WHITE PAPER

Closing the Skills Gap

and Building a Foundation for Long-Term Success With Training

A few years ago, Chad Johnson visited a power plant that had recently hired several new employees. While some of the new workers had previous power plant experience, others had been hired from outside the utility industry.

"One of the guys had worked in the automotive industry as a technician working on cars," said Johnson, a manager in training advisory services for HSI Industrial Skills, a leading provider of training to utilities, manufacturers, oil and gas companies, and other industrial employers. "While his skills did not directly relate to power plants, they translated really well to his new role and required the same aptitude."

By hiring someone from outside its industry but with a relevant skillset, the utility was doing something innovative to address the talent shortage that so many industrial employers face. In fact, the U.S. Bureau of Labor Statistics[1] reported close to 500,000 unfilled manufacturing jobs in May 2026. Not surprisingly, a survey by Eide Bailly[2] shows 32% of manufacturers cite high employee turnover as a top challenge and 25% say the skilled labor shortage is a key challenge to growth.

Closing the skills gaps is not just imperative for companies because the gap leaves well-paying jobs open and employers scrambling. In his annual letter to stakeholders, JPMorgan Chase chairman and CEO Jamie Dimon identified **closing the skills gap as an essential step in achieving economic growth,** reduced income inequality, and the restoration of what he called the "frayed American dream." Dimon's prescription is to provide "students and other individuals with work skills (in fields such as advanced manufacturing, cyber, data science and technology, healthcare, and so on) that will lead to better-paying jobs."

Why Companies Can't Afford to Ignore Training

The skills gap won't close on its own. **It takes well-designed and effective training programs that equip workers with the skills they need to perform their jobs well from day one.** Good training also establishes the kind of career pathways that help retain and motivate employees over the long term.

It can be hard to demonstrate training ROI. However, the focus should be on whether training lowers turnover, speeds proficiency, and improves productivity enough to close the skills gap. ROI should not focus on training completions or satisfaction scores.

There are many quantifiable ways training benefits industrial employers, such as:

Lowering the high cost of churn.

Replacement costs[3] in manufacturing and power can range from $3,000 to $6,000, depending on the role level with much higher costs for skilled searches. Some experts say that the price tag for hiring is as much as three times the salary of the available position once you include the time and resources devoted by managers and human resources departments. Effective training keeps employees engaged and satisfied with their work.

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Avoiding unplanned downtime.

The profitability of industrial companies depends on reliable operations. For that to happen, employees must be equipped with the skills necessary to operate and maintain equipment safely and properly. For example, well-trained workers complete job and tool changeovers rapidly and efficiently, reducing the amount of equipment downtime. The expense of unplanned downtime is both significant and a fact of life for companies that depend on equipment operating at full productive capacity. For example, one study[4] found that **61% of manufacturers experienced unplanned downtime in the past year. The estimated cost of that collective loss of productive capacity is $44 billion a year.** A major culprit for unexpected equipment outages is human error, which can be addressed by effective training. One study found that **23% of unplanned outages in manufacturing resulted from human error, compared to 9% in other sectors.** In the same study, **nearly half of the manufacturers said their efforts to prevent unplanned downtime had considerable room for improvement.**

Maximize worker productivity.

While not having enough workers is a real problem, having workers who lack the skills to effectively perform their jobs is also a challenge. This problem is particularly relevant among **newly hired workers, who are estimated to perform at only 25% of their productive capacity when they begin their roles.** According to research from SHRM, Harvard Business Review, and Gallup, new employees take six to eight months to reach full productivity. Complex or leadership roles can take more than 12 months. Well-designed training programs ensure workers have the skills they need to quickly achieve their productive potential.

Cultivate future managers and leaders.

Worker retention has a range of meaningful advantages, including avoiding the hefty price tag of filling an open position and benefiting from increased productivity. **But retaining workers is also an opportunity to prepare a company for the future by developing leaders with the hard and soft skills needed to enter management.** Training can play a key role in delivering those skills. When done properly, training also lays out the step-by-step journey new employees can take to enjoy a long and fruitful career with an employer, including the opportunity to advance inside the organization.

A well-thought-out onboarding program sets employees up to do well immediately and over the long-term with an employer.

