

# Background

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## Stopping Surprise Attacks: Thinking Smarter About Homeland Security

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For decades, top Pentagon management has not had the time to think deeply about long-term trends or threats that have not even begun to emerge. Instead, it has relied on a small office to do the job—the Office of Net Assessment (ONA).<sup>1</sup> The ONA offers senior leaders insights and new perspectives on an uncertain future by conducting studies and engaging top intellectuals and cutting-edge thinkers in many fields.

The Department of Homeland Security (DHS) can benefit from the Pentagon's experience. The DHS should establish a similar capability for pondering the long-term challenges and opportunities to keep the nation safe from transnational and domestic threats.

### Net Assessment 101

In Washington, D.C., the urgent crowds out the important. Leaders face the constant distraction of daily meetings, briefings, and decisions. The free-thinking, speculative nature of net assessment offers senior leaders a disciplined process to expand their thinking horizon beyond the immediate environment and timeframe. It begins with a premise—all national security challenges are a series of actions and counteractions between competitors—and asks how these competitions might progress in the future. The ONA then offers a comprehensive, multi-disciplinary approach to analysis, looking at the full range of factors that shape and alter the security environment of the future, including social, political, technological, and economic trends.<sup>2</sup>

The net assessment method employs diverse tools to enrich understanding of the nature of competition.

### Talking Points

- For decades, top Pentagon management has benefited from the work of the Office of Net Assessment, which thinks deeply about long-term trends or threats that have not even begun to emerge.
- The Department of Homeland Security needs a similar capability for pondering the long-term challenges and opportunities to keep the nation safe from transnational and domestic threats.
- One of the 9/11 Commission's conclusions was that America's defense against terrorism suffered from a "lack of imagination," with gaps between intelligence agencies and the lack of coordination among the intelligence and law enforcement communities creating a space for terrorist cells to operate on U.S. soil.
- Net assessment capabilities will become even more critical to defeating international terrorism, an adversary that is "proactive, innovative, well networked, flexible, patient, young, technologically savvy," and continuously learning and adapting.

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Analytical fields as diverse as economics, real estate, and marketing use some of the tools of net assessment, including systems analysis and game theory, to interpret competitive environments. For example, game theory uses basic responses of opponents to analyze strategic interactions between parties. This algorithmic analysis is commonly demonstrated in the prisoner's dilemma game, in which outcomes of isolated individuals are predicted. Similarly, systems analysis interprets the complex interactions of discrete entities, such as parts of a supply chain (e.g., manufacturing, transportation, marketing, and wholesale and retail operations), and how they work toward a predictable action.

Net assessment adds to analytical methods like gaming and systems analysis, which produce predictable outcomes such as computer modeling that posits the impact of changing oil prices on consumer goods. Net assessment encourages senior leaders to consider unexpected outcomes that emerge from unforeseen and unappreciated factors. While game theory and systems analysis generate likely outcomes on the basis of participant rationality, net assessment does not assume that players "follow the rules" and react in predictably uniform ways.

Many public and private organizations use net assessment techniques. For example, the International Research Institute for Climate and Society conducts an annual net assessment of climate conditions over several continents.<sup>3</sup> Likewise, the government of Ontario, Canada, conducts net assessments of property value between two neighboring counties.<sup>4</sup> These analyses reflect, literally, the *net* situation, meaning the

environment that remains after costs and benefits are incorporated.

In the realm of national security, net assessment takes on multiple complexities and forecasts futures that conventional analyses or formal models may overlook. The tools of net assessment for defense analyses combine "scenarios, war games, trend analysis, and considered judgment."<sup>5</sup> The consistent thread among these methods is that they deal in speculation about the unknown.

### Thinking Outside the Pentagon Box

In 1971, President Richard Nixon created a net assessment team within the National Security Council. Dissatisfied with the level of integration of his intelligence contributors and defense analysts, Nixon formed the group from scholars at the RAND Corporation, a federally funded research and development center (FFRDC), and had them report directly to National Security Adviser Henry Kissinger. The unit was lead by Andrew Marshall, a RAND analyst. In 1973, Marshall's unit moved to the Pentagon, and he was named director of the Office of Net Assessment, a post he has held during every subsequent Administration.

Much of the ONA's work through the 1980s focused on competitive environments between the U.S. and the Soviet Union. The office utilized case studies, statistical analysis, gaming, and political, socioeconomic, and cultural analysis to provide net assessments of Soviet capabilities and U.S. countermeasures.<sup>6</sup> The ONA became adept at creating novel what-if scenarios that no one else considered.

