



# EXECUTIVE SUMMARY

The collaboration between N2K Networks Inc. (N2K) and Women in CyberSecurity (WiCyS) represents a strategic fusion of expertise and advocacy designed to advance and diversify the cybersecurity workforce. This report leverages N2K's analytical strengths to map WiCyS members' skills directly to the NICE Workforce Framework, categorizing capabilities into functional areas that highlight the unique strengths and potential growth opportunities for WiCyS members. By conducting thorough diagnostics and focused analyses, this partnership identifies the capabilities

of WiCyS members and aligns them with industry standards to ensure that their skills are recognized and utilized to the fullest. N2K and WiCyS are setting new benchmarks in professional development and industry readiness by fostering an environment that enhances cybersecurity skills.

The findings from this collaboration highlight the exceptional skills of WiCyS members across various areas of the N2K Functional Areas, which are mapped to the NICE Framework.

## KEY TAKEAWAYS



**Outstanding Performance:** WiCyS members have demonstrated exceptional performance across several key areas of the NICE Framework, underscoring the importance of WiCyS's training and development programs.



**Strategic Insights:** Analysis revealed remarkable strengths and areas for development, providing WiCyS with actionable data to tailor future programs and initiatives and ensure its members remain at the forefront of cybersecurity excellence.



**Actionable Insights for Cybersecurity Workforce Development:** The study revealed critical areas for targeted development to enhance cybersecurity workforce readiness that empowers WiCyS to tailor programs specifically to meet the diverse needs of its members.



**Leadership Readiness Among WiCyS Members:** The study highlights that WiCyS members are highly skilled and uniquely prepared for leadership roles. Their exceptional performance demonstrates their readiness to lead and influence at high levels, and positions WiCyS members as prime candidates for advancing cybersecurity initiatives and shaping future industry standards.



**Proven Expertise in Critical Cybersecurity Domains:** Excelling in nearly every N2K Functional Area mapped to the NICE Framework, WiCyS members have shown they not only meet, but exceed the standards in key domains. Their scores illustrate a readiness to tackle complex challenges and lead innovations within the cybersecurity field.

OUTPERFORMING IN 17/20 OF THE SPECIALTY AREAS ASSESSED

Areas of Strength:



Communications & Network Security

60.6%



Cyber Workforce, Training & Awareness

62.3%



Cyber/IT Leadership & Management

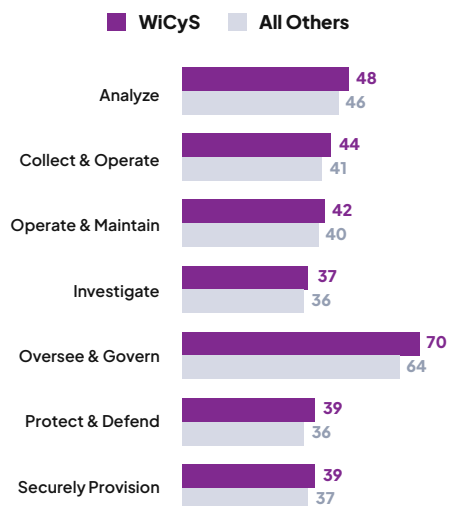
64%



Cyber/IT Policy & Governance

64.3%

OUTPERFORMING IN EVERY NICE CATEGORY:



In the fall of 2023, WiCyS and N2K formalized a partnership designed to provide insights into the state of cybersecurity talent across the WiCyS organization.

The partnership between N2K Networks Inc. (N2K) and Women in CyberSecurity (WiCyS) represents a significant step forward in boosting skills and fostering innovation in the cybersecurity industry. This strategic partnership combines N2K's deep analytical expertise in cybersecurity workforce development alongside WiCyS's expansive network within the cybersecurity community. Together, N2K and WiCyS conducted a comprehensive analysis of WiCyS members' skills to spotlight strengths, identify skill gaps, and ultimately foster a robust and diverse cybersecurity workforce.

The primary goal of this collaboration was to conduct an in-depth analysis of WiCyS members' cybersecurity skills. This initiative was designed to uncover critical insights into WiCyS members' capabilities through diagnostic assessments and enriched by demographic data. The study explores the nuances of skill sets across various roles, pinpoints areas for development, and generates significant findings that will inform strategic enhancements in training and professional growth.

### THE PARTICIPANTS

WiCyS members participating in the study represent a full range of cyber work roles and experience levels. In total, 399 members participated in the study. Because some survey data was optional for participants, 41.8% of participants did not indicate their experience level, and 27.8% opted not to indicate which functional area of cybersecurity they represented.

