

**Statement before the House Committee on Science and
Technology, Subcommittee on Technology and
Innovation**

***“RESEARCH PRIORITIES AT DHS’ SCIENCE
AND TECHNOLOGY DIRECTORATE”***

A Statement by

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Statement of David J. Berteau
Senior Adviser, Center for Strategic and International Studies
for the Subcommittee on Technology and Innovation
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on
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Mr. Chairman, Congressman Smith, and Members of the Committee, thank you for the opportunity to appear before you today in the company of my distinguished fellow panel members. My statement addresses the overall question of establishing research priorities in the Science and Technology Directorate (S&T) of the U. S. Department of Homeland Security (DHS). It also responds to each of your three specific questions, as noted in the invitation letter.

My Background

It may be useful for the committee to know a bit about my background in order to gauge the value of the comments I make today. As shown on the attached biographical statement, most of my career in national security and homeland security issues has been here in Washington. However, in my younger days, I was also a firefighter and an emergency medical technician volunteer, and I still maintain ties to those communities, so I try to apply the first responder perspective as well as the Washington perspective to these questions.

Overall Role of S&T

It is also useful to review the legislative history of the creation of the Science & Technology Directorate. As I recall, this committee played a key role in ensuring that the role of Science and Technology was properly incorporated into the final Homeland Security Act of 2002. Initial legislative proposals included a narrow focus on research and development, tied most closely to requirements in the areas of chemical, biological, radiological, and nuclear, or CBRN. This committee appropriately supported a broader definition of homeland security R&D, and ultimately the act (Section 302 (4)) stated that the Under Secretary for Science and Technology would be responsible for “conducting basic and applied research, development, demonstration, testing, and evaluation activities that are relevant to **any or all elements of the Department**” (emphasis added).

However, with respect to the establishment of priorities both within DHS and for the nation, the enabling legislation was more specific. It states in Section 302 (2) and again in Section 302 (5) that the Under Secretary shall be responsible for “developing, in consultation with other appropriate executive agencies, a national policy and strategic

plan for, identifying priorities, goals, objectives and policies for, and coordinating the Federal Government's civilian efforts to identify and develop countermeasures to **chemical, biological, radiological, nuclear, and other emerging terrorist threats** (emphasis added), including the development of comprehensive, research-based definable goals for such efforts and development of annual measurable objectives and specific targets to accomplish and evaluate the goals of such efforts".

Thus, the originating act for DHS set up two parallel responsibilities for S&T. The first was to conduct R&D for all elements of the Department. The second was to support a national strategy that focused on terrorist threats, primarily in the areas of CBRN. In addition, the legislation includes a requirement for "annual measurable objectives", but that requirement focuses on CBRN. These parallel responsibilities, in my opinion, set up a competition for emphasis in the DHS S&T program. That competition is at the heart of today's hearing questions.

Strategic Planning in the Homeland Security Enterprise, DHS, and S&T

The critical question for the S&T budget in DHS is the matter of the priorities that are used to develop and execute that budget. As noted above, the Homeland Security Act of 2002 requires the S&T Directorate to develop a plan for prioritizing S&T research on CBRN. Such a plan requires a clear link to DHS S&T budgets and spending. There have been a number of plans developed and released in accordance with this requirement, most recently in 2007 and 2008. In keeping with the S&T responsibilities for "all elements of the Department", the plans to date have been broader than CBRN, and I believe that is appropriate and necessary. Such plans are worthwhile for guiding funding and justifying budgets.

However, from a strategic planning perspective, this process to date has been insufficient and inadequate. The ongoing Quadrennial Homeland Security Review, mandated by Congress, includes the charge to examine the homeland security strategic planning process. In fact, the DHS web site refers specifically to QHSR studies on Strategic Management and on Planning and Capabilities, and the questions submitted for the "National Dialogue" related to those studies can be found in links at http://www.dhs.gov/xabout/gc_1208534155450.shtm#0. I cannot speculate on the results of the QHSR, but I would like to share with the committee some of my personal observations about strategic planning and its relationship to the DHS S&T budget.

