



**NICE Community Coordinating Council  
Meeting Minutes  
September 26, 2023 | 3:30-5:00 p.m. ET**

**I. Introduction and Ground Rules – NICE Program Manager Susana Barraza**

- The NICE Community Coordinating Council was established to provide a mechanism in which public and private sector participants can develop concepts, design strategies, and pursue actions that advance cybersecurity education, training, and workforce development.
- Members are encouraged to participate in the meeting via the platform chat space and the Q&A space.
- Reminder: The meeting is not intended for marketing or other commercial purposes.

**II. Opening Remarks**

- a. Academic Co-Chair – Zarina Blankenbaker, Ph.D., President, Tarrant County College – Northwest
- Zarina is honored to serve as Co-Chair and delighted to be affiliated with this esteemed group. The work of NICE is inspiring. Her goal is to always have a pulse on where her community is, aspires to be and how to get there. She is frequently at the table with industry and business partners.
  - A hot topic is the indispensable significance of soft skills which is now being referred to as power skills. What business and industry partners are saying is that its not just technical skills anymore. They want more included in a technically skilled employees' toolkit. Businesses now operate in a globalized technical world and employees need to navigate a complex web of relationships both internal to their organization and external which extends globally. They need to communicate effectively and adapt to changes that employers say are essential.
  - Zarina shared a few recurring themes that she hears are most important to employers across the board.
    - Adaptability and resilience: seeing that change is the only constant in today's business world.
    - Employers want employees who are capable of articulate communication through reports, presentations or just conveying ideas. Communicating across diverse terms.
    - Emotional intelligence emerged as a trait multiple times as an essential skill.
    - Teamwork and collaboration are very important skills. No one works in isolation. Employers want team players who can collaborate seamlessly with colleagues from different backgrounds.

- Problem solving and critical thinking. No one wants employees who follow directions by the book. Employers are on the hunt for innovative employees.
  - Zarina's industry partners are looking for employees who are equipped with power skills. We want to make sure that our colleges are soft skill incubators. They are looking for employees who understand the human dimension of their work.
- b. Industry Co-Chair – Michael Alicea, Chief Human Resources Officer, Trellix
- Michael agrees with Zarina from an industry perspective but not quite in the obvious way. For Michael, the soft skills are those skills which allow someone to come to work in a company in areas that are related to cybersecurity, maybe not coding, but understanding the echo system of how a client uses a company's capabilities. How their ecosystem works. Someone who understands the client's needs even if they are not significantly technical. You can then bring them in and get them steeped in the culture of a company and bridge the gap. Move them up the technical skill chain. The skills that Michaels' company looks for are an entry point into their organization.
- c. Government Co-Chair – Rodney Petersen, Director of NICE
- Rodney moved directly to the Standing items.

### III. Standing Items

- a. Report Roundup – Learning from Good Ideas

*How AI-powered software development may affect labor markets*

Presented by Peter Cihon, GitHub and Mert Demirer, Massachusetts Institute of Technology

URL: <https://www.brookings.edu/articles/how-ai-powered-software-development-may-affect-labor-markets/>

- Some attendees may be familiar with generative AI and the way it is permeating several digital applications. Git Hub has had a product on the market for some time as a coding assistant.
- Git Hub conducted a study about how AI-powered software development affect labor markets. The GitHub Copilot productivity study recruited ninety-five developers and split them randomly into two groups. The groups were tasked with writing a web server in JavaScript. One group of forty-five developers used the GitHub Copilot and fifty did not.
- Out of the first group of forty-five, seventy-eight percent finished in an average time of one hour and eleven minutes. Out of the second group of fifty, seventy percent finished, who did not use the Github Copilot, in an average time of two hours and forty-one minutes.
- Early literature on Generative AI and developer productivity shows two common findings. First, there is a large effect on productivity. These tools increase productivity of software engineers. Also, the tools tend to help developers.