— Suzie Espling

Suzie Espling, an HSI solutions engineer who has worked extensively with industrial companies added, "Onboarding has to answer what employees are going to do on day one and what training you are going to give them to do that job. It also must clearly communicate what the career vision is if they stay there. If you can help employees see a path to success, a path to making more money, a path to providing for their families, then, more than likely, they're going to stay. **Onboarding is also a good time to clarify that the path to achieving their career vision includes training."**

How Training Can Close the Skills Gap

Effective training is both a strategic advantage for industrial employers and a powerful tool to help answer some of their most pressing challenges. While a commitment to training is an essential starting point, not all training is created equal. Effective training programs can close the skills gap industrial employers face by incorporating several key ingredients and principles, including:

Onboarding builds a foundation for future success.

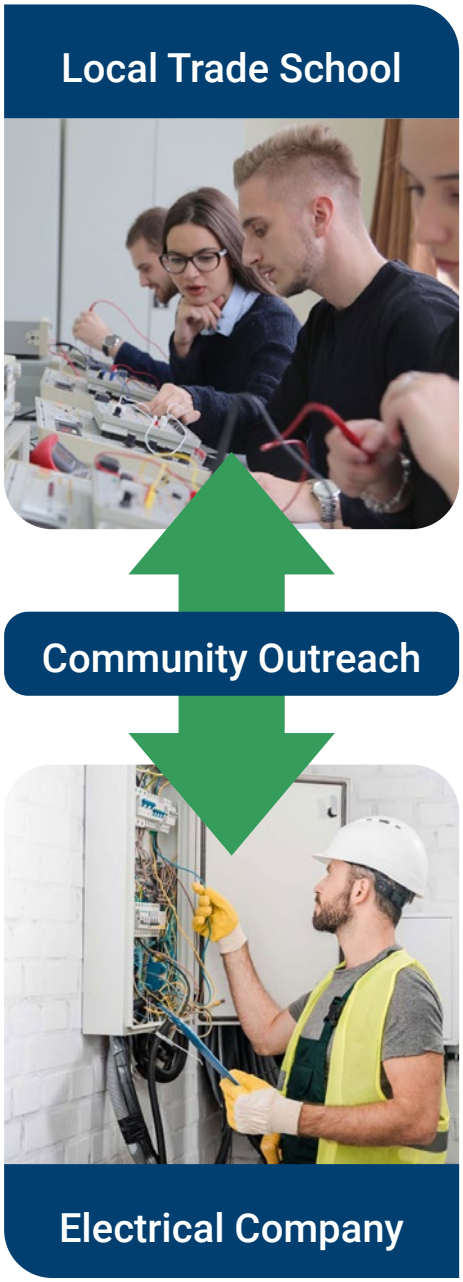
First impressions matter to new employees. Onboarding is an employer's chance to simultaneously prepare new workers with the skills they need to be immediately productive while establishing a vision for their future careers. Unfortunately, this does not always happen today. **According to SHRM, more than half of new employees fail to last beyond the first 18 months of employment.** However, Gallup research has shown that **69% of workers who participate in a structured onboarding program are likely to still be employed after three years.**

Community outreach raises awareness about career possibilities.

It's an unfortunate reality that not nearly enough students and workers grasp the bright future they can build by seeking a job at an industrial company and committing themselves to acquiring the skills to advance. Community outreach by employers can begin to paint that picture. "A high school student has no idea what it's like to work in industry," Johnson explained. **"Successful companies get the word out about themselves.** They say, 'Hey, we'll make sure you're trained to do this job, and here's where this job can take you, and these are the possibilities.'"

Training and skills development can begin before hiring a worker.

Employers would love to hire employees who arrive with all the skills needed to be immediately productive. However, with so many job openings and an always-evolving set of skills needed by industrial employers, that's not a realistic expectation. But employers can establish partnerships and relationships in the communities where they operate to increase the likelihood that job applicants will have many of the required skills. "Some very large companies understand that if they take charge of the training of their new hires before they even become new hires, then they're going to get the exact employees they're looking for," Johnson said. **"They partner with a community college or trade school nearby and do community outreach."** While the skills development piece of community outreach and partnerships is important, raising awareness among students and young people about the type of life and career they can build by working at an industrial company is too.

