

# Where Have All the Workers Gone?

BY TREY BARRINEAU

Help wanted—and lots of it.

**F**rom manufacturing to distribution to installation, the door and window industry faces a labor crisis. There are lots of jobs to fill, but not enough bodies to fill them—and the bodies that do show up are often unwilling or unable to do the work.

“It’s really hard to find really good, really experienced glass and glazing folks,” says Steve Sanko, the chief operating officer of Dash Door & Closer Service in Miami, an automatic door and glazing specialty contractor. “I’m finding

that I'm having to train people here. There's not an apprenticeship program for what Dash Door does."

"One plant manager told me that he hired 40 new employees and 20 of them were gone after the first three days," wrote *dwmmag.com* blogger Jim Plaveccky, an industry veteran of 30 years. "All but eight were gone after a month."

While statistics specific to the fenestration industry are hard to come by, a 2014 survey of the overall construction field by the Association of General Contractors (AGC) and SmartBrief found that two out of three respondents had faced a labor shortage during that year.

And here's perhaps the most startling statistic: One out of four companies turned down work because of the shortage of skilled labor.

So how did we get here?

Massive demographic changes, disruptive technologies and huge shifts in educational values ran headfirst into the worst economic crisis since the Great Depression.

## The Background

A new presentation by Harold Barnard of Evergreen Recruiters, "#LBMillennials: Mobilizing Your Future," summarizes major trends in U.S. employment since the end of World War II.

In the postwar years, the hiring and training process was simple, Barnard writes. Most people learned on the job until the 1950s, when institutional building materials programs arose. What we now know as "vocational education" came into vogue in public schools in the 1960s and 1970s. Later, the widespread use of computers and the Internet in the 1980s and 1990s boosted productivity in the industry.

Things started to change rapidly in the 2000s, however.

First, the Baby Boomers began to retire. According to Barnard, there are 15 million fewer members of this landmark generation working today than there were 10 years ago.

"This significantly impacts the ability of companies to operate at peak capacity, with skill gaps form-



ing at all levels," he writes.

Meanwhile, Millennials—those born between the early 1980s and the 2000s—have become the dominant demographic in the U.S. workforce—except in the building materials industry.

Why? The field is not attractive enough to them.

"There is not only a generational skills shortage, but both increasing social resistance to and disinformation about building materials careers," according to Barnard. Millennials think jobs in the industry don't pay well, and their parents are pushing them to get a college education.

A recent survey by KeyStat Marketing and Greenfield Online revealed that just 6 percent of high school students see themselves working in the skilled trades, defined as plumbers, carpenters, electricians, heating, ventilation or air conditioning installers, or repair people.

As the U.S. economy shifts from manufacturing to more high-tech jobs, most educational programs now are designed to prepare students for college. 2001's No Child Left Behind law, which requires nationwide standardized testing geared almost entirely to college-preparatory work, further diminished the status of vocational education.

The money for vocational courses isn't there anymore, either.

According to AGC, federal funding for career and technical education has declined 29 percent during the past eight years when adjusted for inflation. That's happening as enrollment in public secondary schools is projected to increase about 5 percent between 2012 and 2021, according to the National Center for Education Statistics.

## And Then the Recession Hit

The devastating economic downturn that began more than seven years ago decimated the construction workforce.

As AGC reported in its 2014 study "Preparing the Next Generation of

*continued on page 22*

# Where Have All the Workers Gone?

continued from page 21

Skilled Construction Workers: A Workforce Development Plan for the 21st Century,” the industry has lost more than 2 million workers since 2006. Unfortunately, many of those skilled laborers aren’t returning.

Meanwhile, as the number of unemployed construction workers seeking jobs fell from 2.2 million in January 2010 to 1 million in January 2014 (according to Bureau of Labor Statistics numbers cited by AGC), construction consultancy FMI estimated that 1.5 million new workers were needed in the industry to meet demand and replace retirees. According to the U.S. Census Bureau’s 2012 Current Population Survey, about 44 percent of the construction workforce is 45 or older. Nearly 20 percent is 55 or older.

