



National Counterterrorism University

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National Counterterrorism University

The Department of Homeland Security (DHS) now being created will be the domestic equivalent of the Department of Defense (DoD). The creation of a permanent cabinet department implies a war on terrorism without foreseeable end. Therefore, just as the country has established institutions of higher learning and research to support the national military forces, it should also consider an analogous institution to support its counterterrorist forces. This paper discusses the functions of such a “National Counterterrorism University (NCU),” why it would be desirable to differentiate it from existing institutions, its possible organizational configurations, how it might relate to the DHS, and a potential path to its creation.

Functions

Like the national war colleges and universities (Army War College, Naval War College, Naval Postgraduate School, Air University, National Defense University), an NCU would perform three broad functions: education, research, and communications (see Appendix I). These functions are important to the vitality, progress and adaptability of professional organizations, but they are difficult to perform continuously within operational units. They are also mutually supportive, so that it is most productive to conduct them within the same institution.

Education

The term “education” here is distinguished from “training.” By “training,” we mean the imparting of more or less rote knowledge, with an emphasis on the learning of skills (for example, learning to speak a foreign language). By “education,” we mean a somewhat broader process of reading, writing and discussion that lays a foundation of subject-matter understanding and knowledge. The NCU would offer a master’s degree-level curriculum to early- and mid-career civilian officials and military officers in careers involving counterterrorism. Like its existing counterpart institutions, the NCU might also offer skill-oriented training courses, but its major instructional function would be higher education.

Examples of the kinds of courses in the NCU curriculum might be:

- Terrorist strategy and tactics
- Composition and behavior of terrorist organizations
- U.S. national counterterrorist policy
- History of counterterrorist operations
- Public responses to terrorism and terrorist events
- International organizations and counterterrorism
- Methods of counterterrorist intelligence analysis
- Relationships between domestic and foreign intelligence activities and organizations
- Legal and constitutional issues surrounding counterterrorism
- Critical infrastructure assessment.

Research

The NCU faculty (which might include both teaching faculty, dedicated research faculty, and visiting scholars) would conduct research supporting the long-term improvement of U.S. counterterrorist policies and organizations. It would develop and synthesize the body of knowledge that would be studied in the educational curriculum. It would also build knowledge that would be shared through the “communications” function (see below).

Examples of research projects that the NCU might undertake could include:

- Political, social, and religious roots of terrorism
- Measuring the effectiveness of counterterrorist strategies
- New techniques of counterterrorist intelligence analysis
- Human or machine modeling of terrorist behavior
- Societal responses to terrorism.

A common way of focusing research resources is through institutes or centers that are more or less specialized. Such centers often both conduct research and administer the “communications” function described below. Here are a few hypothetical examples of research centers that might be appropriate for an NCU:

- National Institute for the Study of Counterterrorist Strategy
- Terrorist/Counterterrorist Simulation and Gaming Center
- Center for the Social Psychology of Terrorism.

Communications

The third function of the NCU would be communications, by which we mean here a set of activities that help build and sustain a national (and possibly international) community of scholars and practitioners concerned with counterterrorism. One kind of activity is the sponsorship of workshops and conferences bringing members of the community together to exchange information and ideas. Another is the publication, on line or in print, of the research output of the university’s and others researchers. Another is the interchange of visiting scholars with other institutions.

Cross-Cutting Capabilities

Some resources that could belong to the NCU might be used in different ways by the people and organizations that perform any of the above three basic functions. For example, a natural adjunct to an institution of higher learning dedicated to counterterrorism education and research would be a specialized library, which would likely be the most complete of its kind in the country. A second example might be a “war-gaming” department or unit—a feature of the three service colleges as well as the NDU.

Library

At a minimum, the NCU would need a library similar to those at other postgraduate schools, with books, journals, and electronic data access. However, the NCU facility might in addition become the major access point for the whole national community of academic expertise on terrorism. Few if any other learning institutions in the country are likely to have full departments of terrorism or extensive cross-disciplinary study centers. But many are likely to have individual, or small groups of, researchers who might welcome the opportunity to form a virtual community supported by the NCU. The NCU could become a central clearing house through which members of the terrorism research community could learn about and communicate with one another.

From the standpoint of the NCU, such a facility would become a major research resource for its community, a source of contacts for its professional students after they return to their jobs, and a means of assuring the quality of its communications activities. In addition, it would be a significant resource of the red teaming facility, described next.

