



#### DHS Cybersecurity Future Technology: Where We Go From Here

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## **Overview** *Our Engineering Vision*

- Who We Are
- Building Future Engineering Capability
  - Where We've Been
  - Where We Are
  - Where We Are Going
- Final Thoughts





# Who We Are Network Security Deployment

- Department of Homeland Security (DHS) and cyber mission: Enhance the security, resilience, and reliability of the Nation's cyber and communications infrastructure
- Network Security Deployment (NSD) mission: Design, develop, acquire, deploy, sustain, and provide customer support for the <u>National Cybersecurity</u> <u>Protection System</u>
- National Cybersecurity Protection System (NCPS), operationally known as EINSTEIN, provides key cybersecurity capabilities to defend against cyber threats targeted at Federal civilian government networks (.gov domain)





#### **Building Future Engineering Capability Where We've Been**

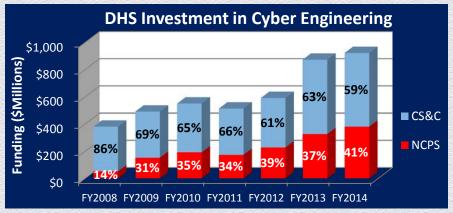
- In the mid-90s, the USG started to increase its focus on the cyber impact to critical infrastructure.
- After 9/11, the USG created institutions and organizations to resource the growing cyber challenge.
- The 2008 Comprehensive National Cybersecurity Initiative (CNCI) shifted government thinking about cybersecurity. In response, DHS evolved its execution strategy:
  - Organizational: Established a single engineering office and Program of Record in DHS
  - Technical: Determined that a scalable engineering and infrastructure capability was needed
  - Architectural: Focused on .gov & Cl/KR stakeholders as part of a national solution

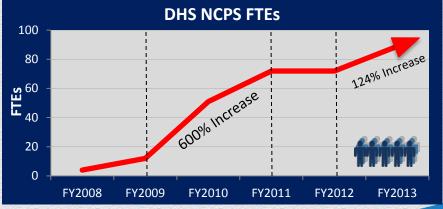




## **Building Future Engineering Capability** *Where We Are: Capacity*

- NCPS has created <u>engineering capacity</u>
  - Investments: Managing injection of seed capital in engineering infrastructure
  - Human Capital: Hiring team of engineers and specialists as part of human capital strategy
  - Organizational Capital: Creating management team and doctrine to support growth



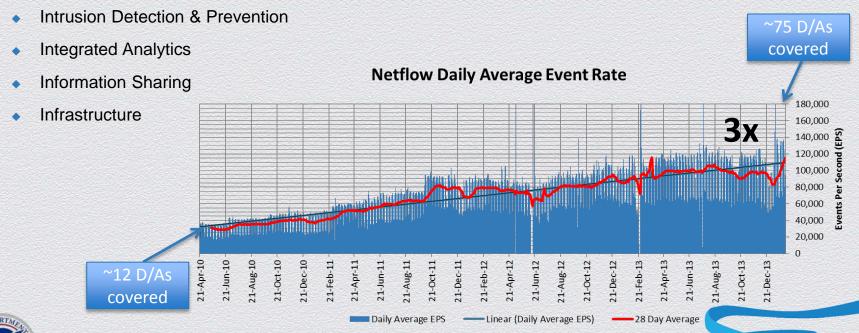






#### **Building Future Engineering Capability Where We Are: Capability**

NCPS fundamental <u>technical capabilities</u> in place for .gov customers





#### **Building Future Engineering Capability** *Where We Are Going: Our Technical Vision*

- Engineering the right information, right people, right time, right manner:
  - **Flexible**: Given the rapidly evolving threat, NCPS will focus on building a flexible, scalable infrastructure that can evolve at the "speed of threat"
  - Innovative: NCPS will integrate new capabilities and technologies quickly through pilots,
     test activities, and agile development approaches
  - Responsive: NCPS will accommodate integration of a community-based mindset into technology development
  - Engaging: NCPS will proactively partner with industry, academia, and other government entities



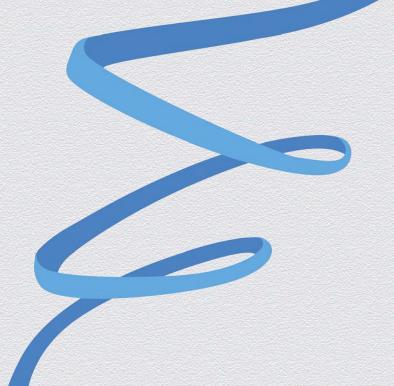
#### **Final Thoughts**

#### Focus on Common Engineering Goals

- Our Technical Vision draws heavily on smart engineering, creative integration, and new forms of partnership
- Stronger collaboration to address the toughest challenges:
  - Engineer cybersecurity to accommodate more powerful forms of technology
  - Deliver real-time situational awareness to large numbers of customers that have divergent needs, architectures, and business models
  - Create world-class engineering organizations







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