AN XOi WHITE PAPER

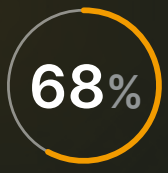
Re-evaluating the Skilled Trades Gap

XOi

From a staffing perspective, the skilled trades are in the midst of a crisis that is going to get exponentially worse if demographic and hiring trends continue. The workforce across the trades is aging, and fewer and fewer younger technicians have entered the field every year.

What can be done? Within the industry, companies have upped their incentives (everything from higher pay to more perks to free training and tools) and made efforts to recruit from non-traditional channels. Nationwide, there is work underway to re-establish trade schools as a viable route to employment. But there are other levers that need to be pulled, and in order to attract younger employees into the trades, the entire conversation around field service needs to change. Technology can also play a role in helping to attract, train, and retain younger workers.

The scope of the skilled trades gap is significant

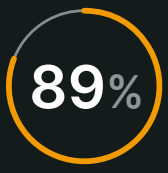


68% of companies say they struggle to hire skilled workers[1]

1/3

Roughly one-third of companies could not fill open positions[1]

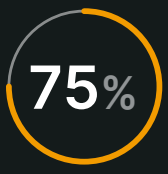
Half of respondents indicated the worker shortage affected their ability to grow[1]



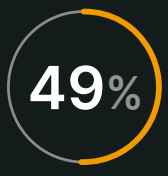
89% of manufacturing executives had trouble filling skilled production positions[2]

4.3 million

There are 4.3 million more job openings than unemployed workers. The U.S. Chamber of Commerce characterizes this as a massive shortage of skilled workers.[4]



75% of surveyed employers reported difficulty in finding skilled talent[3]



The application rate for young workers looking for technical/ trades jobs dropped 49% in 2022 compared to 2020[5]

55 years old

The skilled trades workforce in the U.S. has an average age of 55[6]

1. *Survey by Angi, 2021*
2. *Survey by Deloitte and The Manufacturing Institute*
3. *Survey by Manpower Group*
4. *The U.S. Chamber of Commerce*
5. *Handshake via a report from NPR*
6. *Research firm Gitnux*

The ramifications of this ongoing labor shortage are significant. Without enough skilled labor/technicians, companies are less efficient and productive — there simply is no good way to meet customer demand for service if there are not enough technicians to do the work. This not only degrades customer service, it also increases the workload per technician (which increases stress and reduces job satisfaction), and impedes business growth.

To fill the gap, many firms have increased starting pay and benefits to attract new employees, as well as adopting more flexible work schedules and other strategies. However, since the pool of applicants remains small, companies wind up escalating these costly efforts to fend off competitors who are trying to poach their existing employees. Worse, there may just not be any interested applicants, regardless of how attractive pay and benefits.

The imbalance between the number of workers retiring and new hires also affects training. Traditionally, the trades have relied on experienced technicians to train incoming employees. But those older technicians are leaving the workforce at a rapid clip, so there are fewer available to manage the training process. Some firms have turned to classroom-style training so that more new hires can be trained simultaneously, but in many industries this is a poor substitute for the type of one-on-one, hands-on jobsite training that used to take place.

Changing Perceptions on the Trades

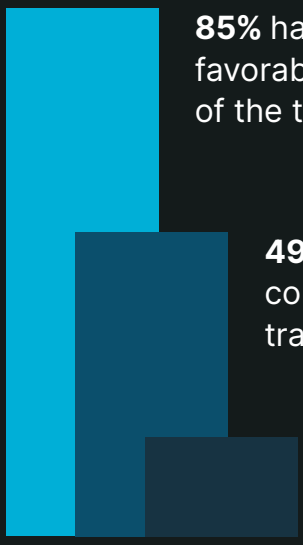
In addition to demographics, the skilled trades are also swimming upstream against how this work is viewed by potential employees. A study from Stanley Black & Decker showed that while the majority of young people (85%) and their parents (94%) had a favorable view of a career in the skilled trades, less than half (49%) had considered such a career, and only 16% were likely to do so.

There has been an effort among businesses, schools, and government agencies to try to counter this perception with more investment and positive discussions of vocational education and the trades as a career, but more can be done.

Businesses within the trades need to make changes to help both attract and retain technicians to maintain growth and productivity, and eliminate the cost of training and then losing these younger hires. The Society for Human Resource Management has published data that indicates the total cost to hire a new employee can be three to four times the position's salary. Other estimates put that cost at six to nine months of the employees salary, but that still means there are thousands of dollars being spent every time you have to replace a technician, not counting the investment in time and expertise lost in training them.