### ANALYZING & INTERPRETING RESULTS

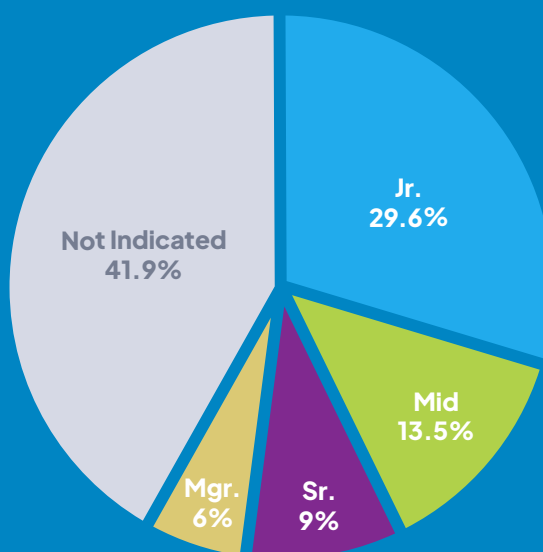
The findings from this talent study revealed significant strengths among WiCyS members, who consistently demonstrated exceptional proficiency across most of the NICE Framework. Their performances in the NICE Specialty Areas: Legal Advice and Advocacy, Executive Cyber Leadership, Cybersecurity Management, Cyber Operational Planning, Strategic Planning, and Policy were particularly noteworthy.

Total Participants:

# 399

Experience Levels:

- Junior: **118**
- Mid: **54**
- Senior: **36**
- Manager: **24**
- Not indicated: **167**



N2K analyzed the results of the diagnostic, using Experience Levels and N2K's Functional Groupings as key components to interpret results. Because N2K's NICE Workforce Diagnostic tests participants' knowledge and skills across the broad spectrum of the NICE Framework, it's important to analyze the results through the lens of the functions of their work roles and experience. As a result, N2K can interpret results by Experience Levels, N2K's Functional Grouping, and NICE Specialty Areas (and combinations thereof).

### About the NIST–NICE Cyber Workforce Framework:

The National Initiative for Cybersecurity Education (NICE) Cyber Workforce Framework, developed by the National Institute of Standards and Technology (NIST), plays a crucial role in addressing cybersecurity education, training, and workforce development needs. By providing a standardized taxonomy and common lexicon, the NIST-NICE Cyber Workforce Framework enables organizations to define and understand the essential tasks, knowledge, and skill (TKS) statements required for cybersecurity roles. This framework not only aids in the development and training of cybersecurity professionals but also helps in workforce planning and management. Additionally, the NICE Framework establishes a taxonomy and common lexicon that describes cyber security work and workers irrespective of where or for whom the work is performed.



### About N2K’s Functional Groups & Taxonomy:

To address industry challenges in translating various elements of the NICE Framework into common job titles and functional teams used for cyber professionals across the commercial sector, N2K established and defined 14 Functional Groups\*. These groups serve as a translation taxonomy, or a “Rosetta Stone.” Utilizing N2K’s Functional Groups offers a streamlined way to analyze performance and interpret workforce needs, reflecting common cybersecurity team structures.

### NICE CWF

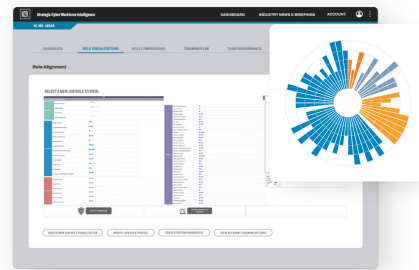
- Oversee & Govern
- Securely Provision
- Operate & Maintain
- Protect & Defend
- Investigate
- Analyze
- Collect & Operate

### N2K FUNCTIONAL GROUPS

\*View N2K’s Functional Groups on page 4.

### WiCyS EXPERIENCE LEVELS

- Junior
- Mid-Level
- Senior
- Manager
- Not Indicated



N2K’S Data Analytics & Visualization Tools to Analyze Results



### SUPERIOR PERFORMANCE IN NICE SPECIALTY AREAS

WiCyS members scored higher in these NICE specialty areas than other participants, underscoring their advanced capabilities and deep understanding of complex cybersecurity disciplines.

These strengths suggest that WiCyS’s programs and initiatives are particularly effective in these domains, providing members with a strong foundation to excel in strategic and operationally critical areas of cybersecurity.

