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TRANSFORM

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Can the Workforce Shortage Be Fixed?

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A photograph of a diverse group of people in what appears to be a professional or educational setting. In the foreground, a young woman with dark hair and glasses, wearing a blue floral top, is smiling and looking towards the right. She is holding an open notebook. Behind her, other individuals are visible, some in focus and some blurred, suggesting a busy environment like a conference or workshop.

Yes. We can solve
the workforce
shortage **together.**

This is (ISC)²



Largest nonprofit membership association of certified cybersecurity professionals



Work with businesses and governments to build certifications that meet market needs



Provider of **lifelong professional education**



Global advocate for ethics, growth and success of the cybersecurity profession

Keeping up isn't enough.

2020



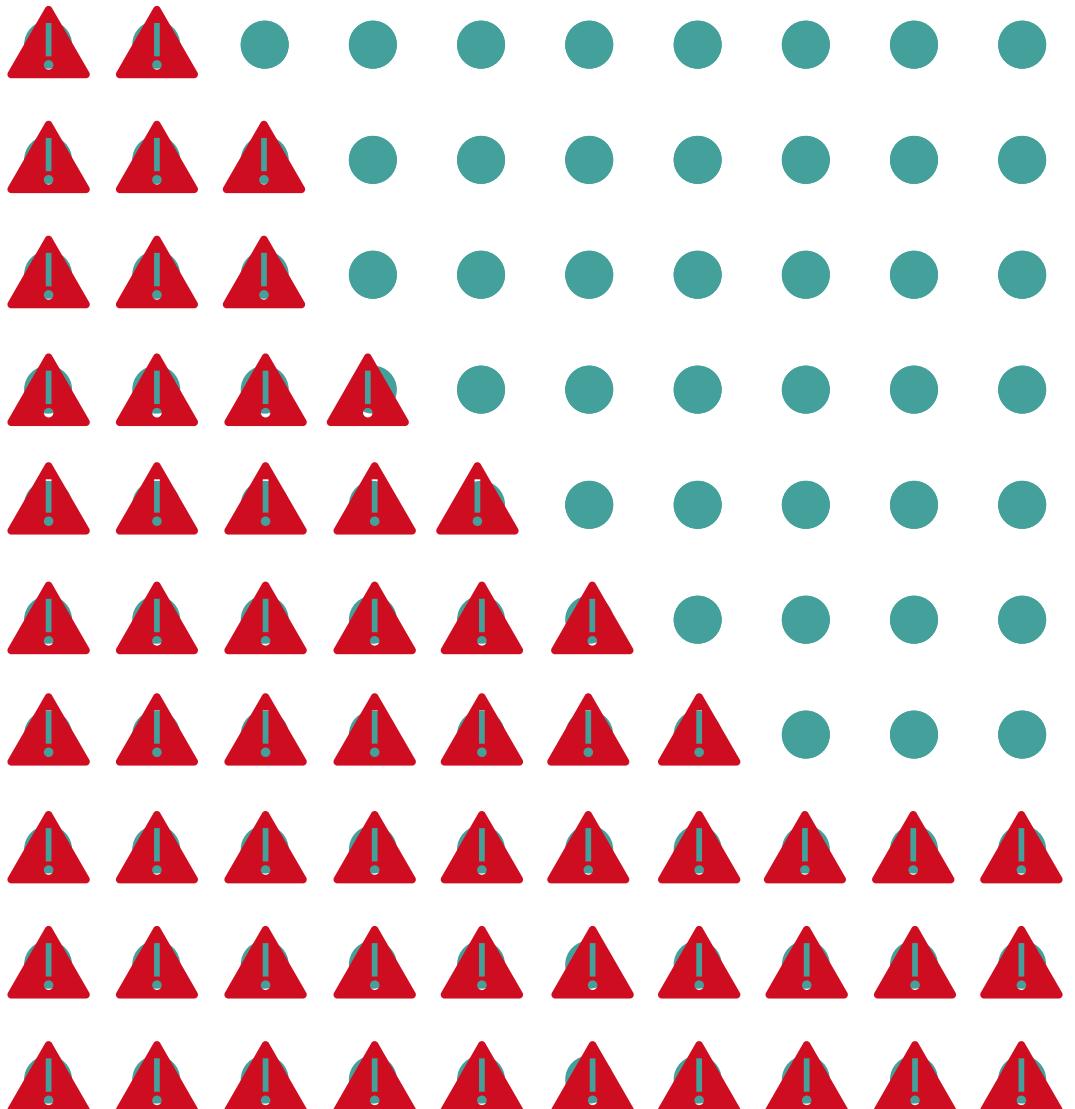
2021



65%

How much the **cybersecurity workforce needs to increase** to close the gap

60%
of study participants say
their organizations are at risk
due to staffing shortages



What happens without enough cybersecurity staff?



