

IT & Cybersecurity Sector

Summary of key themes, needs, and opportunities: June 2024

Prepared by Computing for All (CFA)

(1) What are the top 3-5 themes you hear from employers in your sector related to workforce development?

- Employers are looking for **experience**: most entry-level jobs require 1-3 years of experience, which students coming out of college degree programs don't have. It is important to build in experiences that offer students opportunities for work-based learning, such as capstone projects, hands-on project work, Career Launch internships, and apprenticeships.
- Employers also ask for **soft skills** such as collaboration, problem-solving, communication, etc. Many employers have told us that these are more valuable than tech skills, which they can teach. These are important, as most tech jobs require you to work in teams and collaborate with others. Students can be trained in these skills via the work-based experiences mentioned above.
- Many smaller employers need **funding to pay for interns** as well as the cost of running an internship program. Many employers would take on interns, but they cannot afford to pay them and/or for the cost of managing the program.
- **Industry credentials** for certain roles such as CompTIA A+ for entry-level Customer User Support roles are very important.

(2a) What are the 3-6 occupations that employers in your sector indicate should be high-priority for workforce development to help meet their hiring needs?

- Computer User Support Specialist/Cloud Support Engineer
- Data Center Technician
- Software Developer
- Cyber / Information Security Engineer
- Data Analyst

(2b) Which career connected learning programs are effectively meeting the hiring needs of employers in your sector?

- WABS Job Shadows and Tours (King/Pierce region)
- Data Center Career Launch (Grant County)
- WABS/T-Mobile Explorer Prep Full Stack Developer Career Launch (King/Pierce region)
- Mentors in Tech (MinT) Career Prep, and mentoring programs (across WA state)
- Data Analytics Career Launch WSU (across WA state)
- Per Scholas, Skillspire, Year Up, Ada Developers Academy, Vets2Tech training programs (King/Pierce region)

(2c) Which career connected learning programs could be adjusted, expanded, or scaled to other regions to meet the hiring needs of employers in your sector?

- WABS Job Shadows and Tours (King/Pierce region) is a great program to introduce students to careers in IT. This should be expanded across the state.
- WABS T-Mobile Explore Prep Full Stack Developer Career Launch (King/Pierce region) is being expanded to provide other tracks, such as Cybersecurity and UX Design.

- Mentors in Tech (MinT) Career Prep to prepare CTC BAS students for additional tech roles
- Mentors in Tech (MinT) mentoring program for college students
- CFA CAST Career Launch (IT Support) and Full Stack Software Development Career Prep programs can be expanded to regions across WA state where there is demand for these roles. These are the two fastest growing occupations in IT in our state.
- WSU Data Analytics Career Launch and Career Explore play shops for elementary school students
- Scaling training provider programs such as Per Scholas, Year Up, Skillspire, Ada Developers Academy and Vets2Tech training programs to meet employer demand to fill the gap till the education system can catch up
- Scaling IT programs to rural regions
- Hands-on real world project experiences built into pathway programs such as those provided by CodeDay Labs and Riipen
- CFA Career Readiness workshops and access to job fairs to prepare students for careers in IT
- North Central ESD Tech and Tiaras event for middle school girls to spark their interest in technology careers
- Microsoft Discovery High School internship program in partnership with CBOs should be scaled as a model for other employers

(2d) Which career connected learning programs should be developed to meet the hiring needs of employers in your sector?

- **Youth Apprenticeships:** We need to develop youth apprenticeships in IT pathways in partnership with K-16. The IT apprenticeship program provider, Apprenti, is targeted towards older candidates. Apprenticeships have been proven to be a successful model to address the lack of diversity. Registered apprenticeships offer opportunities for individuals without college degrees to learn new skills while getting paid, as well as cultivate a professional network and gain access to living-wage jobs.
- **Programs and approaches that embed project experience:** Hands-on real world project experiences need to be built into pathway programs. For example, employer-led education pathway collaborations such as Globant’s partnership with Miami Dade college to place student interns into projects with clients is an effective model. Another example includes CFA’s partnership with AWS Tech Alliance for incorporating cloud curriculum into IT pathways in colleges.
- **Cross-sector programs:** Cross-industry and cross-Sector Leader program approaches are needed. For instance, there are opportunities in Finance, Healthcare, Aerospace, Manufacturing, CleanTech and Life Sciences to connect to employers hiring for IT jobs in these sectors and to build cross-sector pathways for IT careers in these sectors.
- **Teacher training:** Investments and partnerships need to be made with IT CoE and IT Cybersecurity to train and develop teachers to teach tech career pathways.

(3) What are the top 3-5 approaches you recommend to increase participation of underrepresented students in your sector’s high priority occupations?

- **Access for students in rural areas:** Students in rural areas are being left behind from access to technology pathways as often the schools cannot find teachers to run the program or do not have enough resources to offer the pathways. For rural areas, we need to deliver programs virtually to reach students. This addresses the teacher shortage issue as well.

- **Youth Apprenticeship:** Apprenticeships have been proven to be a successful model to address the lack of diversity. Registered apprenticeships offer opportunities for individuals without college degrees to learn new skills while getting paid, as well as cultivate a professional network and gain access to living-wage jobs. We need to develop youth apprenticeships in IT pathways in partnership with K-16.
- **Implement comprehensive career explore and prep programs** within the K-12 education system to provide students with early exposure to opportunities in IT. This may include implementing curriculum activities within the classroom, organizing site visits and tours to provide students with interactive and hands-on experiences, facilitating internships, and offering ongoing mentorship opportunities with industry professionals.
- **Representation Matters:** We need to provide access to BIPOC speakers and mentors from the tech industry to students. It is important that students see people who look like them in these roles. This builds confidence, inspires students, and allows them to start seeing themselves in these types of positions.
- **Partnering with CBOs:** We need to partner with CBOs that serve BIPOC students to bring these students into Career Launch and training programs to give them the training and supports to place them into good paying IT jobs.
- **Career Readiness workshops and job fairs:** We need to offer workshops ranging from exploring careers in tech, to resume and interview prep, Linked In, networking, job fairs, emerging technologies such as AI, and more.