So approximately 1.1 million construction workers are likely to retire within the next decade—a total that includes a significant number of experienced leaders.

“Over the next five to ten years, we’re going to see extensive retirement, and the strength of their field leadership is crucial,” Mike Clancy, a principal at FMI, told *USGlass* magazine in December 2014. He also noted that 42 percent of the leaders in the field are over 50. “That’s the really scary part.”

As construction bounces back after a long decline, door and window installers are expected to be in big demand. According to the Bureau of Labor Statistics (BLS), employment for glaziers is projected to grow 17 percent from 2012 to 2022. That’s faster than the average for all occupations. The BLS also projects that employment for carpenters will grow 24 percent from 2012 to 2022, and employment for construction laborers and helpers will grow 25 percent.

But even with rising demand, it’s tough to fill jobs.

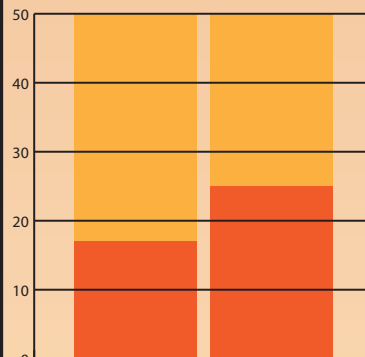
“It’s really hard to just throw an



**The construction industry has lost more than 2 million workers since 2006.**

(Source: Associated General Contractors of America)

**From 2012 to 2022**



**Employment for glaziers is projected to grow**

**17%**

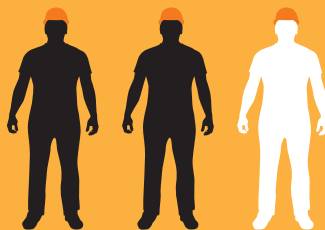
**Employment for construction laborers will grow**

**25%**

(Source: Bureau of Labor Statistics)

**From 1999 to 2009, about one out of every three manufacturing jobs in the U.S. disappeared.**

(Source: The Atlantic, January 2012)



ad out there and get good people as installers,” says Harley Magden of Window Nation in Glen Burnie, Md.

## Much the Same in Manufacturing

The manufacturing end of the door and window industry faces similar challenges.

Yes, the Great Recession and the collapse of the housing bubble wiped out much of the demand for doors and windows (and a lot of jobs), but in the years prior to that, automation, offshoring and robotics also took a big toll.

According to a January 2012 article in *The Atlantic*, from 1999 to 2009, “roughly one out of every three manufacturing jobs—about 6 million in total—disappeared. About as many people work in manufacturing now as did at the end of the Depression, even though the American population is more than twice as large today.”

The situation has improved as the economy has recovered.

An April 2015 article in the *Financial Times* points out that nearly 900,000 manufacturing jobs were created nationwide between February 2010 and February 2015—a streak that McKinsey consultant Sreenivas Ramaswamy calls the longest uninterrupted spell of job growth in 40 years. Many of those manufacturing jobs are what Brookings Institution scholar Harry Holzer calls “middle-skilled” positions—they require some degree of skill and education, such as running and programming a window-assembly machine.

According to the Window and Door Manufacturers Association’s (WDMA) *2015 Window and Entry Door U.S. Market Study*, shipments of residential windows increased 13

continued on page 27



# Fenestration FOCUS

Your industry  
insight

## Quanex Brings Peace of Mind to RBC Winnipeg

*AGM Inc. chooses Super Spacer® products for centre and other high-profile projects*



When an expansion plan for one of Western Canada's top meeting, conference and special event facilities was first discussed, Anatoli Glass and Mirror (AGM) Inc. knew it had to bring its highest-performing and top-of-the-line solutions to the table. The RBC Convention Centre Winnipeg is part of the city's \$2 billion investment to change its landscape, which includes the centre almost doubling in size, with a full renovation of existing space, along with an additional ballroom, underground parking and a more than 133,000-square-foot third floor exhibition space.