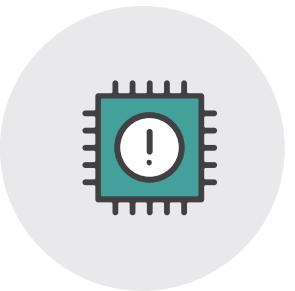
32%

Misconfigured systems



30%

Not enough time for proper risk assessment and management



29%

Slow to patch critical systems



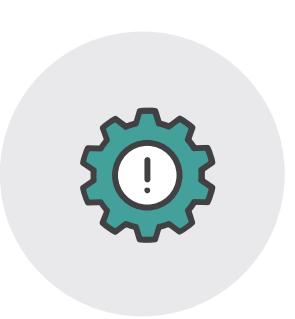
28%

Oversights in process and procedure



27%

Inability to remain aware of all threats active against our network



27%

Rushed deployments

Log4j Impact

Nearly half of cybersecurity teams gave up holiday time and weekends to assist with remediation.

About **one in four organizations was less secure during Log4j remediation** and fell behind on their 2022 security priorities.

“We need more [personnel] to put in the extra hours when there is a disclosure, to avoid burning people out and deprioritizing day-to-day security work.”

What's getting in the way?

Overreliance on IT as a pathway to cyber

Misunderstood and intimidating career

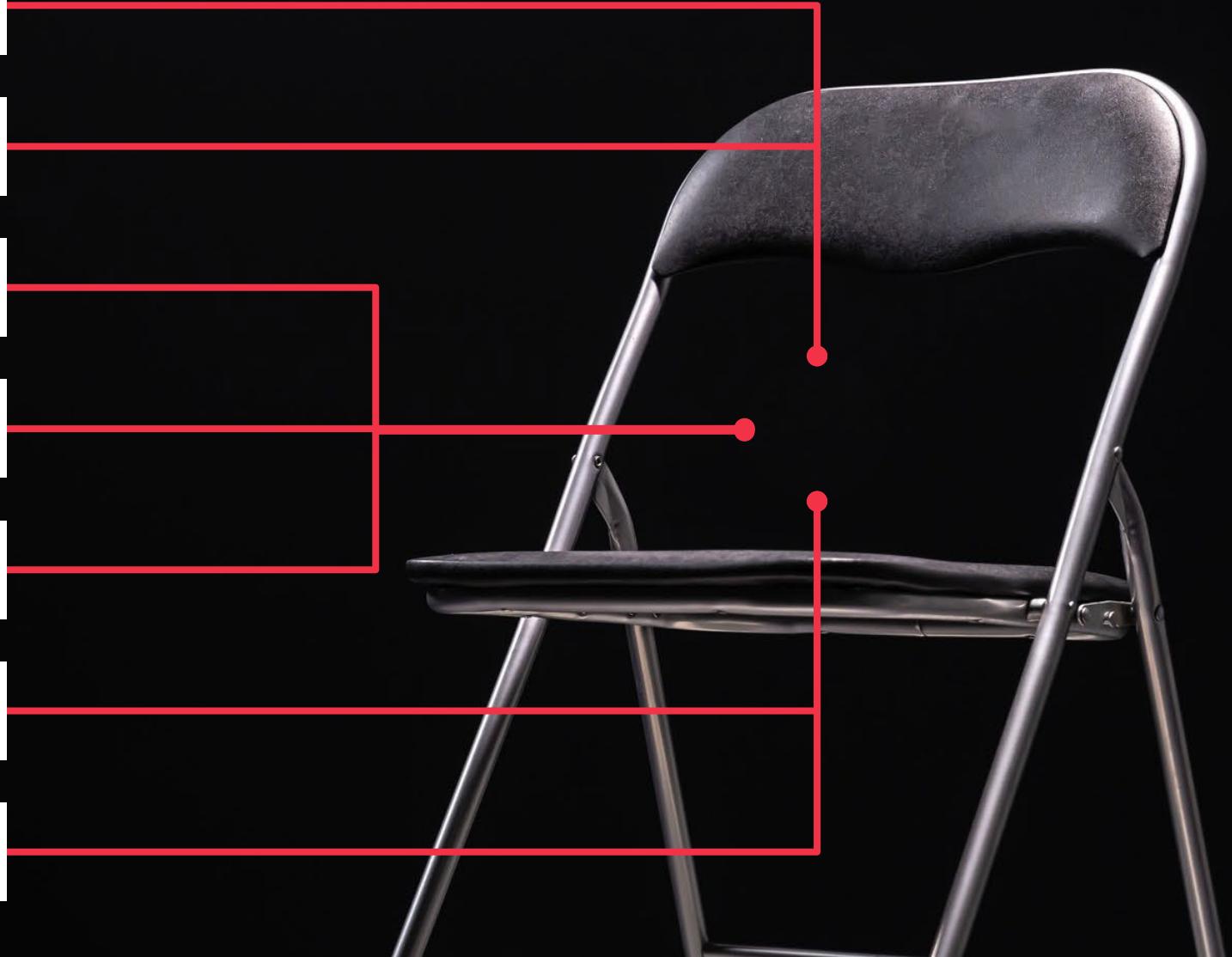
Unrealistic expectations

The dreaded kitchen sink
job descriptions

Lack of diversity in the field

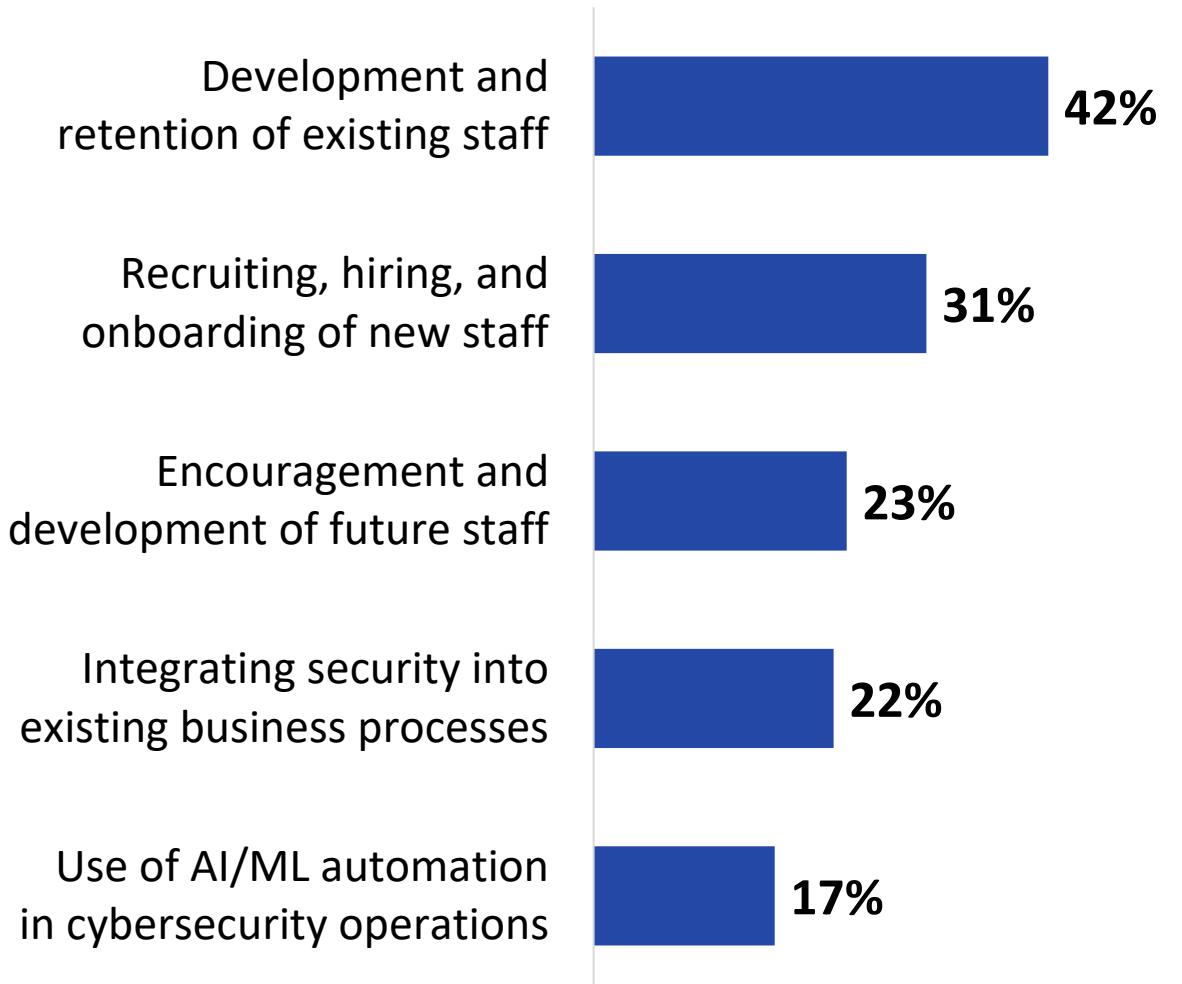
Barriers to entry like cost,
education and even certifications

