June 3, 2015

Chairman John Hoeven (R-ND) Ranking Member Jeanne Shaheen (D-NH)
U.S. Senate Homeland Security Appropriations U.S. Senate Homeland Security Appropriations
Subcommittee Subcommittee
Washington, DC 20510 Washington, DC 20510

Dear Chairman Hoeven and Ranking Member Shaheen,

As the Directors of the Department of Homeland Security (DHS) Centers of Excellence (COE) from across the nation, we collectively write you in support of the COE program as you consider funding for fiscal year (FY) 2016 appropriations legislation. Our centers play a crucial role in carrying out the DHS Science and Technology Directorate’s mission and serve as the only university research program dedicated to solving critical homeland security challenges. **We ask that you continue to support the Office of University Programs, which funds the Centers program, at $40 million in FY 2016.** This funding will allow DHS to fully fund current centers.

The COE program is the flagship source of funding for university research at DHS. The COEs bring together universities and private sector entities to generate basic and applied research that rapidly delivers innovative technologies for the homeland security community. The COE business model provides DHS and the nation affordable research and development products without the longer term costs of conducting the work in-house. The COEs serve a critical role in producing basic and applied research that results in stronger protections for the U.S. against terrorism and natural disasters, threats that no other federal agency exclusively protects against. It is important that Congress maintains strong funding levels for the program in order to sustain technological advances that will protect the U.S. homeland and help drive economic growth.

The centers have produced many important research and technology breakthroughs, including:

- The Center for Risk and Economic Analysis of Terrorism Events (CREATE) has used DHS funding to pioneer new game theoretic formulations that have been used by various components of DHS to maximize security when resources are limited. For example, this game theoretic formulation has been incorporated by the Federal Air Marshal Service (FAMS) to efficiently deploy air marshals while directing resources to the most critical international flights. It has also been incorporated by the Transportation Security Administration (TSA) to randomize the TSA security playbook and for the U.S. Coast Guard to improve effectiveness of on-the-water patrols.
- The National Center for Border Security and Immigration (NCBSI) has developed an AVATAR kiosk that conducts automated interviewing and credibility assessments of people at the border, checkpoints, and airports. Based on proven scientific principles, the AVATAR has undergone field trials for the U.S. Customs and Border Protection Trusted Traveler Program in Nogales, Arizona and at an international airport in Europe. It is scheduled for live testing at a DHS facility.
- The Center for Visualization and Data Analytics (CVADA) developed tools for the U.S. Coast Guard for efficient resource allocation, including mission response during Hurricanes Irene and Sandy, and more effective allocation of boats to boat stations. These tools have increased national safety, saved lives, and are expected to save the Coast Guard up to $120 million in 20 years through more efficient use of its resources. These savings alone are three times the annual cost of the COE program.
- The National Center for Food Protection and Defense (NCFPD) received a request from DHS to rapidly evaluate the impact of the Ebola outbreak on the global food supply. NCFPD quickly assessed the risk of transmission to humans in the U.S. through several routes out of West Africa and provided DHS leadership with a detailed assessment as well as several recommendations.
The Awareness and Localization of Explosives-Related Threats (ALERT) Center developed the Video Analytics Surveillance Transition (VAST) Project that uses advanced video analytics to solve key technical challenges in detecting and tracking potential risks in vulnerable venues. The project has resulted in the installation of a VAST test bed at Cleveland Hopkins International Airport, which enables airport security to use video analysis to detect counter-flow (people moving against the flow of foot traffic) within a defined area (such as exit only lanes). This test bed detects potential violations at a rate of 99 percent with an average of only five false alarms per week.

The Center for Maritime Security developed a tool called Port Mapper that allows the U.S. Coast Guard to identify alternative ports for cargo delivery as a function of cargo type, intermodal truck and rail capacity, and other features in the event of a port closure. The tool was used during Hurricane Sandy; when it became clear that the Port of New York/New Jersey would be closed for an extended period, the Center provided the tool to the LANT area US Coast Guard, who determined that vessels could be diverted to Norfolk and Halifax. This allowed shipping activities during the busy Christmas shopping season to continue for the Northeast.

The Center of Excellence for Zoonotic and Animal Disease Defense (ZADD), along with the agricultural enterprise, has developed and deployed a suite of tools—AgConnect™—to users in over 40 states that enhances biosurveillance, emergency response, and business continuity in the livestock and poultry industries and wildlife within the U.S. The biosurveillance component of AgConnect™, called the Enhanced Passive Surveillance system, developed in collaboration with DHS, U.S. Department of Agriculture, industry, and state animal health officials, uses web-based and mobile applications to capture near real-time information from veterinary practitioners and producers about animal health. The system integrates the information with diagnostic laboratory data to allow for earlier detection and response to potential animal disease outbreaks.

The National Consortium for the Study of Terrorism and Responses to Terrorism (START) has developed a group of databases that has become a standard reference throughout the homeland security community. START’s Global Terrorism Database receives 1.2 million web visits per month, has been downloaded thousands of times by U.S. government and military users, and is the basis for terrorism statistics included in the U.S. State Department’s congressionally mandated annual report to Congress.

As you can see, the COE program is a small but highly-leveraged investment that fulfills DHS’s research mission to solve homeland security-specific research and technology challenges and develop the next-generation security workforce. With this in mind, we ask you fund the program at $40 million for FY 2016.

Sincerely,

Dr. Ali Abbas, Director, Homeland Security National Center for Risk and Economic Analysis of Terrorism Events (CREATE)

Dr. Jay Nunamaker, Jr., Co-Director, National Center for Border Security and Immigration (NCBSI)
Dr. Fred Roberts, Director, Command, Control and Interoperability Center for Advanced Data Analysis (CCICADA), CVADA

Dr. David S. Ebert, Director, Visual Analytics for Command Control and Interoperability Environments (VACCINE), CVADA

Dr. Amy Kircher, Director, National Center for Food Protection and Defense (NCFPD)

Dr. Michael Silevitch, Director, Awareness and Localization of Explosives-Related Threats (ALERT) Center

Dr. Michael Bruno, Principal Investigator and Executive Director, Maritime Security Center (MSC)

Dr. Tammy Beckham, Co-Director, Center of Excellence for Zoonotic and Animal Disease Defense (ZADD)

Dr. Gary LaFree, Director, National Consortium for the Study of Terrorism and Responses to Terrorism (START)

cc: Tom Bishop
    Professional Staff Member
    U.S. Senate Homeland Security Appropriations Subcommittee

    Scott Nance
    Professional Staff Member
    U.S. Senate Homeland Security Appropriations Subcommittee