To attract younger employees, companies within the skilled trades have focused on relatively high salaries, good benefits, and repositioning the trades in ways that appeal to

Young People in the Trades



85% have a favorable view of the trades

49% have considered a trades career

16% work in the trades

Millennials and Gen Z — that these jobs require creativity, problem-solving skills, and allow technicians to provide a real, tangible benefit to customers. Skilled trades jobs are also much more resilient in the face of technology like artificial intelligence (AI) that puts knowledge workers at risk of being made redundant.

The good news is, these strategies appear to be working. The increased emphasis on the trades, as well as the skyrocketing costs of 4-year college degrees, is beginning to move the needle. Enrollment in vocational programs jumped 16% in 2023, according to National Student Clearinghouse, while college enrollment has declined. This is being helped, in part, because of the skyrocketing cost of four-year colleges and the economic challenges associated with student loans.

Technology can also play a key role in both attracting/retaining workers, and helping field service organizations maintain productivity in the face of worker shortages.

From a practical standpoint, technologies like artificial intelligence (AI), remote learning/training, centralized knowledge management, and automated parts ordering can help extend the reach of the dwindling number of senior technicians across the organization. By collecting and organizing existing service histories, and providing techs with the ability to access that data and remotely connect with other technicians for support, you can increase first-time fix rates and allow seniors techs to mentor a larger number of new hires. These same technologies can even enable applications like customer-self service and triage, to reduce costly truck rolls and make sure when a technician is dispatched, they arrive with the right information and parts to complete the job.

For workforce development, the value of these technologies is even greater. First, having a centralized knowledge base and a suite of learning tools makes it easier to create an internal training program and get new hires into the field faster. With real-time reports and analysis on field activities, you can identify which workers may need additional training, or which techs might be the best fit for a given piece of equipment or customer.

A more structured and reliable training program built on real data also enables field service organizations to hire new employees from non-traditional fields or backgrounds, and then train them faster and more effectively. You can hire for attitude, not aptitude, and reduce barriers to entry.

These efforts also improve field service branding when it comes to recruiting younger workers, who generally are looking for employers with a good grasp of the types of technology they already use (AR/VR, mobility, etc.), and also offer opportunities for development, growth, and cultivating new skills. Technology also allows employees to upskill on the job rather than in the classroom, which can be a more effective approach for highly technical work in challenging environments.

Technician-Focused Technology Equals Better Technician Performance

There are follow-on benefits to implementing technician-focused technology as well. For both new and experienced technicians, having a centralized knowledge base and rapid access to information, support, and parts can boost productivity and performance across the board. Techs can more rapidly diagnose problems, quickly adjust to new challenges, and provide better customer service.

With the right tools, knowledge, processes and procedures in place, these companies can also improve employee job satisfaction — a critical consideration given current retention challenges (and costs).

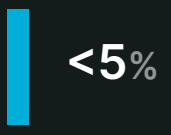
The insights provided to managers from this ever-growing jobsite data repository also help business owners more quickly identify knowledge or skills gaps among the technicians, and determine which equipment or customers are the most costly (and least profitable) to service.

Managers can see which technicians have the best first-time fix rates, and which are underperforming based on custom parameters. They can drill down and see in what circumstances that underperformance is occurring — on which machines, brands, customers, etc. They can then determine if the problem is lack of training, a problem with specific types of units or equipment that is due for replacement, or if there are logistics issues making it hard for those technicians to get parts.

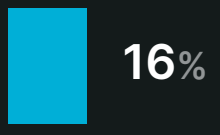
They can also see which customers require the most additional work (and why), and what parts and supplies you need on hand to improve fix rates for various types of equipment.

Analyzing the data collected by technicians through XOi, we know this about aging equipment:

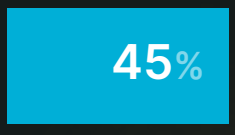
Less than 5% of contractors are helping their customers with capital planning



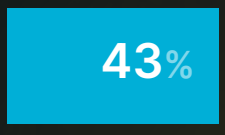
16% of serviced units are determined to be end of life



45% of end of life opportunities are captured between May and August



43% of end of life opportunities are from a single manufacture



Technology Fills the Skilled Trades Gap

For field service companies, finding ways to address the staffing challenge and growing skilled trades gap will require a mix of new recruitment approaches, new technology, and imagination. With data-focused solutions and a centralized knowledge repository, field service organizations can create internal training programs, provide better support to their workforce, and continue to provide reliable service even with fewer resources. That technology can also help them rebrand the opportunities for technicians to appeal more broadly to younger workers — positioning field service as a high-tech, challenging career with real growth and development potential. Companies will also be able to more easily recruit and train technicians that do not necessarily have the specific skill sets needed for their industry, by providing structured training based on jobsite data.

For more information on how technology can help companies bridge the skilled trades gap, visit the XOi website at xoi.io.

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