

The NICE Framework - Applied in Ohio

How the NICE Framework can develop a skilled cybersecurity workforce and enhance education.

- Mark Bell, Cybersecurity Outreach Coordinator, Adjutant General's Office, OCRI Executive Committee Chair
- Bekah Michael, Associate Professor, University of Cincinnati, OCRI Executive Staff Director

Agenda



WHY IS THIS
IMPORTANT?



NICE FRAMEWORK
101



HOW CAN WE APPLY
THIS IN OHIO?



DISCUSSION

Why is this Important?



Cyber Job Openings

- 469,930 Nationally
- 12,104 in Ohio
- In 2024 most openings are for more experienced people
- Still some entry level, but more balance than in the past
- Students need to know the roles, and be well prepared for them
- Hands on training with Industry Recognized Credentials are key
- We must prepare students for success

NICE

NATIONAL INITIATIVE FOR **CYBERSECURITY** EDUCATION



NICE Framework 101

NICE MISSION

To energize, promote, and coordinate a robust community working together to advance an integrated ecosystem of cybersecurity education, training, and workforce development.



NICE GOALS



Why a Workforce Framework?

A consistent framework model...



EMPLOYERS

- Enables the establishment of **regular processes** – from hiring to training and assessment – for multiple roles in an organization.



LEARNERS

- Shares **clear information about cybersecurity work** to help students interested in this career field, people looking for a new job or to change job roles, and workers who are looking to demonstrate or increase their competencies.



EDUCATION, TRAINING, &
CREDENTIAL PROVIDERS

- Provides direct information about **what a workforce needs to know**, helping in the development of certificates, badging, and other verification techniques to consistently describe learner capabilities

Who is the NICE Framework for?

- Public and Private Sectors
- Human Resources
- Hiring Managers
- Other SME's

EMPLOYERS



- Students
- Job-Seekers
- Employees

LEARNERS



- Learning Pathways
- Course Outcomes
- Credentials

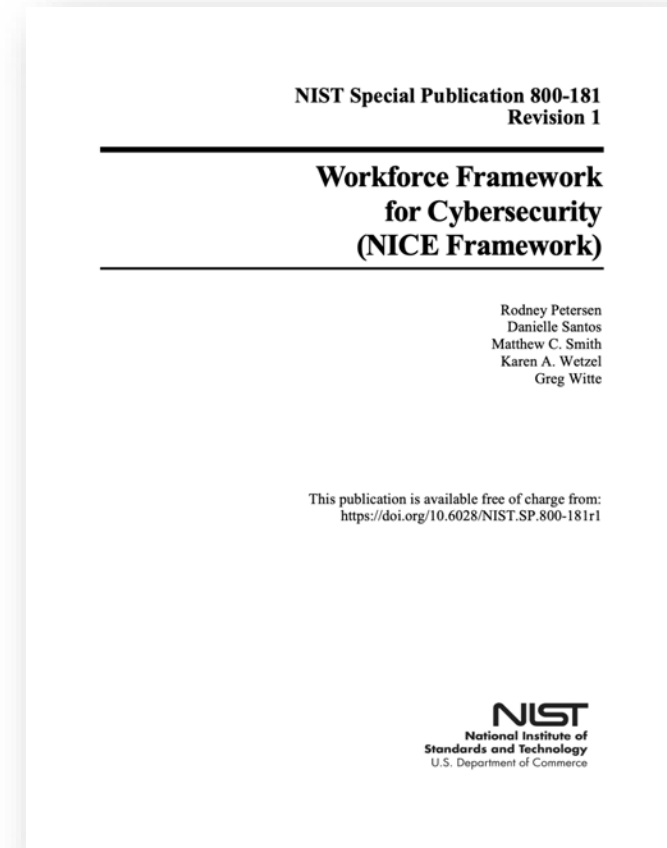
EDUCATION,
TRAINING, AND
CREDENTIAL
PROVIDERS



What is the NICE Framework?

