

DAY ONE PROJECT

A Proposal to Elevate Science and
Technology Policy at the State
Department

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The Day One Project offers a platform for ideas that represent a broad range of perspectives across S&T disciplines. The views and opinions expressed in this proposal are those of the author(s) and do not reflect the views and opinions of the author's institution, Day One Project or the Project's S&T Leadership Council.

Summary

Science and technology (S&T) must play a prominent and strategic role at all levels of United States (U.S.) foreign policy. On day one of the next presidential term, the Administration should reinvigorate and reassert U.S. strength in science, technology, and data-driven decision making. S&T issues at the Department of State (Department) have historically been concentrated into specific offices and personnel, which has constrained the use of S&T as a tool to advance U.S. foreign policy goals. On day one, the Administration can better identify, allocate, and elevate S&T issues and personnel throughout the Department. Building and rewarding diverse teams with the right mix of skills is good management for any organization, and could create significant progress toward breaking down the silos that prevent the realization of the full benefits of the S&T expertise that already exists among U.S. diplomatic personnel.

Challenge and Opportunity

Many of our international partners, allies, and even adversaries welcome the opportunity to partner with the U.S. on S&T issues. Deepening S&T capability is seen as bringing a nation economic growth, prestige, and solutions to societal challenges, outcomes all political leaders aspire to for their countries. The historic legacy of U.S. success in S&T and the diversity of nationalities represented in the human capital underpinning the U.S. S&T workforce together convey an image of America as multicultural, meritocratic, and future-focused.

In many countries, a background in science, engineering, or medicine conveys elevated status and is viewed as an individual's pathway to economic rewards, social status, and political power. In contrast, in the U.S., training in the law is more often a pathway to political power, likely the result of the high value Americans place on the rule of law. Scientists in positions of power -- including political leaders -- are more likely to understand the culture and values of the S&T community and be able to connect personally with scientists and engineers.

As we see in daily headlines, the world is getting a crash course on the importance of rigorous science and the need for governance strategies to translate that science into effective policy responses to challenges like the COVID-19 pandemic. When disasters occur, the S&T community and infrastructure are critical to understanding the problem and identifying viable solutions. Even before the pandemic, there were few foreign policy issues that did not have an S&T component and an opportunity to deepen diplomatic interactions. In the post-pandemic recovery, many international partners will be eager to engage with the U.S. on issues related to S&T well beyond the response needed to contain the pandemic.

When the U.S. re-engages with the international community, S&T must play a prominent and strategic role at all levels of U.S. foreign policy. On day one of the next presidential term, the Administration should reinvigorate and reassert U.S. values including giving priority to strength in science, technology, and data-driven decision making. Rather than occupying a niche role or

being utilized only as a reactive response, S&T should be integral to the strategy and tactics of our front-line diplomatic efforts.

Strategic Use of S&T in Diplomacy

S&T must be integrated into the formation of diplomatic strategies on all topics and with all countries. The S&T community and foreign policy practitioners will both need to adapt to fully realize the benefits of expanded use of S&T for diplomatic engagement.

Foreign policy practitioners -- who may be unfamiliar with S&T -- must embrace elevating S&T as core to U.S. diplomacy alongside the existing tools of political, economic, and security engagement. S&T diplomacy has traditionally been framed as public diplomacy or a "people-to-people" type activity. U.S. foreign policy practitioners need to think creatively and strategically about the opportunities that S&T provides for deepening, expanding, and delivering on U.S. interests and on issues our international partners value most.

The scientific community -- which may be unfamiliar with traditional foreign policy tools and tradecraft -- must embrace the strategic use of S&T to achieve U.S. foreign policy goals. Curiosity-driven science feels more comfortable to scientists than cooperation undertaken to achieve national or foreign policy goals. Realizing foreign policy goals often requires compromise and elevating other priorities along-side pursuit of the best science. Additionally, the risk that cooperation around S&T could create national security vulnerabilities must be accepted and managed rather than denied because of a cultural tendency toward techno-optimism among scientists.