"With a space as large as a convention center, quality was the focus for our recommendation," said AGM Architectural Representative Gordon Seier. "We've been working with and using Quanex from day one, and we knew their spacer solutions brought unmatched value and performance."

Quanex's Super Spacer® Premium Plus warm edge spacer system was used for the convention centre's insulating glass units, bringing durability, longevity and peace of mind to



the building's structure, all critical components for a large commercial building that needed to be energy efficient and stand up to Manitoba's harsh winters.

"The architecture and construction community are more than comfortable with this product," said AGM Vice President Marty Kania. "Every step of the way—from the manufacturing phase

to the installation portion of the project—we knew Quanex would be easy to work with and deliver a premium product, so the decision was easy."

Set to be completed in the second quarter of 2016, the centre will be expanded from offering 160,000 square feet to 264,000 square feet of space and will meet Leadership in Energy and Environmental Design (LEED) Silver Standards. The Quanex Super Spacer Premium Plus spacer is a part of the product mix that will help the building meet these standards, offering optimized energy savings, virtually nonexistent conductivity, mold and condensation resistance, and superior argon gas retention, all adding up to enhanced environmental comfort and health near the centre's windows.

### **An Efficient Future with Triple-Seal Insulating Glass Systems**

What's next on the horizon for AGM? With the purchase of an automated Forel line in 2014, AGM was able to expand its IG offering to include Quanex's Super Spacer® T-Spacer™, a flexible, silicone spacer designed to satisfy the toughest commercial glazing demands, opening up new doors and even more security with its customers.

"The architects and contractors we work with want IG units to have warranties extended," Seier said. "We feel secure providing that with our Super Spacer® TriSeal™ insulating glass system, because of its advanced design and capabilities we've seen for ourselves."

With its unique triple-seal design, the Super Spacer TriSeal insulating glass system incorporates an inner acrylic adhesive seal for immediate unit handling and proven structural performance. And the automated line AGM has incorporated on its floor has boasted real efficiency benefits.

"We can now produce two to three times more product than before on a daily basis," said Seier. "Our IG units are pressed better, are exceptionally high quality and are, in general, better than any traditional warm edge spacer. Overall, our units are consistently made better, offering us and our customers a sense of security with high-profile projects."

*... Continued on page 2*



# Let Tradeshow Season Begin!

See the latest Quanex offerings at the industry's biggest tradeshows

Tradeshow season is right around the corner. With a wide variety of products, ranging from vinyl window and door profiles to insulating glass spacers, Quanex Building Products provides advanced technologies and solutions that answer the needs of both

commercial and residential building professionals. But we're more than great products. At Quanex, "Our Business Is Making Your Business Better" through technical expertise, marketing tools and support, and industry-leading R&D.



Our products and services will be on full display in our booths at the industry's largest tradeshows, including:

- GlassBuild America, booth 1917 - September 16-18 - Atlanta, Georgia
- Win-Door North America - November 3-5 - Toronto, CA

- Greenbuild Expo, booth 3421 - November 18-20 - Washington, D.C.

You can stop by our booths to connect with our experts on these products, industry trends and more:

- Why making your IG makes sense
- The new Mikron C3-11300™ AW-Rated Window & Door System Configurations—the only operable AW-rated vinyl system on the market
- The latest in automated line technology to help meet your IG needs
- Super Spacer®, Duralite® and Duraseal® spacers
- Quanex Screens Outsourcing Solutions (SOS)
- Edgetherm® Sealants
- Spacer application and gas-filling equipment
- EnergyCore® and MikronWood® vinyl systems
- Engineered components

To learn more about Quanex and see updates on these tradeshows and more, visit [www.Quanex.com](http://www.Quanex.com).

