



# Cybersecurity Workforce Structure

Briefing to the  
Information Security and Privacy  
Advisory Board

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# Drivers and Direction

[We] will be unable to combat...threats without a more coordinated, sustained effort to increase cybersecurity expertise in the federal workforce.

*Partnership for Public Service*

All the Services are desperately short of people who have defensive and offensive cybersecurity war skills

*Defense Secretary Robert Gates*

Only about 1,000 people in the entire United States with the skills needed for...frontline cyber defense, but 20 or 30 times that many are needed.

*NPR's Morning Edition 7/19/10*

***“Develop a strategy to expand and train the workforce, including attracting and retaining cybersecurity expertise in the Federal government” (Cyberspace Policy Review, May 2009)***

# Approach

Objective: Ensure Federal agencies have HR tools needed to attract, hire and retain a skilled cybersecurity workforce

Phase 1	Phase 2	Phase 3	Phase 4
•Define Cybersecurity Work	•Develop Competency Models	•Analyze issues, challenges, successful practices	• Review and revise HR policies and strategies
• <i>On-going</i>	• <i>On-going</i>	• <i>On-going</i>	• <i>Future</i>

***Collaboration and input from Federal agencies are critical***

# Phase 1 – Define the Work

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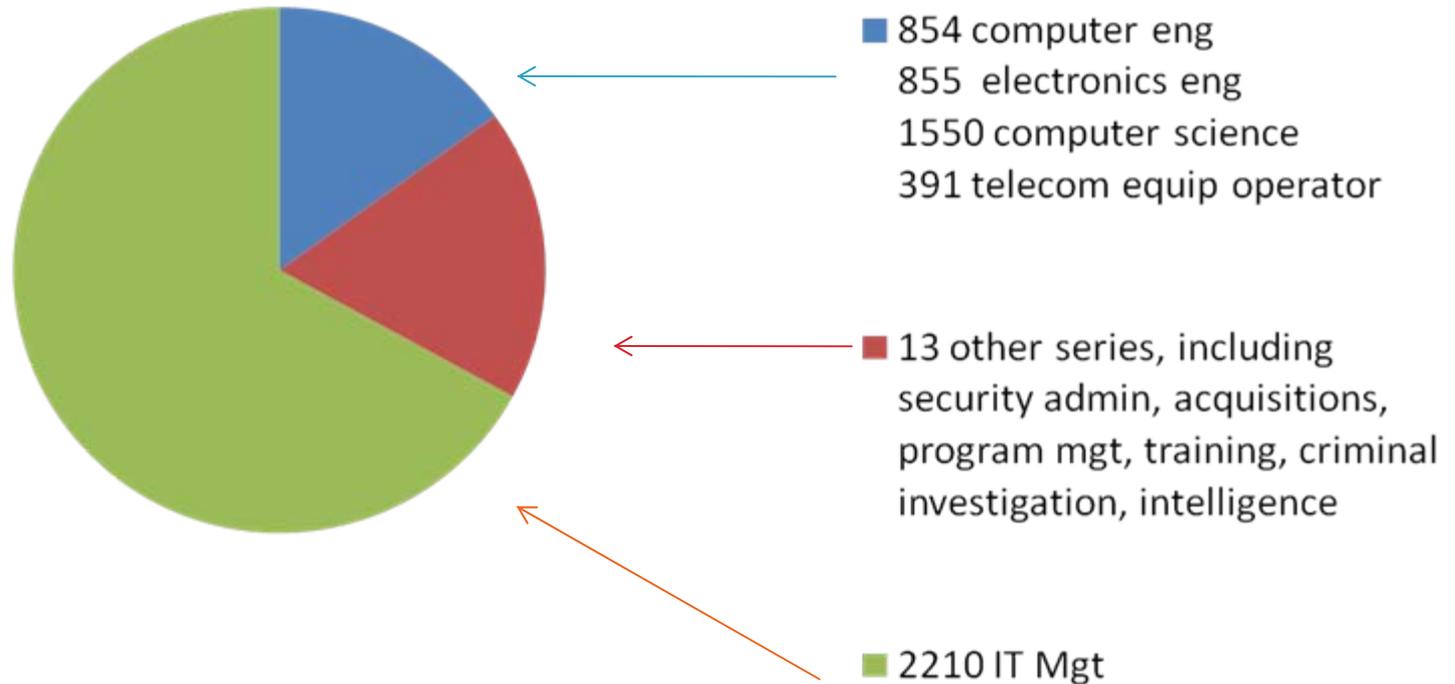
- Group cybersecurity work into 3 categories:
  - Network Operations and Defense
  - Law Enforcement and Counterintelligence
  - Specialized Computer Network Operations
- Ensure consistency and common taxonomy across NICE Tracks
- Challenges remain to scoping the overall workforce

# Challenges

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- Positions not easily identified in HR databases
  - Federal employment data maintained by occupational series
  - Cybersecurity positions currently classified in at least 18 different series, including IT management, criminal investigator, computer engineer
  - Only some of the jobs in any of those series are cybersecurity
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# Occupational Series Included in Cybersecurity Workforce Definition



Preliminary Findings

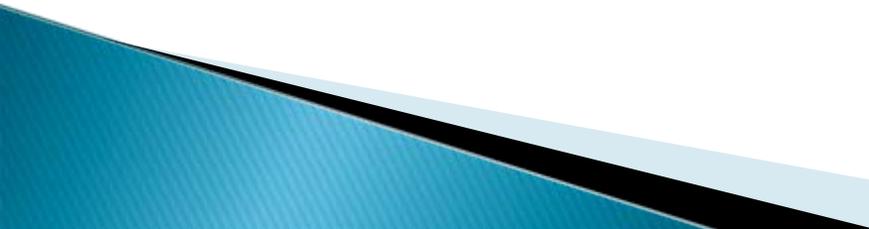
# Phase 2 – Develop Competency Models

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- ▶ Analyzed cybersecurity jobs, tasks, skill requirements and competencies (Jan 2010)
  - ▶ Subject matter experts reviewed tasks and competencies (June 2010)
  - ▶ Linked tasks to competencies
  - ▶ Workforce survey (Oct 2010)
  - ▶ Analyzed survey data (Nov 2010)
  - ▶ Competency Model published (Feb 2011)
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# Phase 3 – Analyze Workforce Issues

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- Working with agencies to identify and analyze barriers, challenges and successful practices
  - Focus groups with hiring managers, employees, recruiters and cybersecurity experts
  - Held 6 sessions in August, October & November (24 agencies, 90+ participants)
  - Discussed challenges, successful practices and possible strategies
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# Phase 4 – Develop HR Strategies

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- Supporting agencies' current requirements:
  - Schedule A hiring authority granted to several agencies
  - Use of hiring flexibilities for recruitment needs
  - Direct Hire Authority for 2210, Information Security
- Future work includes assessing changes that may be needed for classification, recruitment, staffing and other HR policies

# Summary

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- Continue partnering to ensure Federal agencies can attract, recruit and retain skilled employees to accomplish cybersecurity missions
- Let OPM know about recruitment and retention challenges and successes:
  - How can Federal agencies compete for talent?
  - How can HR policies and tools better meet needs?
  - How are we communicating opportunities?
  - How can we work together to attract the right talent?
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Questions?



*A New Day for the Civil Service*