### OPPORTUNITIES FOR DEVELOPMENT

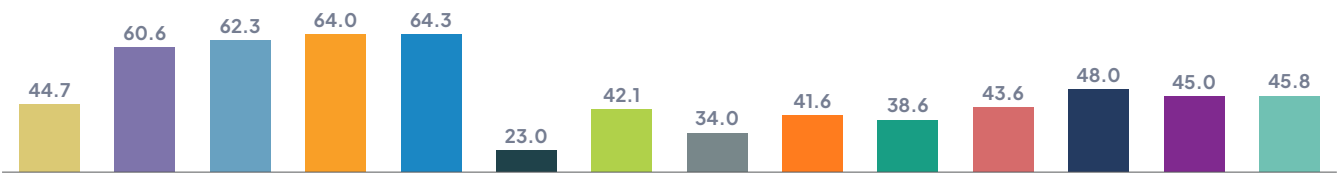
While the overall performance of WiCyS members is commendable, the chart also highlights specific areas in red where their scores were slightly lower than those of other participants who have taken the same diagnostic.

The performance gap in these fields suggests potential opportunities for WiCyS to enhance its programs. Focusing on these areas could help address existing skill gaps and ensure members are equally prepared in all aspects of cybersecurity.

### WiCyS Participants Composition by N2K Functional Groupings:



### Summary of Participant RPS Scoring by N2K Functional Group:



**Relative Performance Score (RPS):** an N2K scoring metric that excludes questions that are not relevant to Work Roles or Specialty Areas that align to each N2K Functional Group, and instead only measures performance on questions that are most-relative to the typical knowledge and competencies expectations for each Functional Group or Work Role.

In addition to the NICE Framework Specialty Areas, N2K has classified the NICE Specialty Areas into broader Functional Groups as part of the methodology for this report. WiCyS members have demonstrated superior performance across four major functional groups:



#### Communications & Network Security

Members excel in this area, demonstrating their ability to effectively manage and secure complex network infrastructures.



#### Cybersecurity Workforce & Awareness

The performance WiCyS members have a strong foundation in training and mentorship, which is critical for the ongoing development of the cybersecurity workforce.



#### Cybersecurity/IT Leadership & MGMT

WiCyS members demonstrate strong leadership capabilities essential for advancing within the cybersecurity industry.



#### Cybersecurity/IT Policy & GRC

Members demonstrate a sophisticated grasp of governance, risk, and compliance issues critical to organizational cybersecurity strategies.

## WiCyS STRATEGIC INITIATIVES

The results of the N2K and WiCyS collaboration highlight the current strengths and capabilities of WiCyS members and frame the strategic direction for future initiatives. These insights are invaluable in shaping programs that are proactive in addressing the evolving needs of the cybersecurity landscape.

As WiCyS continues to lead in the recruitment, retention, and advancement of women in cybersecurity, the data from this study provides a strong foundation for

targeted program development. The initiatives poised for implementation include [skills development training programs](#), [mentorship expansion](#), and [security training scholarships](#).

These strategic initiatives are designed to leverage the strengths identified in the study and ensure that WiCyS members are well-equipped to meet and exceed the cybersecurity industry's demands.

## About N2K

N2K Networks is a leader in strategic cyber workforce intelligence. The news to knowledge network is a trusted source of Industry Insights delivered through our media network, home of the CyberWire Daily podcast and daily briefing, CSO Perspectives, and Hacking Humans, which provides concise intelligence-driven news and commentary to cybersecurity professionals. Global enterprise organizations, including those in the Fortune 100, partner with N2K to gain actionable cyber workforce insights through our Talent Insights and Talent Development capabilities that help organizations build and maintain high-performing teams, rapidly climb the knowledge curve, and stay a step ahead in a constantly changing industry. Learn more at [N2K.com](https://www.n2k.com).

## About WiCyS

Women in CyberSecurity (WiCyS) is a nonprofit organization with international reach dedicated to the recruitment, retention and advancement of women in cybersecurity. Founded by Dr. Ambareen Siraj through a National Science Foundation grant given to Tennessee Tech University in 2013, WiCyS offers opportunities, trainings, events, and resources for its community and members. Strategic partners include Tier 1: Akamai Technologies, Amazon, Bloomberg, Carnegie Mellon University Software Engineering Institute, Cisco, Ford Motor Company, Google, LevelBlue, Lockheed Martin, Microsoft, Optum, Sandia National Laboratories, SentinelOne. Tier 2: Accenture, Adobe, DeVry University, Intel, JPMorgan Chase & Co., McKesson Corporation, MITRE, Motorola Solutions, Navy Federal Credit Union, Workday. To partner, visit [www.wicys.org/support/strategic-partnerships/](https://www.wicys.org/support/strategic-partnerships/).



N2K Networks  
8110 Maple Lawn Blvd, Ste 200  
Fulton, MD 20759

[www.n2k.com](https://www.n2k.com)