## Quanex Brings Peace of Mind to RBC Winnipeg ... Continued from page 1

### Unmatched Support

Seier and Kania said AGM's portion of the RBC Convention Centre Winnipeg project went smoothly, thanks to a great team and the support of Quanex's solutions.



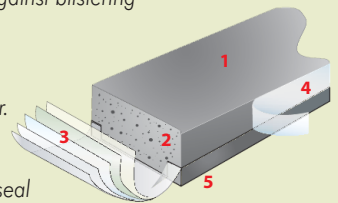
RBC Convention Centre  
Construction Cam Photo [www.wcc.mb.ca](http://www.wcc.mb.ca)

"Quanex has become an integral part of our process," said Kania. "From the consistency of the work the team has done to the quality of its product lines, and the architectural help from Quanex I.G. specialists, the choice for us is simple."

AGM has a number of high-profile projects in the works using Super Spacer TriSeal insulating glass system—stay tuned for updates in future editions of Fenestration Focus.

### Super Spacer® TriSeal™ construction:

1. Smooth, matte finish guaranteed against blistering and bubbling.
2. Thermoset silicone matrix.
3. Proprietary multi-layer vapor barrier.
4. Acrylic structural adhesive
5. Captive PIB primary seal for triple-seal unit longevity.



For more information on Anatoli Glass & Mirror Inc., visit [www.anatoliglass.com](http://www.anatoliglass.com).

For more information on Quanex's dual- and triple-seal spacers, visit [www.Quanex.com](http://www.Quanex.com).

## Finding Your Fit

### *How collaboration and variety helped LA CASA DE LOS CRISTALES de INTERVIDRIO SRL find success*

In today's global and ever-changing market, staying ahead of trends and market demands are daily challenges, and customers are continually requiring higher-performing products. La Casa de los Cristales de INTERVIDRIO SRL, in Buenos Aires, Argentina, is rising to the challenge, bringing innovation and higher product performance to the region and leading the way for innovative architectural projects.

Founded in 1962, La Casa de los Cristales is a manufacturer of insulating glass units, incorporating tempering and laminating processes in-house and specializing in architectural and decorative glass production. Through product innovation and working with manufacturing companies who are committed to advancing the industry, Casa de los Cristales has been a part of many projects that are breaking new ground within the region—and Quanex is one of those key suppliers.

#### Collaboration with Quanex

La Casa de los Cristales has worked with Quanex for the last 22 years. Quanex and La Casa de los Cristales collaborated together to install an Erdman automated horizontal line, helping to increase quality, speed and turnaround time of its IGU's. Because of this, La Casa de los Cristales has been able to be a part of many high-profile building and design projects, making them a leader within the architectural community. The flexibility



Photo credit [www.world-airport-codes.com](http://www.world-airport-codes.com)

of the automated line allows La Casa de los Cristales to manufacture approximately 1,800 units a week using both Dura spacers for residential construction and now Super Spacer® TriSeal™ for commercial needs, expanding its offerings to bring premium edge seal designs that meet any unique demands.

“Because of the flexibility with spacer product the automated line offers us, we were able to provide options that ultimately helped us find solutions for projects with many different needs,” said Architect Esteban Monaco, commercial managing partner, La Casa de los Cristales. “In this world, there is no one-size-fits-all—we need to be able to collaborate and find unique solutions. That's what we get with Quanex.”

#### Finding Their Fit

La Casa de los Cristales is known for its reliability, having a solid reputation of continually delivering high-performing, durable products and solutions to its customers. Because of its reputation and product value, La Casa was the obvious fit for two high-profile projects in Argentina.



Photo credit [www.wave.com.ar](http://www.wave.com.ar)

#### Wave, Buenos Aires, Argentina

Date Completed: 2014

Square Footage of Glass: 28,000 sq. ft.

