



CYBER APPRENTICESHIP PROGRAM



*UPGRADE YOUR  
DATA PROTECTION*

BY UPSKILLING AND RESKILLING YOUR WORKFORCE  
THROUGH CYBER APPRENTICESHIPS

# INTRODUCTION

## Adapt or Die

The year 2020 may have brought the most unprecedented use of the phrase “unprecedented times”. With the worldwide response to COVID-19 affecting the lives of billions, nearly every industry is feeling the impact, and retail is certainly no exception.

Beginning with forced brick-and-mortar store closures to later socially distanced and even the avoidance of in-person shopping due to health concerns, retailers across the country have seen disruptions to their businesses that will likely spread well past 2020 and continue for months, with the resulting economic impact potentially lasting for years to come. For many, this means adapt or die.

Much like in the wild, this Darwinian idea that the “one that is most adaptable to change” will flourish has held true in retail. Companies that rapidly evolved or improved on features such as online shopping, contactless payments and delivery services have been able to continue operations with nearly uninterrupted service in

the face of challenges and have stabilized or even grown. According to McKinsey Insights, “the longer the crisis lasts, the greater the likelihood that online and omnichannel purchasing will become the next normal.”<sup>2</sup> With this trend of online, at-a-distance retail being the next normal, retailers are looking to step up cybersecurity to protect their customers' data.



## INTRODUCTION, CONT.

# Cybersecurity Challenges and Solution

Cybersecurity is not a new concern for the industry. In fact, The New York Times estimated in 2018 that 3.5 million cybersecurity jobs would go unfilled by 2021.<sup>3</sup> COVID has compounded the situation for retail that has shifted online: because of the negative outlook of retail during the shut-down, a large portion of existing cybersecurity talent was poached by other industries, exacerbating the shortage for retail companies.

This lack of cybersecurity talent is particularly concerning as the National Retail Federation reported that 59.4% of employers indicated that e-commerce crime and cyber-related incidents (e.g. data breaches) are increasing, and prevention has become more of a priority in the last five years.<sup>4</sup> The need to recruit, upskill or reskill existing employees to give them the skills companies need to continue to advance while protecting company and customer data is clear.

But in this new and often remote workforce

environment, how can retailers successfully meet their most critical cybersecurity needs?

**An emerging solution is a tried-and-testing approach for talent recruitment, development and retention: apprenticeship.**

The word “apprenticeship” is in the national zeitgeist for a reason. The combination of a Presidential Executive Order, government support, and business leaders’ recognition that paid, standardized training programs cultivate expert talent has led to increased apprenticeship programs across the country.

Specifically, cybersecurity is moving forward and succeeding in helping new candidates enter their occupations using apprenticeships as a foothold. By leveraging apprenticeship as a method to accelerate education, credentialing, and ultimate employment, the retail industry can create new and cost-effective avenues toward bridging the cybersecurity workforce gap.



# What is an Apprenticeship?

Apprenticeship is a globally recognized and leveraged training model used to attract and retain the best talent.

Registered Apprenticeship is an employer-driven training model that combines on-the-job learning with related classroom instruction that increases an apprentice's skill level and wage. It's a method used around the world, proven effective over hundreds of years.

Large-, medium-, and small-businesses are eligible to create and maintain apprenticeship programs since employers

can customize each program to their specific needs and integrate it seamlessly into their current training and human resource development strategies.

Using the apprenticeship model, employers can add another passageway to obtain talent by allowing them to grow their own cyber professionals, establish a pathway for individuals to enter the pipeline and advance others in a high-demand position.

For employers, this "earn and learn" training opportunity is a great way to reap the following benefits:

## Apprenticeship Benefits

ATTRACT A NEW  
TALENT POOL

GAIN HIGHLY-  
SKILLED  
EMPLOYEES

REDUCE  
TURNOVER  
COSTS

INCREASE  
PRODUCTIVITY

CREATE A MORE  
DIVERSE  
WORKFORCE



# Apprenticeship, Business Benefits

## APPRENTICESHIP TO UPSKILL AND RESKILL YOUR EXISTING TALENT POOL

Last year, Harvard Business School discussed how common hiring strategies are failing companies, showing companies often default to hiring college graduates even though many report non-graduates with real-life experience perform critical job functions nearly or equally as well.<sup>5</sup>

Apprenticeship offers a powerful solution to the disconnect between hiring defaults and overlooking candidates with operational experience since it enables the power of upskilling and reskilling your existing employees with the opportunity to also earn a degree.

Using national apprenticeships, companies can instantly extend the program to all hiring areas, regardless of state or region.

In a Department of Commerce study of the costs and benefits associated with creating and running apprenticeships, surveyed companies unanimously determined that program benefits more than justified their costs.<sup>6</sup>



Dollar for dollar, no workforce training method packs as much punch as apprenticeship. On average, employers realize an average return on investment of \$1.47 for every \$1 invested.<sup>7</sup>

Additionally, apprentices tend to invest their time back into companies that have invested in them, reducing turnover rates and recruitment costs.

# 91%

## RETENTION RATE

Nine (9) months after apprenticeship completion, 91% of apprentices retained employment.



**“Both industry and government have a critical need for cybersecurity experts...We built a multifaceted apprenticeship pipeline that unites industry, government and education in a coordinated effort to develop a highly qualified cybersecurity workforce.”**

– Geanie Umberger, clinical professor and executive director of PCAP

# UPSKILLING & RESKILLING YOUR WORKFORCE

HOW CAN EMPLOYERS KEEP PACE IN A VOLATILE ECONOMY TO FILL THEIR MOST IMPORTANT ROLES?

