USING EXISTING INTERNATIONAL STEM TALENT POLICIES TO ADVANCE U.S. INDUSTRIAL POLICY

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Executive summary

Hubs can assist their consortium members attract and retain international talent through existing immigration programs that are underused. Some of these existing pathways are underleveraged simply because they are new and not well-known or understood. The Biden Administration is making efforts to advance the ability of the United States to attract and retain international STEM talent using existing laws. The White House announced agency actions in January 2022 (1/21/22) applicable to international STEM talent and an Executive Order in October 2023 (10/30/23) that included a suite of further agency actions tied to foreign-born STEM experts working in critical and emerging technologies including AI (Section 5.1). These new efforts have created opportunities for hubs, particularly relevant to the STEM workforce.

Opportunity

Hubs can identify ways their regional consortium members can recruit international STEM students earning degrees in the U.S. by:

1. **Encouraging employers to offer STEM Optional Practical Training**. New guidance that will help: the Biden administration has institutionalized an annual process to add to fields eligible for STEM Optional Practical Training (STEM OPT), that allows international students earning a STEM degree in the U.S. to remain for periods of up to three years to work, with 22 fields added in 2022 and 8 fields added in 2023.

2. **Creating pathways for STEM experts to document eligibility for green cards through work in the national interest in their hub**. New guidance that will help: for the first time there is now guidance that explains how STEM masters and doctoral degree holders can show that they are engaged in endeavor in the national interest and poised to make a contribution that endeavor, thus qualifying for employment-based second preference green card eligibility through a National Interest Waiver (NIW).

3. **Sharing information on O-1 eligibility with foreign-born STEM PhDs earning degrees or completing post-docs in the U.S**. New guidance to be aware of: For the first time, there is now guidance that explains how some STEM doctoral degree holders could show that they have received recognition as experts with extraordinary ability, thus qualifying for a O visa status, a classification that has no numerical caps, per country limits, or maximum period of stay.

4. **Sponsoring STEM experts on J-1 visas when they are contributing to research at either companies or in collaborations between industry and academia**. New program to be

aware of: the Biden administration has launched a new program called the Early Career STEM Research Initiative that encourages the use of the J-1 researcher visa category for STEM R&D at companies, instead of just in academia. This is a visa category that permits up to five years of work-authorized status, with no numerical limit or per country caps.

Moreover, because of the different areas for potential action that should flow from implementation of Section 5.1 of President's Biden October 2023 Executive Order there are other international STEM talent policies worth monitoring and taking advantage of as they come online.

So far, U.S. industry has barely tapped the tremendous potential of recent agency actions. Yet, taking advantage of these new policy options seems to correspond nicely with the priorities reflected in new government funding for research, innovation, and economic development hubs. Such hubs are built understanding there is intrinsic value in bringing a diversity of thought to teams at various entities within the hub of activity. Adding a global perspective through foreign-born scientists, technologists, and engineers would integrate individuals who bring different lenses, backgrounds, and ideas.

Examples

Every year, around 14,000 international students in the United States earn a STEM PhD, and around 35,000 international STEM PhD holders in the U.S. participate in a STEM post-doctoral fellowship. Yet before the Biden administration's new O-1 guidance, there were only about 2,600 O-1 visa holders engaging in STEM activities, despite the O-1 being a category for individuals with extraordinary ability that is uncapped, has no per country limits, and no maximum period of stay.

- If STEM PhD candidates and international STEM post-docs in the United States had access to information explaining the O-1 petition requirements, they would be aware of this option, and could have agency in creating the right portfolio of professional activities and employment endeavors that would be most likely to lead to successful acquisition of O-1 status.

74 percent of today's American STEM R&D is funded by companies (compared to 43 percent in 1953) and about 90 percent of all experimental STEM research (and almost 60 percent of applied STEM development) is funded and conducted by companies. Yet very few J-1 researchers are employed at companies (other than some biotech firms that run their own post-doc programs), despite the J-1 being a category that is uncapped, subject to no per-country limits, and allows up to five years of status.

- If the J-1 Early Career STEM Research Initiative was understood by STEM experts, designated J-1 program sponsors, and host companies, the ability for industry to host STEM masters or doctoral degree holders to add a global perspective to science and engineering research and development (whether developmental, applied, experimental, or basic) would become a relevant and used tool in the toolbox.