First, strategic planning needs to be the result of a rigorous planning process. This process would incorporate risk and threat assessment, the administration's priorities, legislation, existing strategies, and involvement of stakeholders into strategic guidance. Such guidance needs to encompass more than DHS – it needs to span the homeland security enterprise, beyond DHS to include the rest of the federal government as well as state and local levels, including first responders.

Second, strategic plans need to be assessed against existing capabilities to determine where there are gaps in capabilities and how those gaps can be addressed. In some cases,

capability gaps can be met by changes in procedures or training or policy. In other cases, resources will need to be allocated to fill capability gaps. In still other cases, new technology or new applications of existing technology will fix those gaps.

Third, budgets need to address capability gaps or shortfalls. Some of this could be in the DHS budget, some elsewhere in the federal budget, and some in state and local budgets.

Ultimately, the S&T strategic planning process should have the following attributes:

- it needs to flow from a broader Homeland Security Enterprise-wide Strategic Plan, linked in turn to a DHS-level Strategic Plan
- plans at each level (enterprise, DHS, and S&T) need to be assessed against current and projected capabilities, with the resulting identification of capability gaps and shortfalls
- those capability gaps and shortfalls need to be linked to the budget and to risk assessments of the consequences of failing to address the shortfalls

Such an S&T strategic plan would have significantly more value to DHS and homeland security than today's process. A broad strategic planning process and capability assessment will illuminate real priorities that reduce risk to America and produce more robust responses to catastrophic threats and events. It is important to recognize, though, that S&T cannot create these attributes; that can only be done at the DHS level.

IPTs and First Responders

The use of Integrated Process Teams or IPTs in the federal government has grown substantially in the past two decades. Such teams provide a mechanism for providing input to and assessing the status of government actions across an array of organizations and institutions. In the S&T process, they provide useful input, but they are not a substitute for the results of prioritization that the strategic planning and capability assessment process described above. In addition, IPTs can create a false sense of a rigorous process when in reality there is only rigorous involvement.

Basic Research

As the members of this Committee know well, the role of research in DHS was debated long and hard at the time the act was passed in 2002. A review of the legislative history shows diverse views over the types of research appropriate for DHS and who should conduct them. While the legislation settled some of this debate, there are still two important questions that need further resolution.

One is the issue of how much basic research should be done by DHS. The second is how to manage that research so that it eventually leads to useful homeland security applications. My own view is that the answers to these two questions need to tie back to the original point of a broader strategic plan and capability assessment process. If research cannot be linked to solving some strategic shortfall or capability gap, then we need to keep working before we assign it a high priority. Basic research sponsored by

other federal government agencies can be the feeding ground for DHS S&T programs, but basic research in DHS should, in my judgment, be tied to identified requirements and shortfalls and not be driven by any quota or budget target.

Transition from Research to Programs

One additional question warrants this Committee's attention, in my view. The first responder community cares about research to the extent that it produces results that help them do their jobs or prepare for contingencies. This means that DHS S&T needs to pay close attention to the transition from research into programs that will produce results. In some cases, this would mean the production of hardware or systems incorporating research results. In other cases, it might be the provision of standards or intellectual property to a broad array of vendors or suppliers. In still other cases, it might produce assistance to internal DHS components or first responders at the state or local level.

Across the board in S&T research, therefore, there needs to be planning for transition as part of the initial prioritization process. That planning has to include funding in the budget. This planning is easier for some activities than for others, particularly when the ultimate customer or user of the research is inside DHS. It's harder when the end user is outside DHS or even the federal government. Decades of experience at DARPA in DoD shows, however, that research dollars have more value and produce better results when consideration is given up front to plans for transitioning research into real, funded programs. This is a feature of the S&T strategic planning process that other homeland security strategic plans will not have, and it makes the S&T planning and budgeting challenge more complex, but it has high payoff for return on investment.