Not enough entry- and junior-level
team members to back you up



Technology helps, **but it can't fix everything.**

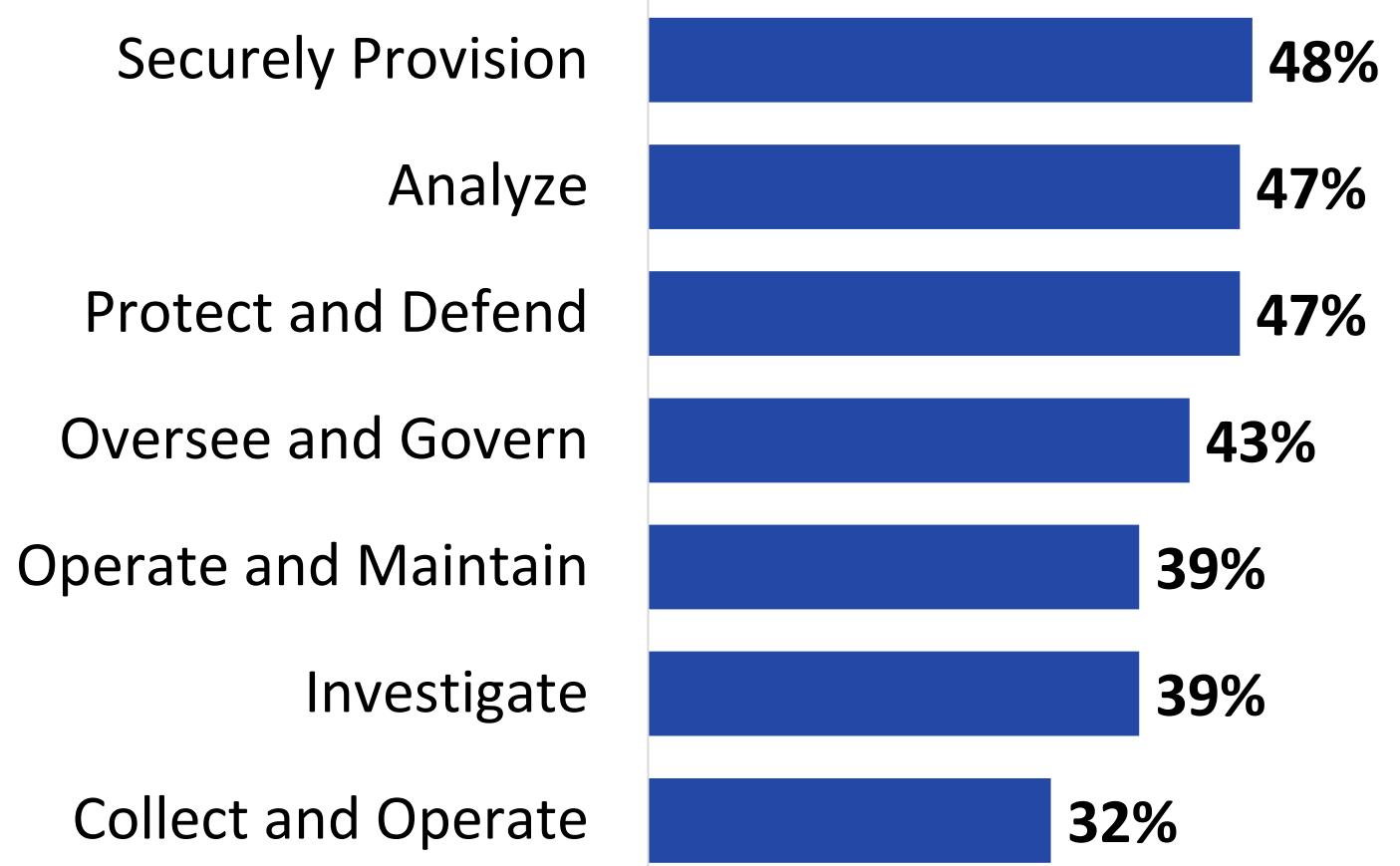
We need more people, not just tech.



A photograph of a man with glasses and a blue shirt standing in a server room. He is holding a tablet and looking at it. The background is filled with rows of server racks, their lights glowing in a dark environment. In the top right corner, there are several colorful, semi-transparent triangles (red, yellow, blue, purple) arranged in a small cluster.

First, understand your gap. **Where do you need help?**

Where pros need help now



Where is your gap?

Ask the right questions to find out.

1

What core skills do you lack?

2

Are your team members able to specialize, or is it all hands on deck?

3

When a major vulnerability surfaces, how well do you respond?

4

How has your attack surface changed with remote work?

5

Where do you anticipate your needs 1, 2 or 3 years from now?

6

Do you know enough about how your organization is evolving?

7

What does it take to succeed on your team, and is that realistic?