“War” Gaming

Unlike non-governmental universities, the primary focus of the NCU is to improve the abilities of government employees to conduct a war—the “war” on terrorism. Therefore, like the military service and national defense universities, there is a case to be made for a resident war-gaming capability.

Unlike the other government institutions that conduct war games, the NCU would focus on the non-military aspects of the war on terrorism. Therefore, the kinds of war games played there are likely to differ from traditional military war games. Traditional war games have centered on force-on-force, “Blue” vs. “Red” scenarios of military encounter. (Though some have dealt with “asymmetric” warfare in which enemy guerilla and sabotage tactics are applied to try to undermine the military effectiveness of the Blue forces.) Traditional military forces would not be central to terrorism war games. Instead, we envisage three other, different kinds of games, with quite different kinds of scenarios.

One type of game would be the “hunter” game, in which U.S. (and possibly allied) intelligence and law enforcement agencies attempt to discover and interdict terrorist organizations and plans before the terrorist acts can be carried out. The second type of game would be the “response” game, in which the scenario begins with an act of terrorism that is carried out, and the consequences of which various government agencies must then try to manage. The response game might also experiment with various measures taken in advance to lessen or nullify the impact of the terrorist event. The third type of game would be the “policy” game, exploring larger-scale, more strategic counterterrorism issues.

We envisage several benefits from a terrorism war gaming capability:

- Education:
 - federal-level law enforcement and intelligence officials experience simulated hunts for terrorists or simulated terrorist events so as to lessen the stress of real-life problems;
 - players test and improve their own responses to the types of problems they may encounter in reality;
 - officials from various organizations practice leadership, management, communication, and collaboration skills that would be required in reality;
 - policy makers explore longer-term strategies for deterring, containing, or defeating terrorist organizations.
- Research:
 - exercise and refinement of capabilities to do “red teaming”—the creation of scenarios of terrorist organization, planning, and attack.; (elsewhere, we argue that red teaming will be an important tool in intelligence analysis that might lead to interdiction of terrorists);
 - “blue” team experimentation with strategies and tactics for finding and interdicting terrorists or for responding to attacks;
 - social-psychological research on the performance of individuals and teams in hunting terrorists or responding to attacks;
 - generate potential terror event response options for dealing with public, press, responder interactions;
 - generate potential long-term counterterror strategy options..
- Communication:
 - in scenario building, opportunity for terrorism experts to share knowledge about terrorist organization and behavior;
 - opportunity for intelligence, law enforcement (local, regional federal), and response agencies to share ideas about counterterrorist strategies and tactics;

- opportunity for researchers and policymakers to share ideas about responding to terrorist events: e.g.,
 - dealing with public reactions;
 - communicating through the press;
 - managing multi-level, multi-agency response teams;
- in blue-red games, policy makers share ideas on strategic options.

Differentiation

The role the NCU is different enough from those played by already existing institutions to justify creation of a new one.

Existing Defense Universities and Colleges

The military service universities and their associated colleges focus on military strategy and tactics and military-related national security issues. Certainly, they will develop resources to enhance the abilities of their professionals to perform their counterterrorist missions (see Appendix II). Nevertheless, the military will continue to have other missions to perform as well, and counterterrorism education and research will remain only one of many subjects with which they must deal. In addition, military professionals would also be eligible to attend the NCU, and the military institutions would be relieved of the need to create redundant capabilities.

The National Defense University has a somewhat different, and broader, portfolio than the individual service institutions, and it serves the joint military community (as well as, to some extent, the civilian national security community). But it, too, should not be expected to divert its present resources exclusively to counterterrorism.

Nongovernmental Universities

The nongovernmental colleges and universities will also play roles in the national counterterrorism effort (see Appendix III). The roles that would overlap the most with the NCU would be in public policy education and research and social scientific research on terrorism. In these areas, few if any institutions would be likely to amass the terrorism-focused resources envisaged for the NCU. Instead, one would expect to see smaller groups of scholars, rather than large centers, devoted to relevant research. And one would expect “homeland defense certificate” programs associated with degrees in various specialties, such as medicine, engineering, or public policy.

In addition, these institutions would probably play other roles *not* assigned to the NCU. One role would be to conduct research and development for technologies applicable to various counterterrorist activities—e.g. computer security, data management, chemical and biological sensors and countermeasures, critical infrastructure assessment and protection. Another role would be the education and training of regional, state, and local “first-responders” and emergency management officials in coping with the consequences of terrorist attacks.