Siloing of S&T

Coverage of S&T issues at the State Department has historically been concentrated into bureaus or offices staffed mostly by civil-service colleagues with technical backgrounds. These technical bureaus and offices are seen as less prestigious, powerful, and career-enhancing for Foreign Service Officers (FSOs) who want to reach the highest levels of success in the Department. In U.S. missions overseas, S&T issues are often grouped into the Environment, Science, Technology, and Health (ESTH) portfolio frequently located within the office covering economic and business issues. The ESTH portfolio often represents the breadth of S&T topics reflected in U.S. technical agencies and across U.S. interests, including but not limited to health, energy, climate change, space, environment, and S&T research. The ESTH portfolio is frequently covered by a single officer who may also be responsible for covering economic and business issues, which have traditionally been seen as more directly relevant to U.S. foreign policy.

Concentrating the responsibility for managing S&T issues into a small number of offices or personnel creates the false impression that S&T issues are not core to U.S. interests or key to achieving U.S. diplomatic goals. Diplomats who are well-trained in foreign policy may feel more comfortable handing off S&T issues to technically-trained colleagues, who in turn may feel their technical expertise is an important criterion for managing the diplomacy related to

S&T issues. In reality, both skillsets are critical to building innovative diplomatic approaches that use S&T strategically to advance U.S. interests and diplomatic goals.

More comprehensive recommendations to reinvent the human resources strategy for U.S. diplomacy¹ could provide an opportunity to rapidly elevate the role of S&T in diplomacy, but would likely encounter internal resistance leading to significant delay. There are steps that can be taken on day one within the current staffing strategy to better identify, allocate, and elevate S&T issues and personnel throughout the Department.

Plan of Action

Identify and Allocate Existing S&T Expertise

Capacity for S&T is needed across all topic areas and must be integrated into the mainstream of U.S. foreign policy. Many foreign affairs personnel have existing expertise in S&T or S&T-related fields that are difficult for them to apply in their diplomatic careers because of rigid human resources policies and practices. One of the greatest strengths of the Foreign Service is the diversity of prior careers and experiences of FSOs, which are a strategic asset when representing the U.S. overseas. However, once on the FSO path, there are formal and informal constraints that direct FSOs to take more narrowly-constructed career paths, especially if they hope to be considered for the senior most roles in the Department. Civilian employees in the Department are even more constrained in their career paths with even fewer opportunities to apply their skills beyond the specific job and function for which they were hired. On day one the new Administration should:

- Catalogue S&T expertise in the foreign affairs workforce into a searchable database to be used for determining short and long-term assignments, promotions, and priority posts. The database should include all levels of S&T expertise -- formally trained or informally acquired -- and be built in a way that allows integration into the formal human resource processes. Personnel should be encouraged to self-identify S&T experience and expertise they feel could be relevant to current and future diplomatic challenges. Once information is compiled for FSO and civil service personnel in the Department and USAID, cataloguing available expertise in the international offices of U.S. technical agencies and other parts of the interagency system likely to have personnel working at the intersection of foreign affairs and S&T could further expand awareness of available skill sets.
- Department personnel with S&T expertise should be rewarded for applying their expertise with incentive pay that can be earned in any Department career "cone" or assignment. Based on the "language incentive" pay model², which gives additional pay to those who have and use high-value language skills, create a pilot program for "S&T incentive" pay. The additional labor costs should be covered and coordinated centrally

¹ Slaughter, Anne-Marie. 2020. "Reinventing the State Department: It was designed to meet twentieth-century challenges. Here's the refresh it needs." *Democracy*, Sept 15, 2020. <https://democracyjournal.org/magazine/reinventing-the-state-department/>.

² "Language Incentive Pay." 3 Fam 3910. <https://fam.state.gov/fam/03fam/03fam3910.html>. Last accessed Oct 6, 2020.

with additional resources allocated to operating units to encourage Department bureaus and U.S. missions to identify staff and deploy resources.

