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Retail's Tech Transformation: Upskilling Frontline Employees for Next-Gen Careers

A Guide to Getting Started

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Executive Summary

Retail is one of the largest employment sectors in the U.S., but it faces persistent challenges with turnover, talent shortages, and limited internal mobility. Frontline roles—such as cashiers, stockers, and sales associates—are often viewed as low-wage, short-term positions with few advancement opportunities. At the same time, the industry is rapidly evolving through digital transformation, increasing demand for workers with technical skills in areas like software development, cybersecurity, and robotics.

This report offers a roadmap for building technology career pathways that connect frontline associates to higher-paying, tech-enabled roles. Drawing from labor market data, employer interviews, and frontline worker transitions, it identifies two key opportunity areas: Computer Tech roles (e.g., software developers, network architects) and Physical Tech roles (e.g., welders, logisticians, mechatronics technicians). These positions offer significantly higher wages and long-term career potential, and over 110,000 workers have already made the leap—often without formal pathways or support.

The report outlines how retailers can design and implement scalable pathways by addressing barriers at the individual, company, and system levels. It emphasizes the importance of adopting a skills-based mindset, aligning training with business needs, and piloting place-based strategies that account for local labor market dynamics. Success depends on leveraging internal corporate assets—such as workforce data, training infrastructure, and local leadership—and building a compelling business case tied to outcomes like increased retention and productivity.

This is both a workforce strategy and a business imperative. By investing in career advancement for frontline workers, retailers can reduce turnover costs, strengthen their talent pipelines, and support more inclusive economic mobility.

The retail industry supports more than 55 million jobs in the U.S.[1] It experiences turnover exceeding 60% for frontline workers, significantly higher than the rates in most other industries. This churn results in billions of dollars in annual losses for retailers. But these losses go beyond operational inefficiency—they reflect a deeper structural issue. Too many frontline retail roles—cashiers, sales associates, stockers—are seen as low-wage, short-term positions with limited potential for advancement. As a result, many workers with expertise in the industry leave retail altogether in pursuit of more sustainable careers.

Meanwhile, technology is reshaping every part of the retail experience. Consumers notice it through the ubiquity of QR-code ordering and self-checkout stations; workers experience it as they rely on increasingly advanced tools and machinery to move and track products. But amid this upheaval lies an immediate opportunity—employers can build more stable, capable teams, and frontline workers can access higher paying roles with greater potential for advancement.

Across the industry, retailers are already responding to real-time talent shortages by hiring external tech workers and competing with other industries for the same talent. But meeting today's needs is not enough. To stay competitive, companies must plan for tomorrow, beginning with the people who will bring that future to life. This starts with building resilient, adaptable pipelines of talent prepared to support a tech-enabled retail experience for years to come.

Rapid shifts in technology and skill demands make workforce planning more difficult than ever. This report offers strategies for retailers and workforce organizations working together to navigate this fast-changing and high-stakes transformation. Throughout, we provide insights and actionable next steps for addressing key questions:

- What are the **fastest-growing technology roles** in the retail sector?
- What are the **most valuable skills** needed for these roles, and how can workers develop them?
- How can **employers get started** in creating effective pathways from the frontline to these emerging tech roles?
- And how can **corporate leaders build a compelling business case** for investing in building these robust talent pipelines?