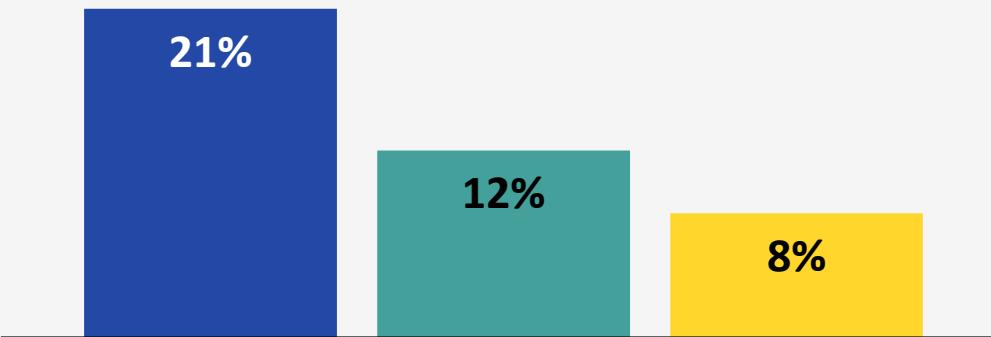
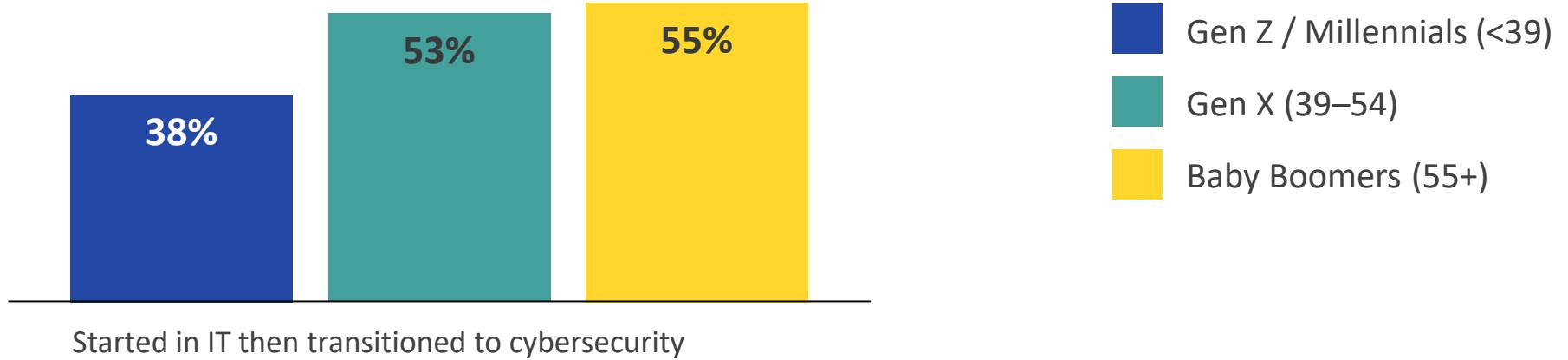
For some,
diversity barriers
are all too real.



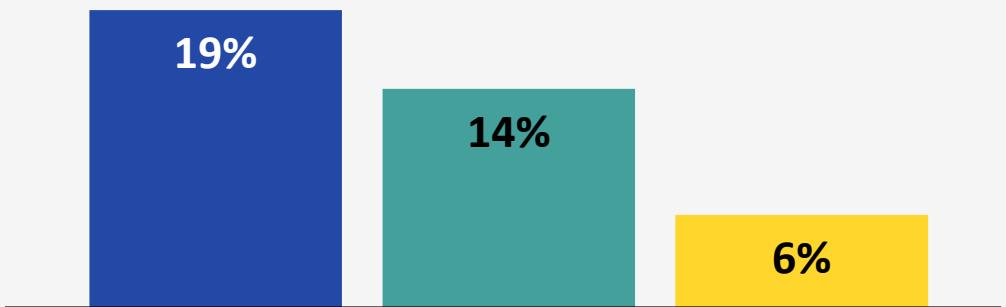


Help Wanted:
Talented people with the potential to succeed.
Deep IT experience *not always required.*

We are starting to see a shift with how people enter their cybersecurity career.



Pursued education in cybersecurity or related field then got first job in cybersecurity



Explored cybersecurity concept on my own, was recruited for a job in cybersecurity

What attracts those outside of IT roles to cybersecurity?

Ability to solve problems

54%

High demand for skills

48%

It fits my skill set/interests

38%

Ability to work in a
continuously evolving field

40%

Ability to help people/society

46%

Hire for aptitude and attitude. You can teach the rest.