- One important open question is replicating these studies in real-world environment. They are working with a few companies to study this and are monitoring their progress in real time.
- Another question is whether these compliment software skills between AI and developers. They could substitute for some tasks and compliment other tasks.
- There are clear questions for further research building off these experimental designs. The piece we offer to contextualize is the existing literature with some history from software development tools. When we think of the history of computing it is a history of subsequent waves of innovation in the ways in which software are built. With each innovation there is a higher level of automation.
- The trends from history show a story of lower costs over time. At the same time there has been an increased demand for digital transformation and increased labor demand. During the transitions developers have benefited.
- Using AI to build AI sets the stage for an exciting future.

b. Strategy Stories – New Developments that align to NICE Strategic Plan

*All Services Personnel and Institutional Readiness Engine (ASPIRE)'s NICE Fit*  
Presented by Anthony Boese, U.S. Department of Veterans Affairs

- ASPIRE stands for All-Services Personnel and Institutional Readiness Engine.
- The ASPIRE system is a cross-agency collaborative project which looks to assess, educate, and streamline the federal government workforce. This AI-powered system-of-systems uses computer adaptive assessments to determine individuals' knowledge, skills, and abilities (KSAs). The system will analyze the individuals' KSAs against agency standards to identify gaps and finally, map personalized learning pathways to close those gaps and for further development. ASPIRE can assess and upskill in any area, with AI, data science, AI and data ethics, and cybersecurity currently under development.
- There is a lot that ASPIRE is doing that overlaps cleanly with what NICE is doing, want to push forward and execute. Broadly speaking these are the objectives of NICE that overlap with ASPIRE's work:
  - Goal #3: Modernize the Talent Management Process to Address Cybersecurity Skills Gaps
    - 3.2: Utilize new technologies such as machine learning and automated approaches to increase connections and fit between employers and job seekers.
- ASPIRE is pushing the edge on the modernization of talent development. Through the All Services Personnel and Readiness Engine they: Assess, Find Gaps, Educate, Describe, and Make Ready.
- ASPIRE provides a consistent language, consistent audit, consistent security, consistent validation, consistent education, and consistent predications.
- Anthony Boese Contact information: [Anthony.boese@va.gov](mailto:Anthony.boese@va.gov)

c. Framework Feature – Applications and Uses of Workforce Framework for Cybersecurity

*Center for Certification & Competency-Based Education (C3Be)*

Presented by Diane DeBacker and Julianna Marie Stockton, The University of Kansas

URL: <https://c3be.ku.edu/>

- Diane and Julianna will share about a project around the cybersecurity talent pipeline. The project being shared was worked on with a client that asked them to help with a talent pipeline for cybersecurity. They will talk about well suited talent within this industry.
- Working with their client and industry representatives they identified the top ten attributes that would make a candidate well suited to a future role in cybersecurity. They then analyzed the abilities section of the KSAs in the NICE Framework, all one-hundred and seventy-eight of them, to identify which attribute was most relevant to the performance of that specific ability in a cybersecurity context.
- After the map was complete, they added in all the nodes and connections of each of the one-hundred and seventy-eight abilities and the rest of the framework: the work roles, specialty areas, job categories across the entire framework.
- The map provided a graph that resulted in the ten well suited attributes that their client requested for consideration. The ten attributes are considered power skills.
- Based upon focus groups they had with early career, mid-career, and C-Suite individuals within the cybersecurity field, they took that information and mapped it against what is required in the Knowledge and Skills and Abilities of the NICE Framework and the work roles.
- The visual alone gives a clear indication about what is needed within each work role. It is very useful in developing a cybersecurity talent pipeline.
- What do we do with the information? We could look at an individual work role and see what attributes are critical for success within a given role. It is particularly useful for their client with the talent pipeline development and aligning assessments. One could also examine a single attribute, like communication, to see how it varies across the work roles, the job categories, through out cybersecurity which may suggest some more nuanced indicators of how a skill or attribute, like communication, might progress development over the course of someone's career across different roles. Or, it could be utilized like a mirror, reflecting information about the Framework itself.
- They would love to hear about what members would be curious to explore further.
- Question: How can integrity be brought into the discussion about power skills?
  - In their focus groups around the attributes, integrity came up around the discussion of protective instincts. It encompassed ethics.

d. Research Review- Driving Research on Effective Practices

*A Targeted Study on the Match between Cybersecurity Higher Education Offerings and Workforce Needs*

Presented by Diane Murphy, Marymount University

URL: <https://digitalcommons.odu.edu/cgi/viewcontent.cgi?article=1493&context=vjs>