Quanex Product(s) Used: Microseal® DS

Glass Information: Lam. 4+4 clear (pvb 0,38) / 12mm spacer / Float 6mm tempered

#### El Calafate Airport, Santa Cruz, Argentina

Date Completed: First stage: 2000 / Second Stage: 2008 / Third Stage: 2015

Square Footage of Glass: 16,000 sq. ft. in first and second stages, 2150 sq. ft. in third stage

Quanex Product(s) Used: Microseal® DS and Duraseal® (stages 1 & 2) Super Spacer® TriSeal™ (stage 3)

Glass Information: Lam. 5+5 clear (pvb 0.76) / 12mm spacer / Lam. 4 clear + low.e6mm #3 (pvb 0.76)

For more information on La Casa de los Cristales de INTERVIDRIO SRL, visit [www.lacasadeloscristales.com](http://www.lacasadeloscristales.com).



# What's Keeping You Up at Night?

*Quanex can help you rest easy with solutions that will move your business forward*

As business increases and demand for efficient windows grows, you and your team have a lot to consider. One item on your to-do list is finding the perfect formula to maximize efficiencies within your production line, oftentimes leading you to ask some important questions:

- Do I need to upgrade or add equipment?
- How do I make the most of my workforce?
- What efficiencies can I expect if I invest in automation?
- Should I collaborate with outside companies to take over specialty processes?

## *Quick Tips to Maximize Your Workforce*

### **1. Invest in your people.**

It might seem counterproductive to spend more time with employees during busy times, but that's exactly what you need to do to keep them engaged and productive. Take the time to provide the proper training on day one and every day going forward.

### **2. Make a short list of your most trusted employees—and empower them.**

As a leader within your company, you probably have a small group of people you confide in and trust to get things done. Start by identifying your most trusted employees at all levels, make sure they fully understand the company's goals and vision and know what's expected—then empower them to lead.

### **3. Put your high-value people on your high-value tasks.**

Take a step back and look at the big picture. Not all of the tasks carried out on your plant floor should carry the same weight. There are certain parts of your production process that will ultimately add more value to your end users and will yield higher margins for your bottom line, such as insulating glass production.

With so many challenges facing your business, your job can be difficult. But you aren't in it alone. Rely on Quanex to help you achieve the greatest efficiencies in your products and your processes. Through your Quanex sales rep and technical service consultants, you have access to ongoing training opportunities, quality checks and audits, equipment ROI analyses, line layout design and recommendations, marketing tools, and support.

In short, we can help you answer your most pressing questions and develop solutions to meet today's demands. Reach out to us today.



### **4. Invest in your equipment.**

You can't always depend on yesterday's technologies to meet today's demands. Look for ways to automate your processes wherever possible, whether it's streamlining your ordering system with production or adding fully automated lines that enable you to redistribute workers to more profitable tasks, increase output and ensure consistent quality.

*At Quanex, our business is making your business better.*

**Quanex**  
building products

## Where Have All the Workers Gone?

continued from page 22

percent in 2014 to 50 million units. Shipments of side-hinged entry doors increased by 13 percent in 2014—twice the 2013 growth rate of 6 percent.

So what problems lie ahead for manufacturing? Again, demographics and education.

According to the *Financial Times*, about a fifth of all manufacturing employees are 55 or older. Combine those looming retirements with marginalization of vocational education, and the pipeline of talent slows to a drip.

Right now, many door and window makers say it's difficult to keep workers around. Reasons vary from poor pay for many jobs to an unwillingness to do work that often involves late hours and loud, dangerous conditions.

Millennials might be especially demanding when it comes to entry-level salaries.

"Hands down, the consensus among people in the industry I talk to is that today's youth expect a much higher starting wage than is warranted in our industry as a beginner," says Amanda Wilson of A.G. Wilson Building Solutions, a Florida-based manufacturers' representative for companies in the commercial fenestration market. "Whether it be in sales or estimating or as a laborer, this industry is complex and has a long learning curve."