34%
Analytical thinking



33%
Problem solving



27%
Critical thinking



24%
Ability to work
in a team



21%
Creativity



19%
Ability to work
independently



11%
Data
visualization



10%
Business
acumen

Diversity, equity and inclusion **make us stronger.**

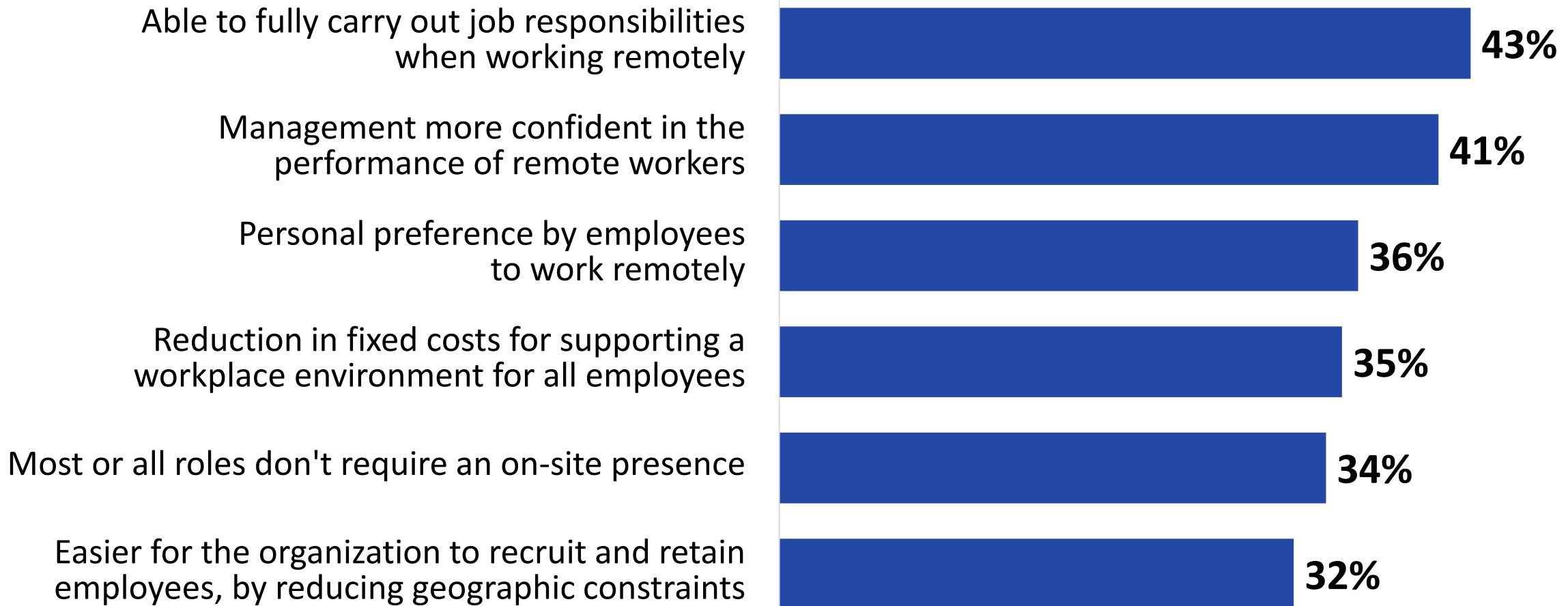
DEI fosters alternative pathways into cybersecurity roles.





Embrace remote work. **Hire the best.**

Moving to a fully or mostly remote workforce has its benefits!





Want to make an impact in your organization?
Recruit entry- and junior-level team members.

We need to meet them where they are.



APPRENTICESHIPS

Entry-level professionals try
multiple functions under the
cybersecurity umbrella



PAID INTERNSHIPS

Less structured than apprenticeships; provide opportunities for those with other commitments

Time and cost to get entry- and junior-level employees up to speed

37%

of cybersecurity hiring managers surveyed estimate entry- and junior-level professionals are considered “up to speed” after six months or less on the job.

\$500–\$5,000

Cost to develop entry-and junior-level cybersecurity professionals





“How have entry- or junior-level cybersecurity team members helped your organization?”

“

“Sometimes a fresh look at these old situations helps us identify problems we overlooked before.”

“They’re often well versed on the newest innovations, even more so than some of our established senior contributors, while lacking skills to support their curiosity, and it creates excellent synergy.”

“They take on a lot of the day-to-day work to free up senior people for more technical work.”

Building entry-level
job descriptions is
a team effort.



Collaborate with HR on entry-level positions. They need you!

Create roles that are attainable

Job descriptions should focus on learning and growth

Be specific about tasks and responsibilities, but don't overload

De-emphasize advanced certifications

Highlight nontechnical aspects and rewards of the job





Establishing a new baseline. Introducing a path into the cybersecurity profession that welcomes a diversity of experience and builds a shared core of skills.