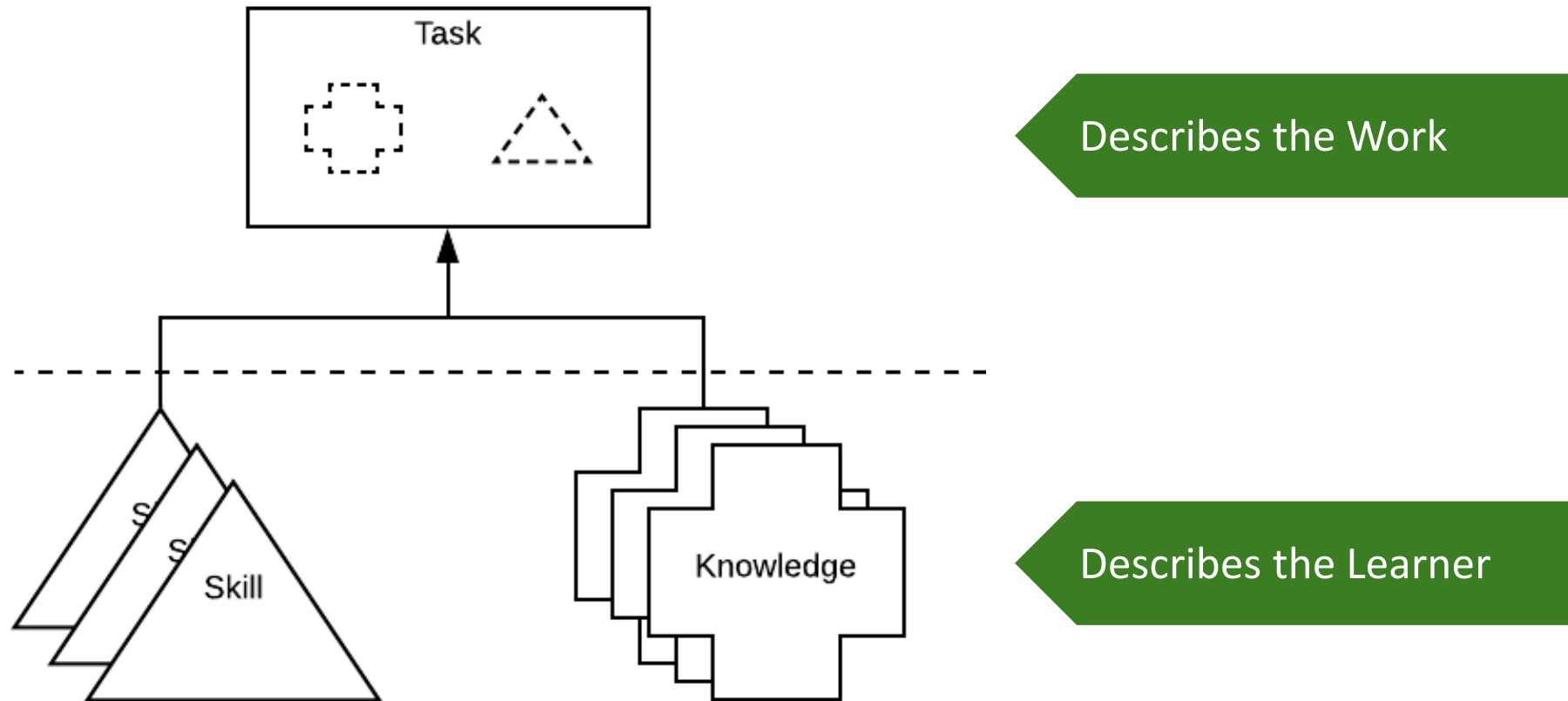
NIST Special Publication 800-181r1

- **Title:** Workforce Framework for Cybersecurity (NICE Framework)
- **Scope:** Security of Cyberspace (Cybersecurity)
- **Focus:** Cybersecurity Work



nist.gov/nice/framework

Building Blocks: Tasks, Knowledge, and Skills (TKS)