"In the window industry, you sometimes work six, seven days, and a lot of people don't hang around for that, even at the supervisor level," says Andy McAllister, a production supervisor at Comfort View Products in Newnan, Ga. "Late shifts, long shifts, long hours."

"I've got positions for probably four more people in the plants that we haven't been able to fill," says Larry Deal, vice president of Virginia Glass Products in Martinsville, Va.

## The Graying of Transportation

North America encompasses countless industries and markets, all with unique challenges. But most share one concern that affects everything from the early stages of production to the end user's ability to put the product to use: transportation.

That was a topic of discussion during the recent Northeast Window & Door Association's (NWDA) summer meeting in Vernon, N.J.

Jason Bohannon of J.B. Hunt Transport updated NWDA members on the trucking industry, which is facing a severe shortage of qualified drivers.

Bohannon said stagnant wages, tough drug testing requirements and a wave of retirements have left the trucking industry with 190,000 fewer drivers than what's needed.

He also said the industry needs 100,000 new drivers a year just to keep pace with demand.

"There's an intense competition for good drivers," Bohannon said, adding that other fields such as construction, plumbing or oil and gas extraction often pay more and don't involve lots of travel.

According to Bohannon, more than half of U.S. truck drivers are over 45, and 17 percent are over 55.

"We really don't have a good funnel of drivers. It's forcing us to be creative," he said.

Deal estimated that his attrition rate for workers at his plant for the year so far has been about 50 percent. Others in the industry who spoke with *DWM* mentioned attrition rates between 20 percent and 40 percent.

### Immigration, Automation Could Help

Immigration will probably be controversial in the U.S. for the rest of our lifetimes, but an expanded workforce is one way the door and window industry can fill employment gaps.

A 2014 Census Bureau report shows there were approximately 5.7 million noncitizens ages 25-34 in the U.S. between 2010 and 2012. Of those, 75 percent were part of the civilian labor force.

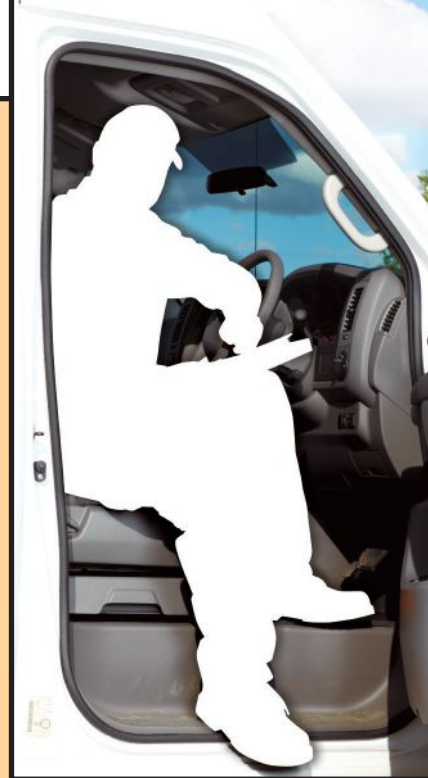
The report adds that "noncitizens were about 50 percent more likely than their citizen counterparts to work in either service occupations (27 percent and 18 percent, respectively) ... Notably, noncitizens in this

age group were over twice as likely as citizens to work in natural resources, construction and maintenance occupations (20 percent and 9 percent, respectively)."

The Census Bureau says the noncitizen category includes "legal permanent residents, temporary migrants, unauthorized immigrants and other resident statuses."

The total number of potential noncitizen workers under 35 is about 8.24 million. That's a lot of young potential employees for physically demanding jobs in manufacturing and construction, and it's a big reason groups like the National Association of Homebuilders, the Associated General Contractors of America and the National Association of Manufacturers support comprehensive immigration reform.

Automated or robotic manufacturing equipment, which is precise, simple to use and doesn't require



continued on page 28



## Where Have All the Workers Gone?

continued from page 27

extra manpower, is another way to solve workforce challenges.

