennessee’s distinctive assets to:
• Catalyze world-leading innovation
• Tie it to sustainable economic development
• Benefit all 95 counties and beyond
Innovation Landscape
“Over and over again it has been demonstrated that the whole can be greater than the sum of its parts, that good people from diverse fields working together can make major scientific discoveries that are denied geniuses working in isolation.”

Dr. Alvin Weinburg, ORNL Director from 1955 to 1973
Timeline for Rollout & Implementation

**CONCEPT DEVELOPMENT**
June - August 2019
- Establish ORI@UT by action of the UT Board of Trustees.
- Create mission and vision with UT and ORNL leadership.
- Appoint Steering Committee.

**STEERING PROCESS**
September - December 2019
- Develop common understanding of Mission, Vision, and Objectives.
- Develop and prioritize work plan.
- Deliver recommendations of the Steering Committee to senior leadership.

**PROGRAM REVIEW & PLANNING**
December 2019 - June 2020
- Assess Joint Programs.
- Create plan to maximize Joint Programs within the framework of ORI@UT.
- Appoint or recruit Director and initial management team.

**LAUNCH**
July 2020 - June 2021
- Conduct the initial ideation process.
- Appoint/recruit ORI Fellows.
- Begin recruitment of new faculty/researchers.

**GROWTH**
July 2021 - July 2025
- Hire 60 new faculty/researchers, matched by 60 complementary hires at ORNL.
- Grow the collaborative graduate programs to 500 students.
- Attract large, interdisciplinary program funding.
DOE-EERE
Workforce Development Project

Project Goal
Develop a national model for collaborative interdisciplinary research and workforce development from the technician to graduate level in areas that align with emerging fields related to the DOE-EERE mission.
Project Objectives

1. Expand and enhance the UT-ORNL interdisciplinary R&D program.
   - Promote collaboration
   - Team science approaches
   - Ideas that lead to funded research and innovation

2. Develop a flexible workforce development program
   - Produce modular and flexible curriculum options
   - Enhance participation from URM
   - Launch a national learning collaborative with other universities and national labs
Expected Outcomes of the WFD Project

1. **New and enriched partnerships**
   - Expand the Joint Ph.D. Program Enrollment
   - Develop new modular curriculum options
   - Expand industry engagement
   - New partnerships with other universities and national labs

2. **Engage students where disciplines converge**
   - New team-science initiatives and research
   - New ideation and seed funding opportunities
   - Engage the community in efforts
   - Develop leadership skills and professional development
   - Increase the diversity of participants

3. **Build computational literacy**
   - Include DSE and leadership as foundational knowledge options for all ESE, DSE and GST students
   - Recruit two senior-level faculty hires
   - Develop community-based experiences and talent sharing programs

4. **Operate with transparency and accountability**
   - New framework to provide coordination and streamlining
   - Advisory board
   - Enhanced assessment and evaluation to promote faster course corrections
Complementary Research Themes of the WFD Project

**Theme 1:** Autonomous, Smart, Secure and Resilient Energy Systems

**Theme 2:** Electrochemical Energy Systems

**Theme 3:** Advanced Science and Engineering of Materials and Manufacturing

**Theme 4:** Predictive Systems Biology for Circular and Sustainable Economies
Program goals

Competitive proposals will focus on the development of new multidisciplinary research programs that:

1. Target large-scale extramural funding opportunities;
2. Integrate two or more disciplines; and
3. Identify novel approaches to support graduate student training and talent development.

The program is intended to support the development of preliminary data to provide graduate students with enriching, rewarding team science experiences.
Seed Proposals

- Open to all UT faculty and ORNL staff
- Proposal teams must include at least two UT faculty and two ORNL scientists
- $150 – 200K awards (total costs) + up to three GRAs for one year.
  - PIs accepting a GRA must commit to the student beyond the program period through the completion of their program.
  - Year two funding (at similar levels) may be available to teams who are deemed to have successful performance.
Review Criteria

- Technical merit of the proposed research
- Integration of novel graduate student training activities
- Likelihood for future external funding
- Potential for the establishment of a meaningful, sustained collaboration between the two institutions, including joint publications, student mentoring, team development, etc.

PROPOSED PROJECTS SHOULD NOT SIMPLY BE AN EXTENSION OF ON-GOING WORK.
Letter of Intent (Optional)

- PI names, Positions, Institutions;
- Project title;
- Project Summary written for a general audience (150-word max);
- Description of how this project addresses specific topic areas of the call (500-word max);
- (Optional*) Request for graduate student support and description of training opportunities from involvement in the proposal development process (200-word max with CVs of the students included as appendices).

*Teams submitting letters of intent can request graduate student support for proposal development during the fall ‘20 semester. These GRA positions will be provided based on merit and availability of funds.
Full Proposals

A. Cover Page
   • PI names, Positions, Institutions
   • Project title

B. Research Proposal (6-page max with 12-point font, not including references)
   • Project Summary written for a general audience (150-word max);
   • Description of the proposed research (including overarching goal and specific aims, approaches to be employed);
   • Description of how this project addresses specific topic areas of the call;
   • Description of innovative approaches to graduate student training and inclusion of data science knowledge and skills development;
   • Summary, including a broader impact statement of how the proposed project aligns with the missions of UT and ORNL.

C. Appendices
   • Appendix A: One page (see quad chart example template) [PowerPoint Format]
   • Appendix B: A budget*
   • Appendix C: A letter of commitment from all senior personnel, including continued funding for each GRA supported on the project until completion of their degree.
   • Appendix D: A one-page bio for each PI and senior personnel that includes external grants over past 5 years, professional awards, and 5 most recent publications. Evidence of successful UT-ORNL collaborations should be included if available.
   • Appendix E: A one paragraph statement of how the PIs will comply with existing guidelines based on COVID19 restrictions.
Submission Instructions

• LOI - Due by September 19, 2020
  • GRA support for proposal development
• Proposal - Due by October 26, 2020 at 5:00 p.m.


• Questions: please contact Betty Carmon at bcarmon@utk.edu
Questions?