National Laboratories

The NCU would not have the science and technology development role characteristic of the national laboratories.

Other Federally Funded Research and Development Centers (FFRDCs)

The Homeland Security Act (P.L. 107-296) authorizes the establishment of an Institute of Homeland Security. Its main focus would be on critical infrastructure analysis and protection, and on analysis of counterterrorist policy and technology options. Its functions do not appear to overlap greatly with those proposed for the NCU. Other FFRDCs (e.g. RAND) do conduct research into terrorist motives and methods, as would the NCU. Again, these organizations are unlikely to accrue the concentration of resources devoted to counterterrorism that the NCU would have. Nor do they generally play the educational role of the war colleges.

National Security Contract Research Organizations

Private contract research organizations can in some cases carry out the kind of research that will be done at the NCU. In general, they will do so to answer the specified, more or less immediate, needs of a specific contracting agency. They may conduct short-term training exercises. They are less likely to be able to conduct the wider-ranging, longer-term research envisaged for the NCU. They are unlikely to amass the resources of an NCU, and do not generally have its education and communication roles.¹

Relationship to the Department of Homeland Security

The Homeland Security Act does allow for various research enterprises associated with counterterrorism: the establishment (mentioned above) of an Institute for Homeland Security, the creation of a Acceleration Fund for Research and Development of Homeland Security Technologies, the selection of a university-based center or centers for Homeland Security, the establishment of a headquarters laboratory, the authorization of utilization of Department of Energy laboratories. None of these, however, quite fits the description of an NCU as described in this paper.

The DHS would be the likely candidate to be the “owning” government organization of the NCU. The majority of the NCU students would probably come from the DHS agencies (but many would also come from the Intelligence Community (IC), State, the Office of the Secretary of Defense, and the military.) Several of the DHS agencies—most especially the Intelligence Analysis Center—would be customers of NCU-generated knowledge and NCU facilities (though other agencies, particularly from the IC, would as well. Thus, although the NCU would be under DHS administrative supervision, it might make sense to levy financial support from other agencies, too.

Like the NDU, the NCU might also associate with an NCU foundation, a non-profit foundation enabling private sector grant and donation support for some NCU resources and activities.

Path to Creation

The professional military education schools are established under directives of the Office of the Secretary of Defense, with the Secretary of Defense seeking authorization and appropriations for the organizations from the Congress. Congress has also legislatively authorized the granting of master’s degrees by the colleges. To create a counterterrorism counterpart to war colleges and universities, then, arguably would begin with the Secretary of Homeland Defense declaring it established. This declaration would, of course, be meaningless without Congressional appropriations and authorization at least of degree-granting status.

The description above of the functions of the NCU imply at least the following set of resources and facilities and associated equipment:

¹ However, the ANSER Institute for Homeland Security does hold conferences and publish a Journal of Homeland Security.

- Permanent and temporary faculty (education and research)
- Administrative facilities and staff
- Classrooms, auditorium, conference facilities
- Library and research resource facilities and staff
- Gaming facilities and staff
- Operations funding in addition to salaries.

The costs of establishment and operations would, of course, depend on the scale of the institution. For an initial faculty and staff of around 200, a figure around \$30 million per year does not seem unreasonable. Eventually, one can imagine growth to a size comparable to that of a service war college. For example, the Army War College FY2003 proposed operations and maintenance budget was \$76 million.

The logical location for the NCU would be the Washington, DC, area—close to the constituencies that the institution would serve.

Conclusion

The “war” on terrorism seems momentous enough—and different enough from traditional military conflicts—to justify a National Counterterrorism University analogous to the existing service war colleges or the NDU. Given the long-term character of the struggle, it is reasonable to establish a Federal institution that would provide professional counterterrorist education to civil servants in the DHS and other agencies in the Intelligence Community as well as to military officers. The same institution would conduct research in terrorism and counterterrorist strategy to improve the U.S. long-term ability to cope with the enduring and evolving threat, and it would serve as a focal point of attention and communication for the broader national community of scholars, analysts, and policy makers concerned with terrorism