A study by the Boston Consulting Group predicts that robots will perform nearly 25 percent of all manufacturing functions by 2025 (it's about 10 percent today).

### A Long-Term Solution

Beyond increasing pay, encouraging immigration reform and automating workplaces, a nationwide rebirth of vocational education could be critical to filling future job vacancies – especially as manufacturing becomes more high-tech.

One expert thinks Europe could serve as a model.

"Unlike what occurs in many EU countries, our high school students receive too little high-quality career and technical education or work-based learning that employers might find valuable," Holzer wrote in a blog post on the Brookings Institution's website in April. "Interestingly, when German manufacturers open plants in the U.S. (where they enjoy lower energy costs and greater access to our consumer markets), they create more apprenticeships and other worker training programs than their American counterparts."

A 2013 study on vocational education from the Manhattan Institute, a conservative think tank, describes how the German "dual system" apprenticeship model works:

"Young people spend some time in the classroom and some time—generally at least half the week—on the job in the workplace, participating in the production process and solving real problems under the supervision of a working mentor. ... Some 60 percent of German youth enter the workforce through apprenticeships, most going straight to dual training rather than to university."

Some U.S. door and window manufacturers are starting to understand the importance of



## How the Generation Gap Looks in the Field

In his presentation "#LBMillennials: Mobilizing Your Future," Harold Barnard of Evergreen Recruiters details how Millennials differ from older generations when it comes to technology.

"Boomers have relied on desktop computers, newspapers, radio, limited Internet use, textbooks and hands-on courses... while Millennials have branched into phones, tablets, apps, social media, websites, e-courses, and online communities," he writes.

Steve Sanko, the chief operating officer of Dash Door & Closer Service in Miami, has seen those differences up close. His company turns 60 this year, and it's a microcosm of the generational conflicts that Barnard points out.

Sanko has fully embraced computer technology at Dash Door – but it didn't happen without resistance from some older workers.

"I've had a lot of people reject it," he says. "Younger ones embrace it because it's faster. If there's a job that has 32 glass doors on it and I can quote it in 10 minutes, whereas they have to send out a quote to somebody else and it's going to take a week, who do you think is going to get the job? The day of the price book and the fax machine is gone. The joke in our office is that 'everything will be paperless in the future.' Well, this year we are implementing a cloud-based work order, invoice and inventory GPS platform that links with our PR and online marketing. The future is here."

Speaking of marketing, Sanko makes sure that Dash Door has a large and active presence on social media. Unlike many door and window companies, Dash updates its Twitter, Facebook and LinkedIn pages frequently, often with engaging and informative content that Sanko writes himself for the company's website – also an important piece of promotional real estate.

"It's called social media for a reason," he says. "Beyond that, today, the website is so important. You kind of judge who you're doing business with just by the website. It's first impressions."

Dash also sends out e-mail newsletters geared toward specific audiences in the door and window industry.

"They're targeted to architects, service customers or glass customers," Sanko says. "We might have multiple versions for different audiences."

hands-on technical education.

In January, Castle Windows in Mount Laurel, N.J., teamed with nearby Burlington County Community College to launch a certificate program in window installation that guarantees successful graduates a job interview.

The first group recently finished the 30-session course, which costs \$980 and combines lectures and hands-on experience in installing vinyl replacement doors and windows.

"We had seven people complete the course, and we hired three right off the bat," says Castle Windows president Chris Cardillo.

The students' hands-on fenestration laboratory is a 5,000-square-foot building filled with

constructed walls and all kinds of windows and siding.

"We basically built exterior and interior walls to simulate a house," Cardillo says.

Cardillo says he'd like to see programs like his door and window installer certification become as popular as schools that teach automotive repair.

"I'm a very big believer in technical and trade schools," he says.

Cardillo also believes the program is a plus for other door and window businesses.

"Ultimately, it benefits the industry to have some qualified technicians out there," he says. ■

Trey Barrineau is the editor of DWM magazine.