Introducing (ISC)² Certified in Cybersecurity, entry-level cybersecurity certification

A foundational certification benefits everyone!



Candidates can
demonstrate
familiarity with
essential concepts

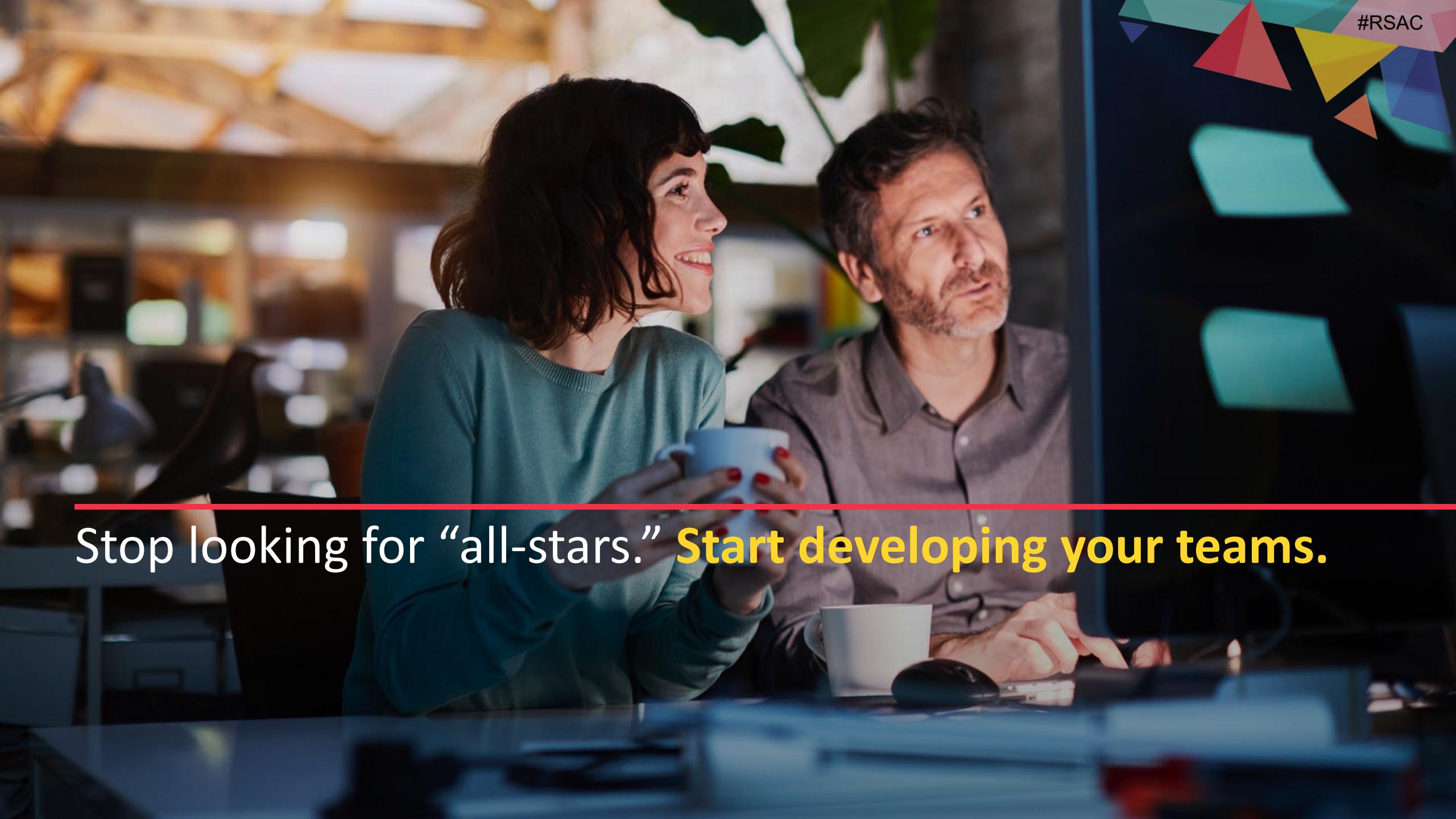


Employers are
assured candidates
have **foundational**
knowledge

(ISC)² Certified in
Cybersecurity
Available Now

Can the
workforce
shortage be
fixed? **YES.**



A photograph of a man and a woman working together at a desk in an office. The woman, on the left, has dark hair and is wearing a teal sweater, smiling and looking towards the right. The man, on the right, has a beard and is wearing a grey shirt, looking towards the woman. They are both seated at a desk with a computer monitor, keyboard, and mouse. The background shows office cubicles and plants.