Even before the onset of COVID-19, a surprising 68% of companies invested in reskilling and upskilling training to handle changes within their organizations and another 65% trained employees on new technologies. Over the last few months, 43% of companies stepped up their upskilling/reskilling efforts due to the outbreak.

## UPSKILLING:

Upskilling focuses on providing training for employees who need to learn and develop new skills to advance their skills along the same professional career path.

## RESKILLING:

Reskilling focuses on training employees who have shown they have the aptitude for learning a completely new occupation.

While recruiting new talent into the industry is a major component of the hiring process and apprenticeships are a sustainable method to find external candidates, an often overlooked method to keep pace in the economy is to leverage current employees who already have operational experience at your company.

**Apprenticeships are an ideal way to upskill and reskill them into cyber roles.**

Employers can customize apprenticeship programs to their needs and integrate them seamlessly into their current training and HR development strategies.

Companies are seeing advantage of the candidate market that's available within their own companies and are using apprenticeships to ensure they capitalize on that value quickly—and with government-provided support.

The Purdue Cyber Apprenticeship Program (P-CAP) offers pathways for companies to

- 1 Access apprenticeship candidates within the P-CAP system who have completed their cyber skills assessment.
- 2 Improve the skills of existing employees who already have a foundation in cyber.
- 3 Bring in candidates from your existing teams that live outside of the cyber space into these critical roles.



## *THE NEXT GIANT LEAP*

### IN UPSKILLING AND RESKILLING CYBER TALENT

Purdue University's Cyber Apprenticeship Program (P-CAP), aligns candidates who have an aptitude for cybersecurity with employers that provide paid apprenticeships and helps current employees access the right training foundation to become cyber professionals within the retail industry.

P-CAP blends traditional models, creating a new way to earn-and-learn for the 21st century. In the program, apprentices can earn an assortment of topic-focused badges, AS, BS, or MS degrees along with certifications while employed in their field of study, gaining simultaneous on-the-job training, earn Purdue Leadership Academy certificate focused on soft-skills, and mentorship. **The program is unique—it is the first apprenticeship in the country to ever offer all the different levels, from industry badges to one-year certifications, an Associates, Bachelor's and even a Master's degree as part of its program.**

## Program Framework

The National Institute of Standards and Technology (NIST) established the National Initiative for Cybersecurity Education (NICE). NICE's mission is to “energize and promote a robust network and an ecosystem of cybersecurity education, training, and workforce development,” and P-CAP was built on this network.

NICE developed Knowledge, Skills, and Aptitude (KSA) for all cybersecurity jobs. P-CAP bases significant portions on this program on NICE KSAs and has established 3 different “levels” for apprentices to receive their related training instruction.

P-CAP also ensures that apprentices are training in soft skills as well as technical know-how through the Purdue Leadership Academy focusing on interpersonal skills, problem solving, decision making, teamwork, and integrity.

Our team works with companies to develop their apprenticeship program as well as helping to identify and hire candidates. We also sort apprentices based on a Skills Assessment to help build the educational pathway employers want their apprentice to take, all while providing leadership training and mentorship programs.



# Apprenticeship Tailored to Retail Businesses

## STREAMLINE

P-CAP streamlines your cyber apprenticeship program creation, maintenance and funding process. We work directly with you and the Department of Labor to expand existing innovative apprenticeships, create national models, and accelerate their completion so you can adopt the programs that fit best within your company and begin training apprentices quickly.

## PROMOTE

P-CAP promotes and sources candidates from both civilian and the military communities. We do this by leveraging technology to connect online, in-person meetings with candidates at hiring events around the globe, and through our strategic partnerships. We also work to promote your programs with minority populations to fulfill companies' diversity goals and needs.

## ACCESS

Working with P-CAP, employers will have greater and more immediate access to resources. These resources include pre-approved, standardized and industry-endorsed online instruction and on-the-job learning for companies with sites in multiple states. Our subject matter experts are ready to give you personalized coaching on program set-up and funding opportunities such as tax credits or the military's Monthly Housing Allowance (MHA) and help you understand how to enroll candidates who show potential using the apprentice assessment tool we have developed.

# Steps to Become a P-CAP Employer Partner



## WORK WITH OUR INDUSTRY INTERMEDIARY

Once you express interest in a Registered Apprenticeship to help fulfill your workforce demands, you will be connected directly with our Industry Apprenticeship Intermediary (FASTPORT, Inc.) to explore how apprenticeships will work within your business model.

## DETERMINE YOUR COMPANY REQUIREMENTS

With our assistance, you will submit your minimum requirements for hire, minimum wage progression, and additional work processes (e.g.) probationary periods. You can use our provided template and modify it based on your needs.

## ESTABLISH YOUR APPRENTICESHIP

After you finalize your requirements and agree to participate as an apprenticeship Employer Partner participating in the National Standard set forth by Purdue University P-CAP and the U.S. Department of Labor (DOL) for your apprentice occupation(s), your program will be registered and recognized by the DOL.

## BEGIN YOUR ONBOARDING PROCESS

During the registration process, you will be sent the P-CAP Portal Link and User Guide. Once your program is registered, you will receive your Welcome Packet that includes information on apprenticeship funding opportunities, the monthly housing allowance (MHA) process, and how to track and report your candidate hires through completing form ETA 671.

## ACCESS CANDIDATES

As a fully registered employer partner, you will be able to enter the database of potential apprentices, view their assessment scores, and communicate with candidates to begin your hiring process.



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## CYBER APPRENTICESHIP PROGRAM

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