



**Homeland
Security**

Science and Technology

Homeland Security
Science and Technology Advisory
Committee (HSSTAC):
Quadrennial Homeland Security
Review Subcommittee

**Human Factors
White Paper**



March 10, 2017



**Homeland
Security**

Science and Technology

This publication is presented on behalf of the Homeland Security Science and Technology Advisory Committee, Quadrennial Homeland Security Review Subcommittee, Human Factors, chaired by Dr. Anne McKee as part of recommendations to the Department of Homeland Security, Under Secretary for Science and Technology, Robert Griffin (*Acting*).

<Signature on File>

Anne McKee, PhD.
Senior Fellow
Director, PennCLO Executive Doctoral Program
Director, MedED Master's Program
University of Pennsylvania

HSSTAC Staff: Michel Kareis, HSSTAC Executive Director/DFO and Gretchen Cullenberg, QHSR Subcommittee support.



THE HUMAN FACTOR AND HOMELAND SECURITY

Dr. Annie McKee

White Paper for HSSTAC Quadrennial Homeland Security Review (QHSR) Subcommittee in support of the 2018 QHSR

I. The Human Factor

A. Within Government and Organizations

Ongoing analyses and recommendations in White papers will be done by people—people who are likely employed by DHS, other government agencies, or companies. Regardless of where they reside, people are subject to existing organizational cultures, management and leadership practices, and habitual ways of thinking and behaving.

In order to ensure that people change, there must be a strategy to include a compelling vision for change, plans for guiding individual **and** collective change, education, reinforcement, and metrics. **This strategy must be explicit and should include the following for government employees:**

- Rigorous analysis of organizational culture, focusing on the underlying (and often unspoken) assumptions that drive values and behavior at work, espoused and actual values, and norms driving work behavior, decision making, management and leadership (formal and informal);
- Development of leadership capabilities and competencies, especially emotional intelligence;
- Process for engaging **all** employees in development of capabilities related to resiliency and stress management. This is important because changing deeply held beliefs and behaviors are hard to change, even when they no longer serve individuals or their institutions. Without practical support and skills to help people manage long-term change, many simply give up or hide out.

A. General Public

I think it is fair to say that the general public is largely unaware of many (maybe most) potential threats linked to AI, cybersecurity, autonomous technology, adaptive Manufacturing and chemical, biological, radiological, or nuclear (CBRN) technology. It's also fair to say that there is a legitimate argument about how much people need to know and when they need to know it. Still, the problem with lack of information is that the void is filled with falsehoods and fear. It also leads to intense and over-focus on the "threat of the day", usually linked to a highly publicized event like a terrorist attack.

It is my opinion that there needs to be a measured, strategic approach to education the general public above and beyond what is currently in place. The current initiatives (website, campaigns and etc) are well done, but I do not know if they reach as many people as possible. Again, a strategy for

widespread education and behavior change—this time in the general public—will not happen by accident and requires a strategy, plans, and resources.

II. Collaboration and Partnership within DHS, with other Agencies in Government, and Businesses/Companies

Most of the White papers specify the need for partnerships and collaboration with individuals and entities outside of DHS and/or HSSTAC. It's important to remember that these partnerships/collaboration will be dependent on **relationships**. Building such relationships may be countercultural, or at the least not a typical, accepted or funded part of many people's jobs. So, in order for these relationships to be built—and to be there when they are needed—culture, habits, policies for how people can use their time, funding for things like travel **must change**. This will not happen by accident and if left to chance, will change slowly over time—if at all. There must be an explicit change strategy to drive relationship building **before** partnerships and/or collaborations are needed. This strategy should include:

- A qualitative analysis of DHS/HSSTAC culture with respect to organizational boundaries and relationship-building;
- Identification of individuals within and close to HSSTAC who already have strong relationships—these can serve as models for how to build this kind of relationships and they can be leveraged when needed;
- Analysis of policies and financial guidelines that help or hinder relationship building;
- Process for engaging HSSTAC employees (maybe DHS as a whole) in developing emotional intelligence competencies—the competencies that support sound, productive work relationships (and good management/leadership).

Conclusion: The people side of change is not something that can or should be left to chance. At best, it will be very, very slow. At worst, it either does not happen at all, or cultures and habits develop that not only do not support HSSTAC mission or white paper recommendations, they are counter to both.