1. The U.S. Department of Defense defines net assessment as "the comparative analysis of military, technological, political, economic, and other factors governing the relative military capability of nations. Its purpose is to identify problems and opportunities that deserve the attention of senior defense officials." U.S. Department of Defense, "Director of Net Assessment," Directive 5111.11, August 22, 2001, at [www.dtic.mil/whs/directives/corres/rtf/d511111x.rtf](http://www.dtic.mil/whs/directives/corres/rtf/d511111x.rtf) (March 29, 2007).
2. U.S. Department of Homeland Security, Homeland Security Advisory Council, *Report of the Future of Terrorism Task Force*, January 2007, at [www.dhs.gov/xlibrary/assets/hsac-future-terrorism-010107.pdf](http://www.dhs.gov/xlibrary/assets/hsac-future-terrorism-010107.pdf) (March 29, 2007). Frank J. Cilluffo, one of the authors of this paper, served as vice chairman of the Future Terrorism Task Force.
3. International Research Institute for Climate and Society, "IRI Net Assessment Forecasts," February 2007, at [http://iri.columbia.edu/climate/forecast/net\\_asmt/2007/index.html](http://iri.columbia.edu/climate/forecast/net_asmt/2007/index.html) (March 29, 2007).
4. Canadian Legal Information Institute, "Allocation of Costs Between Haldimand County and Norfolk County," Ontario Regulation 465/01, 1999, at [www.canlii.org/on/laws/regu/2001r.465/20060928/whole.html](http://www.canlii.org/on/laws/regu/2001r.465/20060928/whole.html) (March 29, 2007).
5. Paul Bracken, "Net Assessment: A Practical Guide," *Parameters*, Vol. 36, No. 1 (Spring 2006), pp. 90–100, at [www.carlisle.army.mil/usawc/Parameters/06spring/bracken.htm](http://www.carlisle.army.mil/usawc/Parameters/06spring/bracken.htm) (March 29, 2007).
6. James Jay Carafano, review of *The Dynamics of Military Revolution, 1300–2050*, by MacGregor Knox and Williamson Murray, *Richmond Independent News*, September 13, 2002, at <http://richmond.indymedia.org/newswire/display/1756/index.php> (March 29, 2007).

Marshall also focused on competitive conditions of Soviet government. The idea of perceptions of power, for both internal and external actors, was considered a crucial metric in which to analyze military capacity.<sup>7</sup> Marshall further sought to scrutinize environmental and demographic conditions within Soviet society that would influence overall Soviet strategy, foreseeing many of the consequences that led to the Soviet collapse in 1991.<sup>8</sup>

The ONA made a major contribution to the work of Team B, a group of intelligence experts that crafted an analysis supplementary to that of the CIA team's National Intelligence Estimate of Russian military capabilities in 1975. Team B as well as the ONA felt that the CIA team (Team A) had vastly underestimated Soviet capabilities and that the danger was greater than the agency was willing to recognize.<sup>9</sup> The office fine-tuned the tactics of alternative analysis throughout the Cold War.<sup>10</sup> Since the fall of the Berlin Wall, the office has pondered the security environment of the 21st century, investigating diverse topics that might change the nature of warfare from developments in neuropharmacology to the course of climate change.<sup>11</sup>

The office continues to have a significant impact on senior leader decision-making. The ONA was an early proponent of military transformation.<sup>12</sup> The influence of the office's work on the revolution in military affairs was reflected in the Defense Department's 2006 Quadrennial Defense Review, which

institutionalized the concept of transforming the military to respond to the diverse potential requirements that might be posed by the national security challenges of the 21st century.<sup>13</sup>

In addition to immediate influence on senior leaders, the ONA has trained a number of the nation's most respected defense analysts in net assessment methodology. They, in turn, today serve in government, research institutions, and academia, providing a cadre of scholars skilled in understanding the complex challenges of national security decision-making.

### Net Assessment and Homeland Security

One of the critical findings in the 9/11 Commission's final report was that America's defense against terrorism suffered from a "lack of imagination," with gaps between intelligence agencies and the lack of coordination among the intelligence and law enforcement communities creating a space for terrorist cells to operate on U.S. soil.<sup>14</sup> The events of 9/11 have presented those that protect the homeland with the challenge of predicting the unpredictable.

