Cyber Security Crisis

230k+ open cyber jobs, 91% growth

Higher ed producing <10k per year domestic talent

Commercial training/certs are available to adversaries

No situational awareness of cyber talent - what is being produced?

Problem solving skills have given way to product training, no future proofing

Cost for commercial intensive training can be $3500 for a week, 10k people =$3,500,000

Train cyber talent in government, then they leave
Cyber Security Responses

NSA/DHS Centers of Academic Excellence in Cyber Defense/Ops- 220 Universities/Colleges
Minimally funded, no incentive beyond being designated
Strong community sharing ideas, no visibility of what talents are developed and what are not

NSA GenCyber & Competitions-
Increasing the pipeline through middle/highschool programs
No permanent funding, “pilot” for years

NICE Framework- Cyber Security Workforce framework for all cyber security job roles and competencies
Comprehensive framework includes classified and unclassified well defined competencies - American solution

NSF CyberCorps: Scholarship for Service
Stemming the tide of attrition and incentive for government cyber work
CR slowing hiring for important civilian positions

NSF Funded ATE Centers
Expertise and pipeline initiatives to grow a qualified workforce

New Workforce needs
Cyber Security Intelligence- Proaction rather than reaction
Pipeline

- Trains teachers and middle and high school students
- Builds domestic capacity in cyber leading to higher ed
- NSA/DHS Designated higher ed schools - 220+, expand to 300
- Innovation and pipeline through high education

Competency and Visibility

- Pilot initiative funded by DHS/NSF/NIST/NSA virtual challenges based on the NICE (National Initiative for Cybersecurity Education) Workforce Framework tasks
- US ONLY challenge labs emphasize real world situations and give “Heat Map” of cyber skills readiness nationwide