Stop looking for “all-stars.” **Start developing your teams.**

Look for These Traits When Hiring Entry- and Junior-Level Team Members

TOP 5 *TECHNICAL* *SKILLS*

1. Data Security
2. Cloud Security
3. Secure Software Development
4. Data Analysis
5. Security Administration

TOP 5 *NONTECHNICAL* *SKILLS*

1. Ability to Work in a Team
2. Ability to Work Independently
3. Project Management Experience
4. Customer Service Experience
5. Presentation Skills

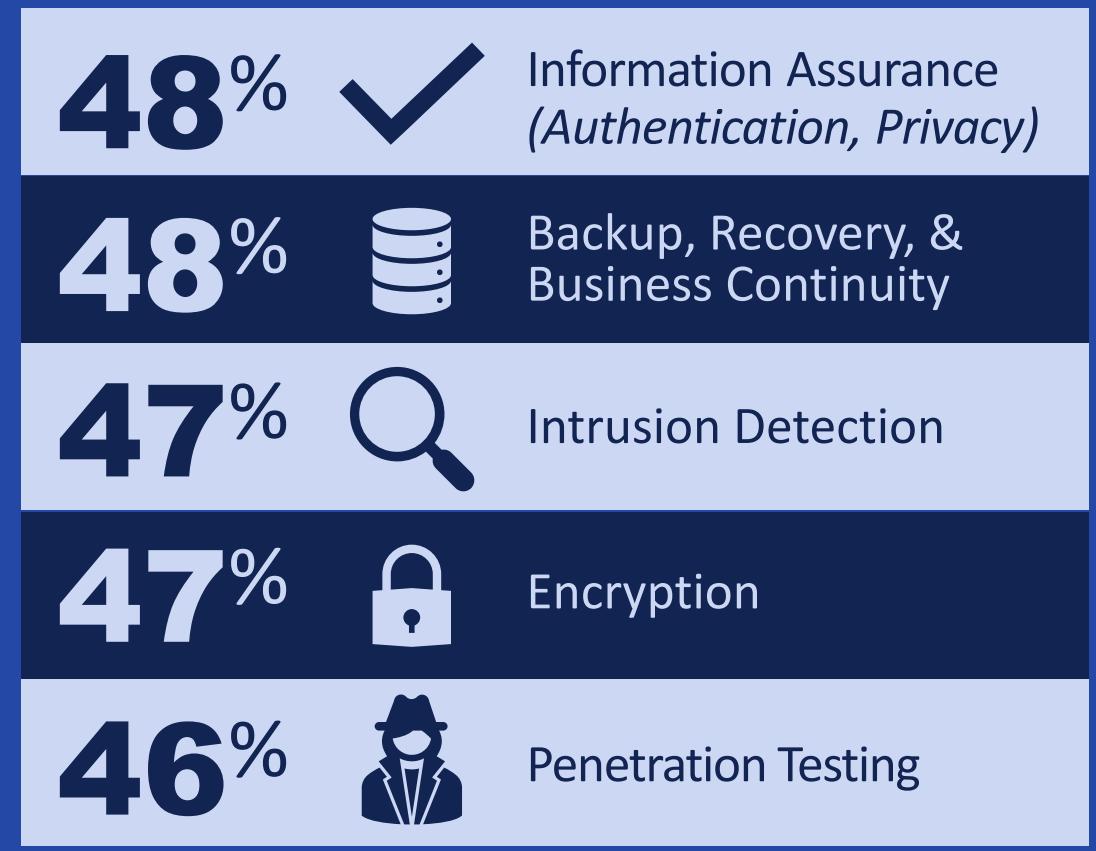
TOP 5 *PERSONALITY* *ATTRIBUTES*

1. Problem Solving
2. Creativity
3. Analytical Thinking
4. Desire to Learn
5. Critical Thinking

Top 5 Tasks for Entry-Level Staff (Less than 1 Year of Experience)



Top 5 Tasks for Junior-Level Staff (1–3 Years of Experience)



Invest in your team. It's the best way to retain your staff.



Having a **mentor**, particularly in the first few years of their career, is critical to entry- and junior-level professionals' **growth, confidence and longevity in the profession.**

90%

of professionals with a mentor say they are satisfied with their career.¹

30%

of cybersecurity professionals say the establishment of a mentorship program at their organization would help diversify their workforce.²



Formal and informal mentorship is advantageous, having a **positive impact on job satisfaction, employee retention and company culture.**

Apply what you have learned today

Your role in expanding the cybersecurity workforce

Technology helps, but it can't fix everything.

First, understand your gap. Where do you need help?

Hire for attitude and aptitude, not necessarily experience.

Diversity, equity and inclusion make us stronger.

Embrace remote work. Hire the best.

Recruit entry- and junior-level team members.

Welcome a diversity of experience built on a shared core of skills.

Stop looking for "all-stars." Start developing your teams.

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Thank you!

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