Net assessment capabilities are and will become even more critical given the very nature of America's current adversary, who has been characterized as one that is "proactive, innovative, well networked, flexible, patient, young, [and] technologically savvy, and learns and adapts continuously based upon both successful and failed operations around the

7. Michael Pillsbury, *China Debates: The Future Security Environment* (Washington, D.C.: National Defense University Press, 2000), Appendix 1, at [www.fas.org/nuke/guide/china/doctrine/pills2/index.html](http://www.fas.org/nuke/guide/china/doctrine/pills2/index.html) (March 29, 2007).
8. Ken Silverstein, "The Man from ONA," *The Nation*, October 7, 1999, at [www.thenation.com/doc/19991025/19991025silversteinside](http://www.thenation.com/doc/19991025/19991025silversteinside) (March 29, 2007).
9. Sam Tanenhaus, "The Hard-Liner," *The Boston Globe*, November 2, 2003, at [www.boston.com/news/globe/ideas/articles/2003/11/02/the\\_hard\\_liner](http://www.boston.com/news/globe/ideas/articles/2003/11/02/the_hard_liner) (March 29, 2007).
10. Andrew W. Marshall, "A Program to Improve Analytical Methods Related to Strategic Forces," *Policy Sciences*, Vol. 15, No. 1 (November 1982), pp. 47–50.
11. Douglas McGray, "The Marshall Plan," *Wired*, February 2003, at [www.wired.com/wired/archive/11.02/marshall.html](http://www.wired.com/wired/archive/11.02/marshall.html) (March 29, 2007).
12. Bruce Berkowitz, "War in the Information Age," *Hoover Digest*, No. 2 (2002), at [www.hoover.org/publications/digest/3437361.html](http://www.hoover.org/publications/digest/3437361.html) (March 29, 2007).
13. James Jay Carafano, Ph.D., Baker Spring, and Alane Kochems, "Getting It Right: A Congressional Guide to Grading the 2005 Quadrennial Defense Review," Heritage Foundation *Background* No. 1905, December 15, 2005, at [www.heritage.org/Research/NationalSecurity/upload/88369\\_1.pdf](http://www.heritage.org/Research/NationalSecurity/upload/88369_1.pdf).
14. National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States* (New York: W.W. Norton and Company, 2004), pp. 86–92, at [www.9-11commission.gov/report/911Report.pdf](http://www.9-11commission.gov/report/911Report.pdf) (March 29, 2007).

globe.”<sup>15</sup> Net assessment provides the ability to beat America’s “competitors” by staying ahead of the changing threat environment.

Yet no DHS office currently conducts net assessment in a department-wide, comprehensive, systematic manner, although some DHS directorates have developed internal assessment groups. In April 2004, the DHS Science and Technology Directorate established the Homeland Security Institute (HSI), the department’s first FFRDC. The HSI includes directorate-wide systems evaluations as well as operational and technological assessments.<sup>16</sup> DHS Under Secretary for Science and Technology Jay Cohen stated in congressional testimony that he wanted periodic net assessments of the department’s biodefense initiatives.<sup>17</sup> The Transportation Security Administration, Citizenship and Immigration Services, Customs and Border Protection, Immigration and Customs Enforcement, and Federal Emergency Management also have internal policy and review contingents.<sup>18</sup> Although these DHS bodies may be conducting some net assessment activities within their domains, they do not have the scope or mission to look at all homeland security efforts and conduct effective net assessments.

The shortfall in DHS net assessment capabilities is not just a problem for the department and its domestic constituents. It is a dangerous deficit in national security. A DHS ONA that could integrate intelligence on external threats and target vulnerabilities would also require cooperation and integration with the current U.S. intelligence community. Effectively countering and destroying a highly

dynamic, adaptive, unpredictable adversary such as international terrorist networks requires employing unconventional scenarios and competitive analysis to gain a better understanding of their means, motives, and opportunities.

In 2004, a joint report by The Heritage Foundation and the Center for Strategic and International Studies first recommended establishing an ONA office.<sup>19</sup> On January 11, 2007, the Homeland Security Advisory Council (HSAC), a group of policy advisers from various backgrounds including academia and the private and public sectors, recommended to DHS Secretary Michael Chertoff that he form his own net assessment office,<sup>20</sup> which would be responsible for preparing “for threats that have not materialized” and would produce “long-term assessments and strategy, acting as a brain trust of creativity and imagination.”<sup>21</sup> The HSAC’s recommendation makes sense.

## Options and Opportunities

The DHS should move immediately to establish a net assessment office. Key to creating a successful ONA is ensuring that the office remains nonpartisan, small, flexible, and responsive and is not perceived as being in competition with other parts of the department in terms of driving policy or the allocation of department resources. In addition, the ONA should be tasked not just with directly informing the thinking of senior leaders, but also with helping to build a national network of scholars and analysts skilled in applying net assessment to the challenges of homeland security.