Appendices

Appendix I: Existing U.S. War Colleges and Universities		
Institution	Instructional departments	Research Institutions
Army War College (Carlisle Barracks, PA)	e.g., Dept. of National Security and Strategy	<ul style="list-style-type: none"> Center for Strategic Leadership (includes gaming and studies) Peacekeeping Institute (studies) Strategic Studies Institute (studies and analyses) Journal: <i>Parameters</i>
Naval War College (Newport, RI)	e.g., Strategy and Policy Department	Center for Naval Warfare Studies, including: <ul style="list-style-type: none"> Strategic Research Dept. Decision Strategies Dept. War Gaming Dept International Law Dept.
Naval Postgraduate School (Monterrey, CA)	Graduate Schools of: Business and Public Policy; Engineering and Applied Sciences; Operations and Information Sciences; International Studies	<ul style="list-style-type: none"> Institute for Information Innovation and Superiority Modeling, Virtual Environments, and Simulation Institute Institute of Systems Engineering 25 Research Centers, including Civil Military Relations, Contemporary Conflict, Homeland Security, INFOSEC, Terrorism and Irregular Warfare
Air University (Maxwell AFB, AL) Air War College	e.g. Dept. of Strategy and National Security, Dept. of Warfighting	<ul style="list-style-type: none"> USAF Counterproliferation Center (studies) AU Center for Strategy and Technology College of Aerospace Doctrine, Research and Education (war gaming, analysis, <i>Air and Space Power Journal</i>)
Air Force Institute of Technology	Graduate School of Engineering and Management; School of Systems and Logistics; Civil Engineer and Services School	

<p>National Defense University (Washington, DC)</p>	<ul style="list-style-type: none"> • National War College • Industrial College of the Armed Forces • Information Resources Management College • Joint Forces Staff College • Africa Center for Strategic Studies • Center for Hemispheric Defense Studies • Near East South Asia Center for Strategic Studies • School for National Security Executive Education 	<p>Institute for National Security Studies, comprising:</p> <ul style="list-style-type: none"> • Center for Technology and National Security Policy • Center for Counterproliferation Research • National Strategic Gaming Center • Center for the Study of Chinese Military Affairs
<p>Joint Military Intelligence College (at DIA, Washington, DC)</p>	<ul style="list-style-type: none"> • School offering Bachelor of Science in Intelligence and Master of Science in Strategic Intelligence 	<p>Office of Applied Research awards research funds to students and faculty</p>

Appendix II: Counterterrorism-Related Activities at U.S War Colleges

Institution	Education	Research	Communication
Army War College	Numerous student papers;	In 2001, commissioned 21 short studies for a book;	Conference 8/02, publication of report book later.
		<p>The Project Decatur series is a cosponsored (Science Applications International Corporation and Joint Warfare Analysis Center) research project designed to identify, test, and assess concepts of operations for exploiting terrorist network vulnerabilities identified during the earlier MacDuff workshops, which examined “what insights the organizational sciences and related disciplines) offer to the conduct of military operations against terrorist organizations.”</p> <p>Three wargames using social network analysis.</p>	
Air University	Several AWC master’s theses		
Naval War College	A few elective courses		Symposium (10/01)Conference on international law and WOT (6/02)
Naval Postgraduate School	National Security Master’s Homeland Security curriculum in preparation		Center for Homeland Security and Center on Terrorism and Irregular Warfare have not yet published programs
National Defense University	A few courses on terrorism and homeland security; Gaming Center conducted one game in a seminar in 2002	INSS Research Directorate Strategic Policy Studies Program in has 5 staff focusing on terrorism, transnational threats, and homeland security	Four conferences in 2002

Appendix III: University-based Counterterrorism Programs

Fairleigh Dickinson University Public Administration Institute	Undergraduate certificate program in Security & Terrorism Studies
Purdue University	Planning a certificate in homeland security program in conjunction with multiple degree programs

Appendix IV: Non-Profit Institutions with Major Counterterrorism Research and Communication Programs

Organization	Activities
ANSER Institute for Homeland Security	Director teaches NDU Homeland Security Course Annual Conference With partners, developing Joint Staff and Service-sponsored interactive antiterrorism training for commanders Publish Journal of Homeland Security Offers courses for certificate in Homeland Security within American Military University (distance learning) degrees
Oklahoma City National Memorial Institute for the Prevention of Terrorism	Conferences, workshops, and exercises, emphasis on responders and preparedness
RAND	Staffs Gilmore Commission No specific organization, but substantial research and publication on terrorism
Council on Foreign Relations	Web-based encyclopedia of open-source information on terrorism
Potomac Institute for Policy Studies International Center for Terrorism Studies	Lectures, meetings, seminars, briefings, conferences, and publications
Center for Strategic and International Studies, Transnational Threats Initiative, Terrorism Task Force	Terrorism-related research and publications
Brookings Institution	America’s Response to Terrorism project