- Critical to the success of this effort would be visible support from high-level leadership in the Department rewarding the leaders of operating units who elevate the S&T expertise of existing personnel by giving those personnel a voice on issues critical to U.S. foreign policy. Specific criteria for success should be defined and shared with operating units, which would each propose the best approach for their unit, reflecting the heterogeneity of staffing models across the Department.
- Two years after the pilot is launched, lessons learned should be captured, shared with Department leadership, and adjustments to the program considered. If the program is successful, resources should be expanded. This opportunity should be presented to senior Department leaders through venues such as the annual Chief of Missions Conference.

Expand Expertise and Build Creative Staffing Patterns

Many past efforts to expand S&T in the Department have concentrated S&T expertise into separate offices and, at one point, a science focused “cone.”³ The science cone, however, had difficulty recruiting and retaining FSOs, who had little hope of reaching the highest levels of success in the Department from its ranks, which later resulted in it being disbanded. In contrast, many feel a key element of the success of the AAAS Science and Technology Fellows Program -- which imbeds early- to mid-career Ph.D. scientists in operating units -- hinges on the scientists working and learning alongside more traditional foreign policy practitioners. On day one, the new Administration should:

- Pilot multiple creative, dynamic staffing models that allow operating units flexibility in how they source S&T expertise to get the right type of needed technical knowledge in real time. The heterogeneity of staffing structures in Department operating units makes it unlikely that a single staffing model will meet the needs of all units. Options could range from full-time staffing in a single area of technical expertise to more transient, modular short-term support for fixed periods of time, similar to an S&T consulting team built with the appropriate mix of expertise to respond to a specific event or to inform strategic planning. At least initially, the funding to use these pilot S&T staffing models should be dispersed centrally to encourage uptake and build familiarity with the potential for S&T to advance diplomatic goals.
- These pilots should be coordinated through a single operating unit in the Department that would be responsible for building models and providing support to recipient offices as they deploy the pilots. This could include responsibility for training, coordinating, assigning, and augmenting management of the personnel with S&T expertise taking part in the pilots. In addition to maximizing the use of internal S&T capacity, there should be models that bring in S&T support from the interagency or beyond if needed. Lessons on how to build and administer this type of program could be learned from the Presidential

³ Chen, Justine F. 2015. “Reinstituting the ESTH Cone Within the US Foreign Service.” *Journal of Science and Policy Governance*, 7:1. https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/oped1_formatted.pdf.

Innovation Fellows program that was coordinated by the General Services Administration to provide technical human capital across the U.S. Government.

- Building on the success of existing fellowship programs, the Department should expand the amount of funding available for placements of technical fellows to increase the number of operating units that are able to host fellows. Existing programs that bring in S&T capacity -- including but not limited to AAAS Science and Technology Policy Fellows and S&T-focused Presidential Management Fellows -- usually require an operating unit to cover staff and administrative costs, which constrains the number of placement opportunities. Operating units should be able to apply for funding if they meet a set of criteria that could include integrating S&T into mainstream foreign policy activities.
- All operating units should be given additional, dedicated resources that can only be spent on S&T human capital but used flexibly between the S&T staffing models such as "S&T incentive" pay, S&T fellows, or internal S&T consultants.

Build Upon Existing S&T Activities

The U.S. can rebuild credibility with partners by expanding engagement on S&T to restore global economic stability to our communities, allies, and countries that most need to be stabilized to avoid extreme risks. As the Department deepens its capacity to engage strategically with S&T on important foreign policy issues, priority should be given to building upon existing programs, initiatives, and activities already underway. Before building new S&T initiatives, the Department should survey state, local, and civil society partners for similar projects that could be expanded and elevated rather than recreated. Building on existing state, local, and civil society-based initiatives showcases the strength and vibrancy of the U.S. S&T enterprise, which goes well beyond that controlled by the federal government. Reinforcing the efforts of state, local, and civil society leaders recognizes the growing influence these actors have on the international stage. Aligning with these powerful and growing voices could provide an effective way to harness the diversity and strength of the entire U.S. S&T enterprise to the international audience, a goal which the country continually struggles to realize. The U.S. is more than government institutions and should build upon the best ideas and work collaboratively to solve the most challenging societal problems