15. U.S. Department of Homeland Security, *Report of the Future of Terrorism Task Force*, p. 6.

16. U.S. Department of Homeland Security, “Fact Sheet: Homeland Security Establishes Its First Government ‘Think Tank’ Homeland Security Institute,” April 2004, at [www.dhs.gov/xnews/releases/press\\_release\\_0395.shtm](http://www.dhs.gov/xnews/releases/press_release_0395.shtm) (March 29, 2007).

17. Jay M. Cohen, statement before the Subcommittee on Prevention of Nuclear and Biological Attack, Committee on Homeland Security, U.S. House of Representatives, September 14, 2006, p. 9, at [http://chs-republicans.house.gov/Files/Hearing/Testimony/TestimonyCohen4\\_0.pdf](http://chs-republicans.house.gov/Files/Hearing/Testimony/TestimonyCohen4_0.pdf) (April 16, 2007).

18. U.S. Department of Homeland Security, “Department of Homeland Security Organizational Chart,” January 2007, at [www.dhs.gov/xlibrary/assets/dhs-organizational-charts-012907.pdf](http://www.dhs.gov/xlibrary/assets/dhs-organizational-charts-012907.pdf) (March 29, 2007).

19. James Jay Carafano, Ph.D., and David Heyman, “DHS 2.0: Rethinking the Department of Homeland Security,” Heritage Foundation *Special Report* No. 2, December 13, 2004, p. 12, at [www.heritage.org/Research/HomelandDefense/upload/72759\\_1.pdf](http://www.heritage.org/Research/HomelandDefense/upload/72759_1.pdf) (March 29, 2007).

20. Jonathan Marino, “Advisors Urge DHS Chief to Seek Intel Community’s Support,” GovExec.com, January 11, 2007, at [www.govexec.com/dailyfed/0107/011107j1.htm](http://www.govexec.com/dailyfed/0107/011107j1.htm) (March 29, 2007).

21. U.S. Department of Homeland Security, *Report of the Future of Terrorism Task Force*.



Specifically, building on the Pentagon's pioneering work, the DHS ONA should:

- **Be an independent office that reports directly to both the DHS Secretary and Deputy Secretary.** The ONA's fundamental purpose is to provide strategic analysis to the department's most senior leaders to keep them informed of global and domestic trends and evolving issues. This cannot happen unless the ONA has direct access to senior leaders and can provide unfiltered analysis and feedback.
- **Have a clearly defined mission that is consistent with the purpose of net assessment.** The ONA is not a policymaking office. It should not produce policy options for senior leaders. Its job is to inform the thinking of senior leaders by scanning the environment and horizon for new challenges and opportunities. Senior leaders are responsible for deciding how to use that information and initiating appropriate actions, programs, and policies in response to ONA analysis.
- **Have a professional staff and adequate resources to commission studies and analyses and evaluations.** The ONA should be staffed by a core of career-service intellectuals, skilled at asking probing and imaginative questions and armed with sufficient resources to commission top researchers around the country to collaborate on conducting cutting-edge analysis.
- **Authorize an ONA fellows program** that will enable the DHS to bring some of the nation's finest post-doctoral students, private-sector innovators, and state and local government officials into the office for two-year fellowships to learn the skills of homeland security assessments. This program will provide the foundation for developing a national cadre of thinkers skilled at applying net assessment to homeland security.
- **Require development of a center of excellence for network science capable of understanding the long-term implications of network science on net assessment.**<sup>22</sup> This initiative will ensure

that net assessment exploits cutting-edge science for conducting systems analysis and understanding the behavior of complex systems that will affect the homeland security environment.

- **Be tasked with working closely with relevant federal agencies, the public and private sectors, and international partners on collaborative projects.** Collaborative projects will ensure that net assessments exploit the best practices from around the world and incorporate the knowledge of the many stakeholders in homeland security.
- **Sponsor academic courses and executive education for leaders on net assessment.** Professional development of current and senior leaders is essential to ensure that they know how to exploit the benefits of net assessment.

### Time for Action

It is long past time for the federal government to develop an ONA capability within the DHS to provide the DHS Secretary and ultimately the President with a comprehensive analysis of future threats and capabilities to meet those threats. The Administration's FY 2009 budget request should fully fund the office, providing the staff, financial resources, and authorities to establish national homeland security net assessment programs. Failure to do so would demonstrate how little the U.S. has learned from its past successes.

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22. Richard Silbergliitt, Philip S. Antón, David R. Howell, and Anny Wong, *The Global Technology Revolution 2020, In-Depth Analyses: Bio/Nano/Materials/Information Trends, Drivers, Barriers, and Social Implications* (Santa Monica: RAND Corporation, 2006).