Closing

Chairman Wu, Congressman Smith, I would like to conclude by noting that the process I have advocated here is not easy. It is hard to develop broad strategic plans, hard to conduct such a planning process, and hard to do the capability assessments that lead to priorities in the budget. Failure to undertake an enterprise-wide strategic planning process will, however, ensure that we don't spend our scarce budget dollars where they will do the most good. I recommend that this Committee endorse the creation and support for a broad strategic plan across the Homeland Security Enterprise and the clear linkage of S&T strategic plans to that larger enterprise-level work.

Sir, this concludes my remarks, and I stand ready for your questions.

DAVID J. BERTEAU BIOGRAPHICAL STATEMENT

David J. Berteau is Senior Adviser and Director, Defense-Industrial Initiatives, at the Center for Strategic and International Studies in Washington, DC, where he is a resident scholar on acquisition, industrial base, programs, budget, and management for national security and homeland security. Recent and ongoing studies include projects on interagency resource management, federal services contracts, defense acquisition reform, transatlantic defense trade, and complex program management.

Mr. Berteau is a Fellow of the National Academy of Public Administration and chaired their panel on Joint Land Use Studies for the Defense Department. He is a member of the Defense Acquisition University Board of Visitors, a Director of the Procurement Round Table, and an Adjunct Professor at Georgetown University. He chaired the National Research Council's 2005 study of printed circuit boards for national security. Mr. Berteau served on the Secretary of the Army's Commission on Army Acquisition and Program Management in Expeditionary Operations and on two recent Defense Science Board task forces, on the defense industrial structure and on integrating commercial systems into defense.

Prior to coming to CSIS, he was Director of National Defense and Homeland Security for Clark & Weinstock, where he still consults. He was the Director of Syracuse University's National Security Studies Program and served as a Professor of Practice at the Maxwell School of Citizenship and Public Affairs. Mr. Berteau was a Senior Vice President for Science Applications International Corporation (SAIC) until early 2001.

Mr. Berteau served in the Defense Department for 12 years under four Defense Secretaries, including four years as Principal Deputy Assistant Secretary of Defense for Production and Logistics. He was responsible for weapons production readiness, the defense industrial base, military base closures, defense logistics, installations and military construction, defense procurement, and environmental matters. He testified before Congress more than 100 times, led numerous defense management reform initiatives, oversaw the Defense Logistics Agency, and was instrumental in creating two new agencies, the Defense Contract Management Agency and the Defense Commissary Agency. He twice was acting Assistant Secretary of Defense for nearly a year, in 1990 and 1993. As Chairman of the 1992 government-wide Defense Conversion Commission, Mr. Berteau's report to the Secretary of Defense, Adjusting to the Drawdown, developed ways to address the impact of defense reductions on the U.S. economy, on military and civilian defense personnel, and on communities. Nearly all of the commission's recommendations were implemented.

In the late 1980s, Mr. Berteau was the Deputy Assistant Secretary of Defense for Resource Management & Support, responsible for all defense military and civilian manpower and personnel requirements. He chaired the Federal Economic Adjustment Committee. He was acting Assistant Secretary of Defense for Force Management and Personnel for eight months in 1989.

Mr. Berteau was the Packard Commission's Executive Secretary in 1985-86 (President's Blue Ribbon Commission on Defense Management). Earlier, he was Assistant to the Deputy Secretary of Defense, Executive Secretary of the DoD Council on Integrity and Management Improvement and the Defense Resources Board, and Special Assistant to the DoD Comptroller. He entered DoD in 1981 as a Presidential Management Intern.

Mr. Berteau graduated from Tulane University in 1971 and received his Master's degree in 1981 from the LBJ School of Public Affairs at the University of Texas. Mr. Berteau received the Secretary of the Army Exceptional Public Service Medal in 2007 and the Secretary of Defense Medals for Distinguished Public Service in 1991 and Outstanding Public Service in 1987 and 1989. A native of Louisiana, he lives in Derwood, Maryland, with his wife, Jane Berteau; they have two grown children.