# Foreign-Born Scientists and Engineers and the U.S. Workforce

*"As more countries offer their students reasons to stay in their own country for their education or to return home after earning a degree, the U.S. could face a shortage in a critical segment of its workforce."* (*National Science Board*, 2020)

## Key Issue

Evidence building to understand the availability and demand for global science and engineering training and talent.

## Key Evidence Building Considerations

America's DataHub Consortium is unique in bringing together capabilities and infrastructure to securely fill information gaps and to take on key analytic questions and evidence building challenges:

- Policy-relevant context
    - What is the return on investment on U.S. training of Foreign-Born Scientists and Engineers (FBSEs)?
    - How many FBSEs go on to gain permanent resident status in the U.S. or become U.S. citizens?
    - Do FBSEs return to their country of citizenship and what contributions do they make to the global science and engineering enterprise after they complete their education?
- Key focus areas [data security, data linking, privacy]
    - What are key challenges with accessing, linking, and using information on FBSEs?
    - What are the successful approaches to using the presumption of accessibility in the Evidence Act?
    - What privacy preserving techniques can be used to protect confidentiality?
    - What models and estimation methods are best suited to fill information gaps?
    - Are the resulting data and models fit to use to inform policy discussions?

## Information Gaps

We lack comprehensive information on FBSEs who come to the U.S. after their training, as well as those who come to the U.S. and earn associate's, bachelor's, and master's degrees but do not go on to complete a doctorate (including those who are part of the skilled technical workforce). We also lack information for FBSEs at all levels in terms of their patterns for staying in the U.S. after their education/training and their international mobility patterns.

## Disparate Data Sources

Existing data and analyses on FBSEs are spread across government agencies, academic institutions, and non-profit entities. Bringing together information from these diverse sources to fill existing gaps will require obtaining access to traditional and organic data sources, securely linking that data, working with co-mingled information, and evaluating the fitness for use of the resulting information, among other challenges.