



## **Background**

A direct result of the rapid technology migration to cyberspace is the emergence of masses of data on nearly every aspect of the global online environment. Users and organizations knowingly and unknowingly generate increasing volumes of data related to users, transactions, and participants in online commerce. These stores of “big data”, as subjected to analysis using specialized tools and algorithms, have the potential to enable improved outcomes in both cybersecurity and emergency response by increasing the ability to identify threats, protect systems, and share information. Similarly, while the Government currently collects a lot of its own data, there is currently no effective or efficient way to utilize the data it collects—nor does it have a complete understanding of the challenges, policy or otherwise, associated with leveraging big data.

## **Subcommittee Establishment**

In February 2015, the Executive Office of the President requested that the President’s National Security Telecommunications Advisory Committee (NSTAC) examine how big data analytics (BDA) could enhance national security and emergency preparedness (NS/EP) for the Nation. As a result, the NSTAC Big Data Analytics Subcommittee was formed.

The BDA Subcommittee will examine the implications of BDA within the context of NS/EP. The goal of the NSTAC’s investigation is to successfully identify Government and industry resources that could be utilized to support NS/EP activities, as well as the allowable uses, constraints, and limitations on the use of BDA. The NSTAC’s study will also explore what systems, infrastructure, and/or assets are needed to ensure access to the data. More specifically, the NSTAC will examine the challenges that need to be addressed in order to guarantee that Government can access big data information or resources, especially during an emergency.

## **Activities to Date**

To better inform the scoping effort, the BDA Subcommittee has met with subject matter experts from Government and industry regarding current trends in BDA methods and practice, BDA’s physical and cyber infrastructure needs, the interoperable NS/EP communications architecture, and the security threats big data collection poses to critical infrastructure systems and the measures needed to counteract them. Past and scheduled briefers include, but are not limited to:

- Mr. Richard Puckett, Chief Security Architect, General Electric;
- Mr. Stephen Dennis, Innovation Director, Homeland Security Advanced Research Projects Agency, Department of Homeland Security Science and Technology Directorate;
- Dr. W. Phillip Webster, Chief, Computational and Information Science and Technology Office, NASA Goddard Space Flight Center;
- Dr. Kirk Borne, Professor, School of Physics, Astronomy, and Computational Sciences, George Mason University; and
- Dr. Sandy Pentland, Director, Human Dynamics Laboratory, Massachusetts Institute of Technology.

Additional briefings are scheduled through June 2015 from key experts who are engaged with this issue and can provide insight on applicable technical issues, intelligence threat information, general lessons learned, best practices, and/or research activities.



### **Process and Timeline**

The subcommittee will continue to hold weekly meetings to have subject matter expert briefings and develop a draft scoping report.

The subcommittee plans to complete a draft scoping report by July 2015 and will present it for the members' deliberation and vote during the August 2015 member conference call.