- Diane talked about a study that was conducted in 2020/2021. The idea behind it was to see the gap between higher education and their view of cybersecurity and what the workforce needs.
- The study was sponsored by the Commonwealth Cybersecurity Initiative and focused on Northern Virginia. They were looking at, as a group of seven universities, at how they are preparing their students and looking at what their local industry was asking for in their job descriptions and the hiring process.
- It is still very hard for a college graduate to get their first cybersecurity job. They examined what they were teaching and what they thought was a preparation for the workforce and what their industry partners were looking for.
- They developed the study, sent out surveys and received about one-hundred and twenty responses. About seventy-five percent of them were from industry, twenty percent from government and the remaining from academia. They then looked at the differences between the industry perception of what they were getting from graduates and the academic perception.
- The employer's perspectives were very interested in hiring experienced personnel over recent graduates. Only about twenty percent of the postings being put out were from entry level people. They felt new graduates did not have the training to hit the ground running. They felt the salary expectations were too high particularly given the movement of personnel between companies. They also found that there were a lot of inconsistencies between job titles. The findings also reinforced the need for skills and work experience.
- The seven schools also examined how they were meeting some of the needs. The findings included:
  - The curriculum and programs broadly aligned with employer demands for foundational knowledge.
  - Soft skills like teamwork and communication are necessary and not always prioritized in programs.
  - Need for more recognition of the role of certifications in demonstrating skills.
  - Need to focus more on experiential learning and demonstrate on resumes, not just internships, but also projects and in-class activities, competitions, etc.
  - The preference for specific tools and certifications.
- As academics, they felt updating their curriculum is very important. Soft skills are very important. They need to promote a strong online presence as well as certifications and experiential learning. They also felt that students need to take advantage of outside-the-classroom learning to stay current as well as take advantage of projects and competitions to demonstrate skills on a resume.

#### **IV. Working Group Updates**

- a. Promote Career Discovery  
Co-chair: Karl Cureton, Council Exchange Board of Trade (CEBOT)

- Cybersecurity Career Ambassador Program Update:
    - Conducted Five training session sessions so far for about 30 ambassadors. They are piloting the program to scale. Connie Bragg has been a key to the program's success.
    - Final product will be ready on October 11, 2023.
    - The Ambassador Program will hold a webinar on Wednesday during the Cybersecurity Career Awareness Week on [Cultivating Cybersecurity Leaders: The New Cybersecurity Careers Ambassadors Program'](#).
  - Having conversations about ideations on a new project charter that is looking at how to ensure outcomes as far as the Strategies of Goal 1. They are contemplating a plan that considers the NICE Community from a research and vision perspective and look at coordinating a solution that handles the workforce gap in cybersecurity by focusing on the connection between employer and employee.
  - They are coordinating an event on October 19<sup>th</sup> called 'Cybersecurity Paths and Ladders'. The event will take place in lieu of their monthly meeting.
  - Site: [Promote Career Discovery Working Group | NIST](#)
  - Next Meeting: November 15, 2023, at 3:30 p.m. ET
- b. Transform Learning Process  
Co-chair: Tara Wisniewski, ISC2
- The group have recently been discussing the need for more research around the shortage in cybersecurity workforce education. They are examining what the group can do more of in terms of the studies.
  - The group has located a new Co-Chair for their newest project charter to champion the development and recognition of teachers, faculty, and instructors as part of the in-demand workforce.
  - The Working Group will take up the topic of Artificial Intelligence (AI) as a topic for teaching and other attributes from it.
  - Site: [Transform Learning Process Working Group | NIST](#)
  - Next Meeting: October 10, 2023, at 2:00 p.m. ET
- c. Modernize Talent Management  
Co-chairs: Jo Justice, Leidos; Olesya Menon, Google
- The previous project on '[Guidance to Writing Effective Job Descriptions](#)' was updated to reflect the loss of one of their project members and is now dedicated in memory of Elizabeth Fraumann.
  - The group conducted a survey for future projects which led them to issues pertaining to talent retention, that aligns with their strategic goal. The new project is called 'Issues Contributing to Talent Retention – Why People Leave and Why People Stay'.
  - The meeting also had a lively discussion about reskilling and upskilling, diversity, mental health issues, and how all those things are related to the cybersecurity workforce.
  - They have also updated their environmental scan.
  - Site: [Modernize Talent Management Working Group | NIST](#)

- Next Meeting: October 19, 2023, at 1:00 p.m. ET

## V. Community of Interest Updates

### a. Apprenticeships in Cybersecurity

Staff: Marian Merritt, NICE

- The leaders have been very active and spoke at a recent Department of Labor and Department of Education event in Biloxi, Mississippi. They spoke about un-locking career pathways using cybersecurity.
- They are also appearing at InfoSec World. They have a career booth where they are promoting apprenticeship. They are conducting a session on the benefits of Cybersecurity Apprenticeship Pathways.
- They also held a session meeting with members of the Business Round Table on ways to get member feedback on cybersecurity apprentice able occupation.
- Within the COI, they have finalized their one-pager which is now back with the NICE Program Office for final editorial changes.