Conclusion

The United States must better identify, allocate, and elevate S&T issues and personnel to respond to foreign policy challenges and take full advantage of the nation's international strength in S&T. Strategic use of S&T across all foreign policy would provide opportunities to deepen diplomatic relationships and create innovative approaches to global challenges. The new Administration would benefit from recognizing that the U.S. is more than government institutions. This provides an opportunity to demonstrate the strength and willingness to apply the best U.S. science and scientists have to offer to solve the most challenging societal problems.

Frequently Asked Questions

How much funding would this proposal need?

Additional resources to support this proposal could be quickly and effectively put to good use, however, new resources are not necessarily required. In the initial stages, these activities could likely be implemented out of existing resources and scaled up as more resources become available. Demonstrating the value of S&T to the core mission of foreign policy is a critical element of this proposal. It is important that operating units do not perceive these activities as an “unfunded mandate” that has to be accommodated by defunding other activities identified as priorities for that unit. Creating flexible staffing options that are realistic about funding constraints and can be adapted to give the type of support needed will augment rather than direct the work of the operating units. Kudos from senior leadership in the Department to those operating units willing to engage in these activities will also send a powerful signal of the importance of S&T and, in time, build the momentum needed to more permanently elevate S&T within operating units.

How do you create buy-in from long-time career employees for building creative staffing patterns?

This proposal is designed to increase the impact of traditional foreign policy activities by integrating and elevating S&T into those activities. Creating multiple, flexible staffing solutions to augment the work and resources of operating units is critical to building buy-in for creative staffing patterns. Long-time employees need to be reassured that the career incentives they have operated under will be honored and the benefits they have worked hard to earn will be conferred. Incentives that elevate S&T can encourage calculated career risks but need not drastically alter the overall career incentives for long-time career employees. Creative staffing models could also retain some employees who otherwise might have left the Department because they cannot envision a future role for themselves in existing career trajectories, retaining the many levels of diversity critical to representing American foreign policy interests.

What challenges do you anticipate for State Department leadership in elevating S&T along-side other foreign policy tools?

Demonstrating the value of S&T to long-time career employees is an important goal of these activities and will require careful change management. The individuals who make up the foreign policy workforce are some of the government’s most flexible and resilient, as demonstrated by their willingness to shift priorities, professional focus, and often geography every few years. Nonetheless, any changes that impact HR processes can be perceived as threatening and need

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to be made with close attention to the secondary and tertiary impacts and drivers of those impacted. The Foreign Service has a very strong and unified culture that garners many benefits for U.S. foreign policy but can create an impediment to organization-wide change. Senior leadership in the Department needs to create a safe space and reward employees for taking calculated management and career risks. If the pilots prove successful, there should be evidence and examples to build momentum toward expanded use and additional funding. The success of this proposal requires that operating units want to augment their existing activities. Leaders need to create an incentive architecture that creates champions and gets the buy-in of long-time foreign policy professionals. Elevating S&T cannot come with a loss of status, opportunities, or resources for more traditional foreign policy tools and personnel. An ability to quickly integrate and adapt to the circumstances on the ground is a core tenet of successful foreign policy. Demonstrating a positive impact on U.S. foreign policy from elevating, augmenting, and integrating S&T issues into mainstream foreign policy should go a long way toward overcoming resistance to change.

About the Author



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About the Day One Project



The Day One Project is dedicated to democratizing the policymaking process by working with new and expert voices across the science and technology community, helping to develop actionable policies that can improve the lives of all Americans, and readying them for Day One of a future presidential term. For more about the Day One Project, visit dayoneproject.org.