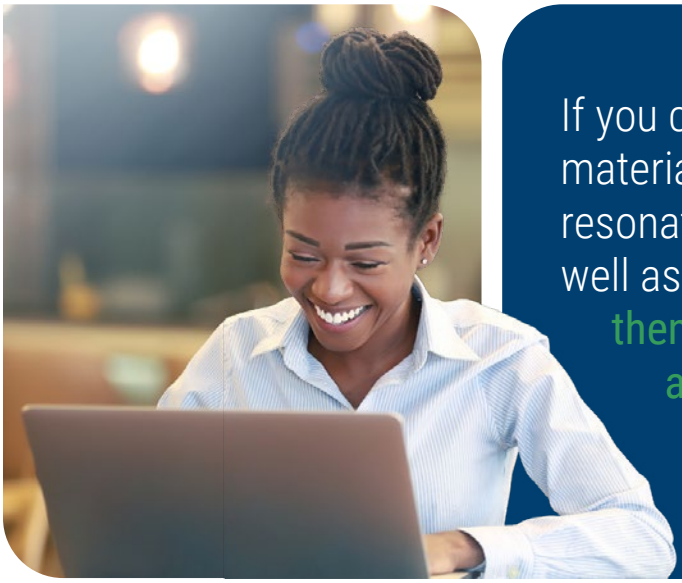


Relevance matters, particularly with soft-skill training.

Designing a training program that equips workers with the specific set of technical skills needed to perform a job is straightforward. **A job task analysis (JTA) will establish the set of tasks an employee is responsible for, and training can be focused on ensuring a worker is proficient in completing all those tasks.** Soft skills, such as effective communication and accountability, are more challenging to impart. Additionally, the effect of soft skills training depends on its relevance. "If you give a machinist accountability training, and it is set in an office environment and doesn't relate to his daily work in any way, it's not going to be taken seriously," Espling said. "They're not going to feel that it's important to them, and they're not going to get much out of it."

Relevance extends well beyond the scenarios and content used in training to also include how the material is presented. People learn and retain information in different ways. Some prefer to watch videos, others like to read, and others are hands-on learners. Good training programs have some combination of these and other formats, offering materials that appeal to a variety of learning preferences. "It's not saying someone is incapable of learning one way or another, but a lot of people have a way that resonates with them," Johnson said.

Delivering training in a format that resonates with employees increases the likelihood they will master important new skills and concepts.



If you can present your training material in such a way that it resonates with a visual learner as well as someone who likes to read, then you're going to hit a bigger audience.

— Chad Johnson

Training can help place workers in the right positions.

One HSI client is a very large chemical manufacturer with continuous job openings. **As part of its onboarding, the company must match the skills of its new employees with open positions in its facilities. That's where training comes in.** For the first 30 days of employment, new workers take a selection of courses from the industrial skills curriculum provided by HSI. Their performance in the courses gives both the manufacturer and new employees a sense of what job they are best suited to do. "Over the first 30 days, all they're doing is taking e-learning courses and talking to their manager about the kinds of things they will do and the equipment they will use," Espling said. "Based on those courses, managers can review where their strengths are and decide where they're going to be placed in the organization. This helps new employees become productive quicker and increases the likelihood their work experience will be positive from the start."

The Role of Managers and Leaders

Is the training relevant and delivered in a way that will resonate with a worker? Has the topic been covered, and if it has, is a refresher course necessary? Does the sequence of training provided reinforce a coherent career trajectory that will excite the employee?

Thoughtful training delivers value to the employee and the employer. "It can't just be, 'I'm going to commit to assigning X number of courses to every employee every quarter,'" Johnson said. **"It has to be thoughtful because you don't want to turn your employees off on the very real benefits of training."**

Johnson emphasized that managers and leaders have a critical role to play in the effectiveness of training. A few best practices include:

- If you assign training, give employees time to do it. "Don't make it something where they're having to juggle doing the training or doing their job," Johnson said.
- Never use training as a form of punishment.
- Demonstrate the importance of training. "You have to do training yourself and let employees see that," Johnson said. "That's leadership because you are showing employees that training is important enough to you that you take the time to do it."

Competition for talent among industrial employers will only become more intense in the future. **Effective training programs are a critical tool to recruit, retain, and provide the necessary skills for both employees and employers to flourish in the future.**

Citations

1. U.S. Bureau of Labor Statistics, Economic News Release, 4/26/2025.
2. The Future of Manufacturing Talent, Mark Wenig, Eide Bailly, 2/2/2026.
3. Manufacturing Industry Staffing Costs 2026, Stealth Agents, 3/23/2026.
4. Unplanned Downtime Costs Manufacturers Up to $852M Weekly, Exposing Critical Vulnerabilities in Industrial Resilience, Fluke.com, 10/30/2025.

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