Site: [Apprenticeships in Cybersecurity Community of Interest | NIST](#)

- Next meeting: October 13, 2023, at 11:00 a.m. ET

### b. Cybersecurity Skills Competitions

Co-chair: Jake Mihevc, Mohawk Valley Community College

- The group have moved three papers forward that have been in progress in their group for some years. They will be publishing; Building a Competition; A Guide to Cyber Ranges and a Guide for Competitors. Those will all be published in the next few weeks.
- The group discussed how to map a competition landscape for students and faculty. A project is underway to build a competition list. They have received a ton of great feedback on different criteria, filters, and how to make that list most accessible to students and faculty.

Site: [Cybersecurity Skills Competitions Community of Interest | NIST](#)

- Next meeting: October 20, 2023, at 2:00 p.m.

### c. K12 Cybersecurity Education

Co-chair: Thomas Trevethan, Palo Alto Networks

- The group celebrated the Insider Threat Awareness Month. They shared a plethora of resources with the group from the Security Awareness Governance Site.
- Amber and Lindsay from iKeepSafe.org provided a presentation.
- Davina updated the group on the progress being made for Cybersecurity Career Awareness Week, which starts on October 16<sup>th</sup>.
- The K12 COI is planning to kick off its professional development monthly webinar series on the morning of October 16<sup>th</sup>. It will focus on teacher best practices for integrating cyber across all academic disciplines within the K12 space.

Site: [K12 Cybersecurity Education Community of Interest | NIST](#)

- Next meeting: October 12 2023, at 3:30 p.m. ET

### d. Diversity and Inclusion

Staff: Susana Barraza, NICE

- The Diversity and Inclusion Community of Interest officially launched in August.
  - They are currently working on drafting their charter based on discussions and expectations from members.
  - Members are working on getting a short video out for Cybersecurity Career Awareness Week.
  - Site: [Diversity and Inclusion Community of Interest | NIST](#)
  - Next meeting: October 20<sup>th</sup> at 11:00 a.m. ET
- e. NICE Framework Users  
Staff: Mike Prebil, NICE
- Earlier this month the group held an open call with other members of the NIST community. The objective for the open call was to discuss some of the conceptual connections between the NICE Framework and other NIST Frameworks as well as some of the ways they can formalize those connections. The connections between frameworks are extremely important.
  - The next Framework Users Group will feature someone from the Ethically Hacking Space, a non-profit, focused on the cybersecurity skills needs of space-based commerce and defense.
  - In November they will have a cross-over feature with the Cybersecurity Competitions COI looking at the ways that different competitions are using the NICE Framework.
  - Framework Users Group: <https://www.nist.gov/itl/applied-cybersecurity/nice/community/community-coordinating-council/nice-framework-users>

## VI. Project Progress Reports

- a. US Cyber Games  
Presented by Brad Wolfenden  
URL: <https://www.uscybergames.com/>
- Their target demographic is fifteen to twenty-five years old.
  - Season 3 Timeline is well under way. Successfully wrapped up the Combine on September 1, 2023. The Combine is an intensive period of assessment, training, and evaluation for the US Cyber Games program. They saw substantial growth in Season 3 with just over one-hundred and twenty individuals joining the Combine. The coaching and mentor staff will meet to discuss the data collected throughout the combine over the coming weekend to make some selections for the Season 3 team and Season 3 Pipeline Program. Both will be announced on October 16, 2023, at the US Cyber Games Draft Day.
  - The Season 3 US Cyber Combine was held from July 7<sup>th</sup> – September 1<sup>st</sup>, 2023. Each week of the Combine was broken into a core topic area.
  - Contact: [info@uscybergames.com](mailto:info@uscybergames.com)
- b. NICE K12 Cybersecurity Education Conference (Phoenix, Arizona) – December 4-5, 2023  
Presented by Felicia Rafeliff, iKeepSafe