Appendix V: Response Training Programs

St. Petersburg College, Southeastern Public Safety Institute, National Terrorism Preparedness Institute	Offers first-responder weapons of mass destruction training
SAIC	“SAIC offers emergency response training and mass-casualty medical training and evaluation. We are leaders in training and education in the area of biological defense and have conducted extensive training for military, intelligence, and civilian authorities throughout the United States”

Appendix VI: Homeland Security Act--Responsibilities of the DHS Under Secretary for Science and Technology

SEC. 302. RESPONSIBILITIES AND AUTHORITIES OF THE UNDER SECRETARY FOR SCIENCE AND TECHNOLOGY.

The Secretary, acting through the Under Secretary for Science and Technology, shall have the responsibility for--

- (1) advising the Secretary regarding research and development efforts and priorities in support of the Department's missions;

- (2) 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, 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 for such efforts;

- (3) supporting the Under Secretary for Information Analysis and Infrastructure Protection, by assessing and testing homeland security vulnerabilities and possible threats;

- (4) conducting basic and applied research, development, demonstration, testing, and evaluation activities that are relevant to any or all elements of the Department, through both intramural and extramural programs, except that such responsibility does not extend to human health-related research and development activities;

- (5) establishing priorities for, directing, funding, and conducting national research, development, test and evaluation, and procurement of technology and systems for--

- (A) preventing the importation of chemical, biological, radiological, nuclear, and related weapons and material; and

- (B) detecting, preventing, protecting against, and responding to terrorist attacks;

- (6) establishing a system for transferring homeland security developments or technologies to federal, state, local government, and private sector entities;

- (7) entering into work agreements, joint sponsorships, contracts, or any other agreements with the Department of Energy regarding the use of the national laboratories or sites and support of the science and technology base at those facilities;

- (8) collaborating with the Secretary of Agriculture and the Attorney General as provided in section 212 of the Agricultural Bioterrorism Protection Act of 2002 (7 U.S.C. 8401), as amended by section 1709(b);

- (9) collaborating with the Secretary of Health and Human Services and the Attorney General in determining any new biological agents and toxins that shall be listed as 'select agents' in Appendix A of part 72 of title 42, Code of Federal Regulations, pursuant to section 351A of the Public Health Service Act (42 U.S.C. 262a);

- (10) supporting United States leadership in science and technology;

- (11) establishing and administering the primary research and development activities of the Department, including the long-term research and development needs and capabilities for all elements of the Department;

- (12) coordinating and integrating all research, development, demonstration, testing, and evaluation activities of the Department;

- (13) coordinating with other appropriate executive agencies in developing and carrying out the science and technology agenda of the Department to reduce duplication and identify unmet needs; and

- (14) developing and overseeing the administration of guidelines for merit review of research and development projects throughout the Department, and for the dissemination of research conducted or sponsored by the Department.

Appendix VII: Homeland Security Act–DHS FFRDCs

SEC. 305. FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS.

The Secretary, acting through the Under Secretary for Science and Technology, shall have the authority to establish or contract with 1 or more federally funded research and development centers to provide independent analysis of homeland security issues, or to carry out other responsibilities under this Act, including coordinating and integrating both the extramural and intramural programs described in section 308.

Appendix VII: Homeland Security Act—HSARPA

SEC. 307. HOMELAND SECURITY ADVANCED RESEARCH PROJECTS AGENCY.

(a) DEFINITIONS- In this section:

(1) FUND- The term 'Fund' means the Acceleration Fund for Research and Development of Homeland Security Technologies established in subsection (c).

(2) HOMELAND SECURITY RESEARCH- The term 'homeland security research' means research relevant to the detection of, prevention of, protection against, response to, attribution of, and recovery from homeland security threats, particularly acts of terrorism.

(3) HSARPA- The term 'HSARPA' means the Homeland Security Advanced Research Projects Agency established in subsection (b).

(4) UNDER SECRETARY- The term 'Under Secretary' means the Under Secretary for Science and Technology.

(b) HSARPA-

(1) ESTABLISHMENT- There is established the Homeland Security Advanced Research Projects Agency.

(2) DIRECTOR- HSARPA shall be headed by a Director, who shall be appointed by the Secretary. The Director shall report to the Under Secretary.