Describes the Work

Describes the Learner

Application and Uses

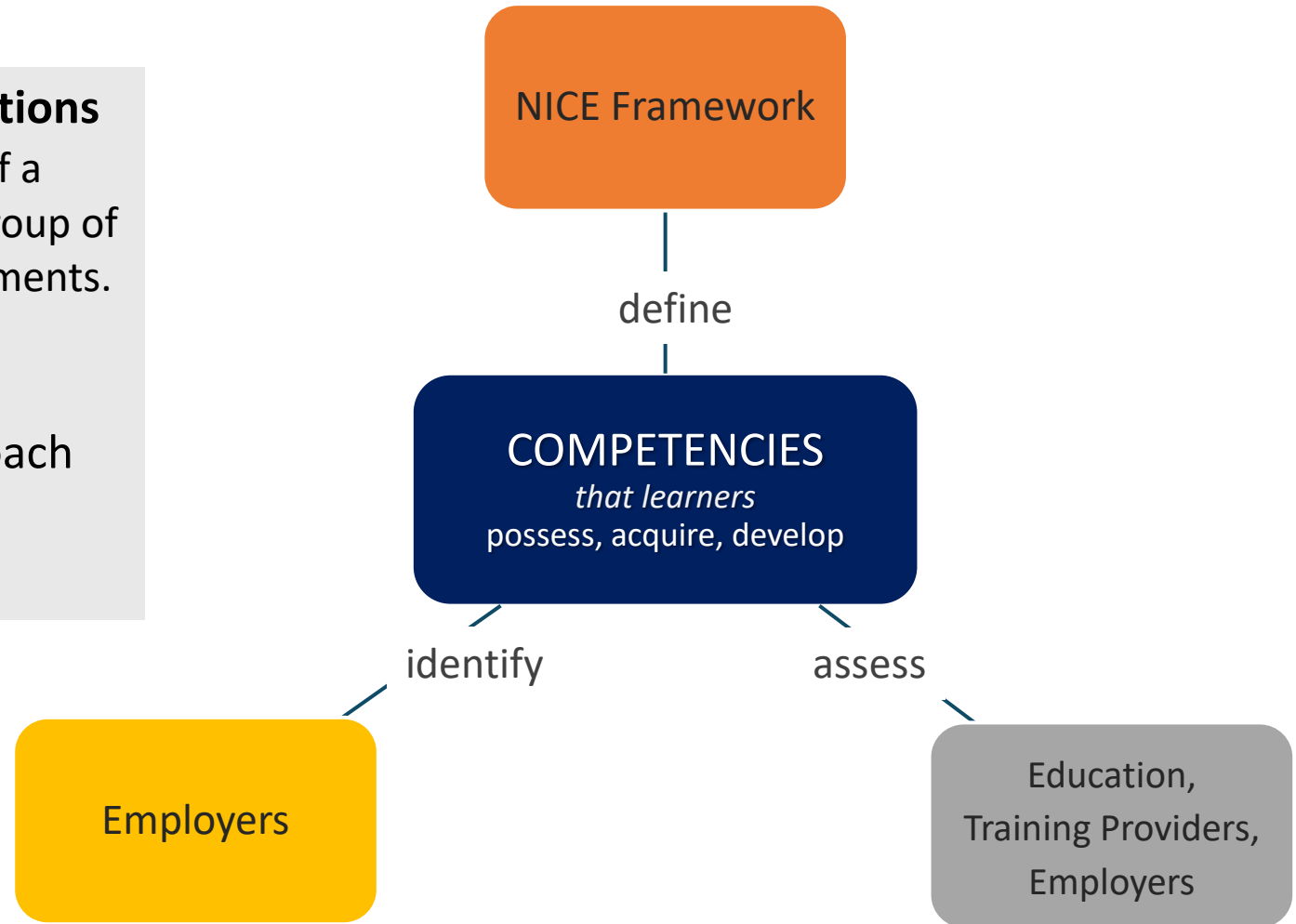


Competencies

Competency: A mechanism for organizations to assess learners. Competencies consist of a name, description of the Competency, and group of associated TKS (Task, Knowledge, Skill) statements.

Competencies are

- Defined via an employer-driven approach
- Learner-focused
- Observable and measurable



For More Information from NICE



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#NICEFramework

#NICEatNIST

How Can We Use This to Improve Our Cybersecurity Education, Workforce, and Economic Development in Ohio?

A Common Lexicon for Defining Cybersecurity Work, Education, and Research

- **Hiring? Use this tool to define Job Descriptions and Roles:**
- <https://niccs.cisa.gov/workforce-development/nice-framework-mapping-tool>
- **NICE Framework Mapping Tool:** <https://niccs.cisa.gov/workforce-development/nice-framework-mapping-tool>
- **Teaching? Use Knowledge and Skills to define Learning Outcomes & Hands-on Assessments:**
- <https://niccs.cisa.gov/workforce-development/nice-framework>
- **Preparing Students for the Workforce? Give them tools to define their path to specific roles and their portfolio:**
- <https://niccs.cisa.gov/education-training/cybersecurity-students>

- **Educate Everyone! Use our Videos and Make Your Own!**

Discussion

Links

- <https://www.nist.gov/> National Institute of Standards and Technology
- <https://www.nist.gov/itl/applied-cybersecurity/nice> National Initiative for Cybersecurity Education (NICE)
- <https://www.nist.gov/itl/applied-cybersecurity/nice/nice-framework-resource-center/getting-started> NICE Framework Resources
- <https://www.cyberseek.org/heatmap.html> NICE funded project showing current cybersecurity workforce gaps
- <https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-181r1.pdf> Official full documentation on the NICE Framework
- <https://niccs.cisa.gov/workforce-development/cyber-security-workforce-framework> National Initiative for Cybersecurity Careers and Studies NICE Framework Exploration

Links

- <https://www.cisa.gov/nice-cybersecurity-workforce-framework> Cybersecurity and Infrastructure Security Agency NICE Framework Overview
- <https://resources.infosecinstitute.com/topic/how-to-align-training-with-the-nist-nice-framework/> Information Security Institute's 'How to Align Training With the NIST NICE Framework'
- <https://www.nist.gov/news-events/events/2017/09/nice-webinar-efforts-align-training-and-certifications-nice-framework> NICE's Great Video on Efforts to Align Training and Certs to the NICE Framework

Links

- https://niccs.cisa.gov/sites/default/files/documents/pdf/using%20the%20nice%20framework_pdf.pdf?trackDocs=using%20the%20nice%20framework_pdf.pdf 1 Pager on Using the NICE Framework
- https://www.nist.gov/system/files/documents/2021/05/05/NICE%20Framework%20%28NIST%20SP%20800-181%29_one-pager_508Compliant.pdf 1 Pager Intro to NICE Framework
- <https://www.nist.gov/itl/applied-cybersecurity/nice/nice-framework-resource-center/education-and-training-provider> NICE Framework Education and Training Provider Resources

Links

- <https://www.comptia.org/content/tools/comptia-and-the-national-initiative-for-cybersecurity-education> CompTIA Alignment
- <https://www.giac.org/workforce-development/government/niceframework/> GIAC Alignment
- <https://www.cybrary.it/info/align-your-training-to-the-nice-cybersecurity-workforce-framework/> Cybrary Alignment