- Early Bird registration is open. The fee is \$295 until October 23, 2023. The full agenda and speaker line up is now live on the website.
  - There are sixteen pre-conference workshops that are an additional \$50 per ninety-minute session at Canyon University on Saturday and Sunday. They have a brand-new facility where all the workshops will be held. A free box lunch will be provided for the sessions as well.
  - Their roster of students will be announced next week. Six high school students will be featured in the 2023 [National Cyber Signing Day](#).
  - There are four keynote speakers. More information about them can be found on the Conference Website.
  - The next planning committee meeting will take place tomorrow, Thursday, July 27<sup>th</sup> at 3:30p.m. ET.
  - Actively looking for exhibitors and sponsors. There are still exhibitor spaces available in addition to sponsorship opportunities.
  - Next planning committee is on Thursday, September 28, 2023, at 3:30pm ET.
  - Connect on Twitter:
    - i. @ikeepsafe
    - ii. NISTcyber
    - iii. #NICEK12
  - Please contact Felicia Rateliff with questions: [felicia@ikeepsafe.org](mailto:felicia@ikeepsafe.org)
  - URL: <https://www.k12cybersecurityconference.org/>
- c. NICE Conference and Expo (Dallas, Texas) – June 3-5, 2024  
 Presented by Cesar Cabot, Florida International University  
 URL: <https://niceconference.org/>
- The conference will be held at the Sheraton, Dallas, Texas.
  - The theme has been announced: Strengthening Ecosystems – Aligning Stakeholders to Bridge the Cybersecurity Workforce Gap.
  - Call for proposals will open in October.
  - Regional Initiative for Cybersecurity Education and Training (RICET) will be held in October in the Bahamas. The in-person registration has closed but the virtual component is still available for registration.

## VII. Featured Topic

*Building a Cybersecurity and Privacy Learning Program: NIST Releases Draft SP 800-50 Rev. 1*  
 Presented by Marian Merritt, NICE Deputy Director  
 URL: <https://www.nist.gov/news-events/news/2023/08/building-cybersecurity-and-privacy-learning-program-nist-releases-draft-sp>

- Marian has been working on an update to NIST SP 800-50 which is a twenty-year-old document. The documents original title was 'Building an Information Technology Security Awareness & Training Program (2003)'.

- The document is meant for the Federal Cybersecurity Training audience. The document is targeted for people who are educating the cybersecurity federal workforce and over time this document has found a much broader audience.
- The new draft was made public on August 28, 2023. It was announced through Gov Delivery but was also provided to the various groups who have an interest in this topic.
- The co-authoring team included people from CISSA, the Department of Transportation, the IRS, NASA, MITRE, along with several additional stakeholders.
- The publication will go out for public comment which will be open until October 27, 2023. The comments will be adjudicated after which the final draft will be made public.
- Some of the goals include:
  - Leveraging NIST guidance (such as the numerous Frameworks that have been created since the original document was published).
  - Develop consistent language.
  - Reflect research from FISSEA community and incorporate the research as well.
  - Address challenges such as measuring impact.
- The updated title is: 'Building a Cybersecurity and Privacy Learning Program'. They are highlighting the inclusion of 'privacy' as many people doing the training now need to cover the topic of privacy. Privacy is a huge issue. People doing the training usually have to coordinate with the privacy team. Additionally, the title now includes 'learning program' as it supports a culture of respect for employees. The hope is that the concept of learning as an umbrella will be accepted by the community and more broadly understood terminology of training.
- They are encouraging people to step back from the concept that employees are the weakest link. Rather, they want to encourage building a culture where employees are respected, supported, brought into the practice of risk reduction and management. Everyone plays a role in managing the organizations cybersecurity and privacy risk.
- They also view the learning program as not simply a single program done once a year that is someone else's responsibility. The program needs to be nimble, adaptable, cyclical, and iterative.
- The team also recognize that Federal agencies vary greatly in size. The guidance provided in the SP 800-50 reflect those different circumstances. It is intended to be collaborative, flexible, and scalable.

#### **VIII. Closing Remarks and Next Meeting Reminder**

The next NICE Community Coordinating Council Meeting will be **October 24, 2023**, at 3:30 p.m. ET.