(3) RESPONSIBILITIES- The Director shall administer the Fund to award competitive, merit-reviewed grants, cooperative agreements or contracts to public or private entities, including businesses, federally funded research and development centers, and universities. The Director shall administer the Fund to--

(A) support basic and applied homeland security research to promote revolutionary changes in technologies that would promote homeland security;

(B) advance the development, testing and evaluation, and deployment of critical homeland security technologies; and

(C) accelerate the prototyping and deployment of technologies that would address homeland security vulnerabilities.

(4) TARGETED COMPETITIONS- The Director may solicit proposals to address specific vulnerabilities identified by the Director.

(5) COORDINATION- The Director shall ensure that the activities of HSARPA are coordinated with those of other relevant research agencies, and may run projects jointly with other agencies.

(6) PERSONNEL- In hiring personnel for HSARPA, the Secretary shall have the hiring and management authorities described in section 1101 of the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (5 U.S.C. 3104 note; Public Law 105-261). The term of appointments for employees under subsection (c)(1) of that section may not exceed 5 years before the granting of any extension under subsection (c)(2) of that section.

(7) DEMONSTRATIONS- The Director, periodically, shall hold homeland security technology demonstrations to improve contact among technology developers, vendors and acquisition personnel.

(c) FUND-

(1) ESTABLISHMENT- There is established the Acceleration Fund for Research and Development of Homeland Security Technologies, which shall be administered by the Director of HSARPA.

(2) AUTHORIZATION OF APPROPRIATIONS- There are authorized to be appropriated \$500,000,000 to the Fund for fiscal year 2003 and such sums as may be necessary thereafter.

(3) COAST GUARD- Of the funds authorized to be appropriated under paragraph (2), not less than 10 percent of such funds for each fiscal year through fiscal year 2005 shall be authorized only for the Under Secretary, through joint agreement with the Commandant of the Coast Guard, to carry out research and development of improved ports, waterways and coastal security surveillance and perimeter protection capabilities for the purpose of minimizing the possibility that Coast Guard cutters, aircraft, helicopters, and personnel will be diverted from non-homeland security missions to the ports, waterways and coastal security mission.

Appendix VIII: Homeland Security Act—R&D

SEC. 308. CONDUCT OF RESEARCH, DEVELOPMENT, DEMONSTRATION, TESTING AND EVALUATION.

(a) IN GENERAL- The Secretary, acting through the Under Secretary for Science and Technology, shall carry out the responsibilities under section 302(4) through both extramural and intramural programs.

(b) EXTRAMURAL PROGRAMS-

(1) IN GENERAL- The Secretary, acting through the Under Secretary for Science and Technology, shall operate extramural research, development, demonstration, testing, and evaluation programs so as to--

(A) ensure that colleges, universities, private research institutes, and companies (and consortia thereof) from as many areas of the United States as practicable participate;

(B) ensure that the research funded is of high quality, as determined through merit review processes developed under section 302(14); and

(C) distribute funds through grants, cooperative agreements, and contracts.

(2) UNIVERSITY-BASED CENTERS FOR HOMELAND SECURITY-

(A) ESTABLISHMENT- The Secretary, acting through the Under Secretary for Science and Technology, shall establish within 1 year of the date of enactment of this Act a university-based center or centers for homeland security. The purpose of this center or centers shall be to establish a coordinated, university-based system to enhance the Nation's homeland security.

(B) CRITERIA FOR SELECTION- In selecting colleges or universities as centers for homeland security, the Secretary shall consider the following criteria:

(i) Demonstrated expertise in the training of first responders.

(ii) Demonstrated expertise in responding to incidents involving weapons of mass destruction and biological warfare.

(iii) Demonstrated expertise in emergency medical services.

(iv) Demonstrated expertise in chemical, biological, radiological, and nuclear countermeasures.

(v) Strong affiliations with animal and plant diagnostic laboratories.

(vi) Demonstrated expertise in food safety.

(vii) Affiliation with Department of Agriculture laboratories or training centers.

(viii) Demonstrated expertise in water and wastewater operations.

(ix) Demonstrated expertise in port and waterway security.

(x) Demonstrated expertise in multi-modal transportation.

(xi) Nationally recognized programs in information security.

(xii) Nationally recognized programs in engineering.

(xiii) Demonstrated expertise in educational outreach and technical assistance.

(xiv) Demonstrated expertise in border transportation and security.

