

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

May 16, 2017

Mr. David T. Donahue
Acting Assistant Secretary
Bureau of Consular Affairs
Department of State
2201 C Street, NW
Washington, DC 20520

Dear Acting Assistant Secretary Donahue,

The National Academies of Sciences, Engineering, and Medicine believe that the approach contained in the **Notice of Information Collection Under OMB Emergency Review: Supplemental Questions for Visa Applicants**, published in the *Federal Register* on May 4, 2017, will have significant negative unintended consequences on the nation's international leadership in research, innovation, and education. We believe that the changes will discourage scientists, engineers, and students from affected and non-affected regions of the world from pursuing research and studies in the United States. U.S. scientific, engineering, and medical societies also are concerned that international attendees at their meetings and conferences may instead increasingly decide to attend meetings of European societies that, in turn, will use the opportunity to expand their competitive position relative to the United States. This is a crucial matter for U.S. leadership in science, engineering, and medicine since approximately 25% of U.S. Nobel Laureates and 25% of the members of the National Academy of Sciences, the National Academy of Engineering, and the National Academy of Medicine were born outside of the United States and emigrated as students or as adults to the U.S., where they became American citizens. Indeed, many U.S. national security assets were developed or invented by immigrants who came to this country to avoid unwarranted persecution in their home countries or to pursue the freedoms that we take for granted but that were not available in the countries of their birth.

Combined with the two Executive Orders on immigration released earlier this year, the message being sent to the world is that the United States is no longer a welcoming country to these future leaders in science, engineering, and medicine. We see this in foreign student applications to U.S. colleges and universities, which are down significantly in 2017, in notices from international organizations that are calling for boycotts of meetings in the United States, and in decisions by scientific, engineering, and medical societies to hold their meetings outside the United States. We hear this in conversations with researchers and students from around the globe when they explain their decisions to stay home or to go elsewhere rather than accept invitations to join research teams in the United States.

To mitigate these unintended consequences, we urge that, if the proposed changes are adopted, several adjustments be made.

1. The groups of individuals affected by the proposed changes should be clear and unambiguous to everyone.
2. The proposed changes should be re-evaluated to determine if all the new information requirements are truly required to meet national security needs. This is particularly true for reviews of social media accounts. This potentially very broad, currently undefined, and ambiguous requirement could potentially affect all international students in the U.S. In addition, the extensive review of applicants' international and possibly domestic travel history seems overly broad for today's world.

3. A clear message should be sent by the U.S. Government that scientific and educational visits are enthusiastically welcomed and encouraged.
4. The State Department and its partner agencies must have adequate personnel to ensure that visa requests are not denied simply because lengthy processing delays precluded visa applicants from obtaining visas in time for their scheduled meetings in the U.S.

We believe these proposed changes are necessary to ensure that legitimate science, engineering, and medicine exchanges and academic study continue to sustain the highest quality contributions that have served the nation so well.

Ensuring the safety of our nation's citizens is of primary importance, but so is the need to lead our nation responsibly into the increasingly globalized future where our economic competitiveness, improved health, and national security have long rested firmly on the following principles:

- The United States must sustain and strengthen its traditional commitment to long-term basic research that has been proven to create the flow of new ideas that fuel societal progress.¹
- The United States must offer the most compelling and supportive setting to study and undertake research so that we can develop, recruit, and retain the best and brightest students, scientists, engineers, and health professionals from within the United States and throughout the world.²
- The United States must maintain its ability to draw the most capable and entrepreneurial people from throughout the globe, which depends on welcoming visa policies for legitimate and qualified students and researchers.³

Over the last two decades, international collaborations in science, engineering, and medicine have increased dramatically. For example, the National Science Foundation's *Science & Engineering Indicators 2016* reported that in 2013, 33% of U.S. publications were coauthored by authors at institutions in other countries, compared with just 19% in 2000.⁴ Projects and facilities are increasingly international as well. This is largely due to three reasons:

1. Quality and expertise: When searching for a collaborator, researchers look for the best talent, wherever it may be located. When U.S. researchers work with researchers in other countries, we expand our domestic scientific capabilities, improve our national competitiveness, and contribute to the U.S. economy.
2. Economies of scale and increased efficiencies: Most countries cannot afford the monumental expenses associated with large projects like particle accelerators, radio telescopes, or the human genome project, and the largest projects are nearly all funded by multi-national funding agreements today. The development of security and military hardware is often funded from multinational sources as well.
3. Data needs: In solving very complex global challenges, such as energy, food and water security, data from different regions of the world are necessary for the development and use of computer

¹ Committee on Prospering in the Global Economy of the 21st Century (U.S.), & Committee on Science, Engineering, and Public Policy (U.S.). 2007. *Rising Above the Gathering Storm: Energizing and employing America for a brighter economic future*. Washington, D.C.: National Academies Press.

² Ibid.

³ Committee on Science, Security, and Prosperity (U.S.) & Committee on Scientific Communication and National Security (U.S.). 2009. *Beyond "Fortress America": National Security Controls on Science and Technology in a Globalized World*. Washington, D.C.: National Academies Press.

⁴ National Science Board. 2016. *Science and Engineering Indicators 2016*. Arlington, VA: National Science Foundation (NSB-2016-1).

models to simulate complex behaviors of these challenges and then to predict the outcomes obtained from proposed solutions.

While electronic communication has made international collaborations easier, researchers must still meet in person either through academic exchanges or at professional meetings. Sensible visa policies are essential to facilitate the required mobility to achieve these important goals.

Foreign students are important to the United States. They bring intellectual vitality and new perspectives to our classrooms and research laboratories. They participate in and contribute to research projects, and increase the international cultural awareness of American students. They contribute significant amounts of money to the U.S. economy. Some remain in the U.S. and become U.S. citizens after completing their degree programs, contributing to the nation's research and economic base. More importantly, however, is the fact that by hosting international students, these students develop an appreciation of American freedoms, culture, values, and institutions that lays the foundation for future goodwill, understanding, and demand for American products. Numerous foreign leaders have studied in the United States over many decades, and this is probably one of our nation's most under-recognized and under-appreciated diplomatic and economic assets.

Several years ago, the Academies report *Beyond Fortress America* stated,

"While the United States remains a world leader in advanced science and technology, it no longer dominates; it is now among the leaders. We are increasingly interdependent with the rest of the world. What is the United States doing to reap benefits from its increased interdependence? Instead of promoting engagement, the United States is ... turning inward. Our visa controls have made it more difficult or less attractive for talented foreign professionals to come and learn what is great about this country, or to stay and help grow the American economy".

"In the post-9/11 world, even if we could accept the costs associated with mistakenly turning away some of the brightest international students or accept the forfeit of some business opportunities in the interest of national and homeland security, these are not the only outcomes of current policies. Such policies also weaken relations with allies, reduce the capability and strength of America's defense industrial base, and help to create foreign competitors that diminish U.S. market share in critical technologies."

"These unintended consequences arise from policies that were crafted for an earlier era. In the name of maintaining superiority, the United States now runs the risk of becoming less competitive and less prosperous; we run the risk of actually weakening our national security."

Thank you for considering our request to modify the approach contained in the **Notice of Information Collection Under OMB Emergency Review: Supplemental Questions for Visa Applicants.**

Sincerely,



Marcia McNutt, President
National Academy of Sciences



C. D. Mote, Jr., President
National Academy of Engineering



Victor J. Dzau, President
National Academy of Medicine