

GUIRR Future of Science Initiative: Expanding State and Regional STEM Pipelines

WEDNESDAY, OCTOBER 16, 2024
12:00 - 2:30 PM ET

Purpose

Increased global scientific competition in recent decades has revealed cracks in the foundation of the American innovation ecosystem. Developing new strategies for strengthening connectivity between scientific institutions and a robust scientific pipeline will profoundly impact our national and economic security for decades. State and regional STEM ecosystems are drivers for innovation across the United States. Government-University-Industry-Philanthropy partnerships formed amongst local leaders are essential drivers of new technology and market development. The U.S. must revitalize and evolve current scientific infrastructures to enhance the STEM pipeline amongst states and regions nationwide. GUIRR brings expertise from across disciplines to identify areas and topics contributing to accelerating U.S. global competitiveness.

This session will revolve around leveraging a CHIPS and Science Act model to catalyze unique Government-University-Industry-Philanthropy partnerships to develop diverse regional innovation hub approaches focused on strengthening the STEM pipeline. By partnering state-level economic development boards, Governors' offices on economic development, and philanthropic organizations with traditional scientific institutions from industry, academia, and government, new ways of developing domestic STEM talent that can compete globally will be explored.

Discussion Breakouts

GUIRR participants will hold discussions to identify key themes and questions needed to address the Future of U.S. scientific enterprise in the context of global competition from a state and regional perspective. GUIRR leaders will serve as moderators, walk through different aspects of scientific leadership, and ask leading questions to divulge areas and topics for further exploration. The main question for each topic is, "What are the bottlenecks and barriers to excelling in the following nodes?" Below are the topics to be discussed:

- Science, Technology, and Innovation Leadership
 - The U.S. must have a strengthened leadership in S&T to lead the collaboration across partnerships for acceleration. States and regional leaders are demonstrating different ways to lead in S&T.
 - What are the characteristics of successful state and regional models that contribute to innovation?
 - What is needed in national policy to empower state and regional leaders to cultivate stronger scientific partnerships?
 - What are the barriers preventing more robust regional/state partnerships for innovation?
- Market Access and Market Leadership
 - The transition from basic to applied research is necessary to accelerate innovative technologies to the public. Regional consortia and universities are important to help move innovations to market.
 - How can state and regional leaders facilitate more impactful collaborations with industry to provide market access for technologies incubated at universities?

- What policies are needed from states to enable increased investments from private equity, banking, and venture capital to enable regional universities to accelerate the development of emerging technologies?
- Leading Edge Manufacturing
 - The transition from basic to applied research is necessary to accelerate innovative technologies to the public. Regional consortia and universities are important to help move innovations to market.
 - What are the criteria for regional innovation balanced with providing the increased needs for resources (e.g., water, energy) to support emerging technologies?
 - What do regions and states need in support from within a national research strategy to compete with international manufacturers with respect to emerging technology?
- Top-shelf STEM Talent Across the Workforce
 - Shifts in technology production require a diverse set of skills from a U.S. STEM workforce. States are competing to build strong a strong workforce provided shifts in technological needs.
 - How can states work with local and national governments, philanthropy, and industry to build more robust experiential learning frameworks?
 - How can state and regional leaders encourage and incentivize the restructuring of training to help fit the shifts needed in local workers for future scientific needs?

SESSION ADJOURNS