(xv) Demonstrated expertise in interdisciplinary public policy research and communication outreach regarding science, technology, and public policy.

(C) DISCRETION OF SECRETARY- The Secretary shall have the discretion to establish such centers and to consider additional criteria as necessary to meet the evolving needs of homeland security and shall report to Congress concerning the implementation of this paragraph as necessary.

(D) AUTHORIZATION OF APPROPRIATIONS- There are authorized to be appropriated such sums as may be necessary to carry out this paragraph.

(c) INTRAMURAL PROGRAMS-

(1) CONSULTATION- In carrying out the duties under section 302, the Secretary, acting through the Under Secretary for Science and Technology, may draw upon the expertise of any laboratory of the Federal Government, whether operated by a contractor or the Government.

(2) LABORATORIES- The Secretary, acting through the Under Secretary for Science and Technology, may establish a headquarters laboratory for the Department at any laboratory or site and may establish additional laboratory units at other laboratories or sites.

(3) CRITERIA FOR HEADQUARTERS LABORATORY- If the Secretary chooses to establish a headquarters laboratory pursuant to paragraph (2), then the Secretary shall do the following:

(A) Establish criteria for the selection of the headquarters laboratory in consultation with the National Academy of Sciences, appropriate Federal agencies, and other experts.

- (B) Publish the criteria in the Federal Register.
 - (C) Evaluate all appropriate laboratories or sites against the criteria.
 - (D) Select a laboratory or site on the basis of the criteria.
 - (E) Report to the appropriate congressional committees on which laboratory was selected, how the selected laboratory meets the published criteria, and what duties the headquarters laboratory shall perform.
- (4) LIMITATION ON OPERATION OF LABORATORIES- No laboratory shall begin operating as the headquarters laboratory of the Department until at least 30 days after the transmittal of the report required by paragraph (3)(E).

Appendix VIII: Homeland Security Act—DOE Laboratories

SEC. 309. UTILIZATION OF DEPARTMENT OF ENERGY NATIONAL LABORATORIES AND SITES IN SUPPORT OF HOMELAND SECURITY ACTIVITIES.

(a) AUTHORITY TO UTILIZE NATIONAL LABORATORIES AND SITES-

(1) IN GENERAL- In carrying out the missions of the Department, the Secretary may utilize the Department of Energy national laboratories and sites through any 1 or more of the following methods, as the Secretary considers appropriate:

(A) A joint sponsorship arrangement referred to in subsection (b).

(B) A direct contract between the Department and the applicable Department of Energy laboratory or site, subject to subsection (c).

(C) Any `work for others' basis made available by that laboratory or site.

(D) Any other method provided by law.

(2) ACCEPTANCE AND PERFORMANCE BY LABS AND SITES- Notwithstanding any other law governing the administration, mission, use, or operations of any of the Department of Energy national laboratories and sites, such laboratories and sites are authorized to accept and perform work for the Secretary, consistent with resources provided, and perform such work on an equal basis to other missions at the laboratory and not on a noninterference basis with other missions of such laboratory or site.

(b) JOINT SPONSORSHIP ARRANGEMENTS-

(1) LABORATORIES- The Department may be a joint sponsor, under a multiple agency sponsorship arrangement with the Department of Energy, of 1 or more Department of Energy national laboratories in the performance of work.

(2) SITES- The Department may be a joint sponsor of a Department of Energy site in the performance of work as if such site were a federally funded research and development center and the work were performed under a multiple agency sponsorship arrangement with the Department.

(3) PRIMARY SPONSOR- The Department of Energy shall be the primary sponsor under a multiple agency sponsorship arrangement referred to in paragraph (1) or (2).

(4) LEAD AGENT- The Secretary of Energy shall act as the lead agent in coordinating the formation and performance of a joint sponsorship arrangement under this subsection between the Department and a Department of Energy national laboratory or site.

(5) FEDERAL ACQUISITION REGULATION- Any work performed by a Department of Energy national laboratory or site under a joint sponsorship arrangement under this subsection shall comply with the policy on the use of federally funded research and development centers under the Federal Acquisition Regulations.

(6) FUNDING- The Department shall provide funds for work at the Department of Energy national laboratories or sites, as the case may be, under a joint sponsorship arrangement under this subsection under the same terms and conditions as apply to the primary sponsor of such national laboratory under section 303(b)(1)(C) of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 253 (b)(1)(C)) or of such site to the extent such section applies to such site as a federally funded research and development center by reason of this subsection.

(c) SEPARATE CONTRACTING- To the extent that programs or activities transferred by this Act from the Department of Energy to the Department of Homeland Security are being carried out through direct contracts with the operator of a national laboratory or site of the Department of Energy, the Secretary of Homeland Security and the Secretary of Energy shall ensure that direct contracts for such programs and activities between the Department of Homeland Security and such operator are separate from the direct contracts of the Department of Energy with such operator.

(d) AUTHORITY WITH RESPECT TO COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS AND LICENSING AGREEMENTS-

In connection with any utilization of the Department of Energy national laboratories and sites under this section, the Secretary may permit the director of any such national laboratory or site to enter into cooperative research and development agreements or to negotiate licensing agreements with any person, any agency or instrumentality, of the United States, any unit of State or local government, and any other entity under the authority granted by section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a). Technology may be transferred to a non-Federal party to such an agreement consistent with the provisions of sections 11 and 12 of that Act (15 U.S.C. 3710, 3710a).

(e) REIMBURSEMENT OF COSTS- In the case of an activity carried out by the operator of a Department of Energy national laboratory or site in connection with any utilization of such laboratory or site under this section,

the Department of Homeland Security shall reimburse the Department of Energy for costs of such activity through a method under which the Secretary of Energy waives any requirement for the Department of Homeland Security to pay administrative charges or personnel costs of the Department of Energy or its contractors in excess of the amount that the Secretary of Energy pays for an activity carried out by such contractor and paid for by the Department of Energy.

(f) LABORATORY DIRECTED RESEARCH AND DEVELOPMENT BY THE DEPARTMENT OF ENERGY- No funds authorized to be appropriated or otherwise made available to the Department in any fiscal year may be obligated or expended for laboratory directed research and development activities carried out by the Department of Energy unless such activities support the missions of the Department of Homeland Security.

(g) OFFICE FOR NATIONAL LABORATORIES- There is established within the Directorate of Science and Technology an Office for National Laboratories, which shall be responsible for the coordination and utilization of the Department of Energy national laboratories and sites under this section in a manner to create a networked laboratory system for the purpose of supporting the missions of the Department.

(h) DEPARTMENT OF ENERGY COORDINATION ON HOMELAND SECURITY RELATED RESEARCH- The Secretary of Energy shall ensure that any research, development, test, and evaluation activities conducted within the Department of Energy that are directly or indirectly related to homeland security are fully coordinated with the Secretary to minimize duplication of effort and maximize the effective application of Federal budget resources.

Appendix IX: Homeland Security Act—Functions of the Planned Department of Homeland Security Institute

SEC. 310. HOMELAND SECURITY INSTITUTE.

(a) ESTABLISHMENT- The Secretary shall establish a federally funded research and development center to be known as the 'Homeland Security Institute' (in this section referred to as the 'Institute').

(b) ADMINISTRATION- The Institute shall be administered as a separate entity by the Secretary.

(c) DUTIES- The duties of the Institute shall be determined by the Secretary, and may include the following:

(1) Systems analysis, risk analysis, and simulation and modeling to determine the vulnerabilities of the Nation's critical infrastructures and the effectiveness of the systems deployed to reduce those vulnerabilities.

(2) Economic and policy analysis to assess the distributed costs and benefits of alternative approaches to enhancing security.

(3) Evaluation of the effectiveness of measures deployed to enhance the security of institutions, facilities, and infrastructure that may be terrorist targets.

(4) Identification of instances when common standards and protocols could improve the interoperability and effective utilization of tools developed for field operators and first responders.

(5) Assistance for Federal agencies and departments in establishing testbeds to evaluate the effectiveness of technologies under development and to assess the appropriateness of such technologies for deployment.

(6) Design of metrics and use of those metrics to evaluate the effectiveness of homeland security programs throughout the Federal Government, including all national laboratories.

(7) Design of and support for the conduct of homeland security-related exercises and simulations.

(8) Creation of strategic technology development plans to reduce vulnerabilities in the Nation's critical infrastructure and key resources.

(d) CONSULTATION ON INSTITUTE ACTIVITIES- In carrying out the duties described in subsection (c), the Institute shall consult widely with representatives from private industry, institutions of higher education, and nonprofit institutions.

(e) ANNUAL REPORTS- The Institute shall transmit to the Secretary and the Congress an annual report on the activities of the Institute under this section.

Source: HR 5005