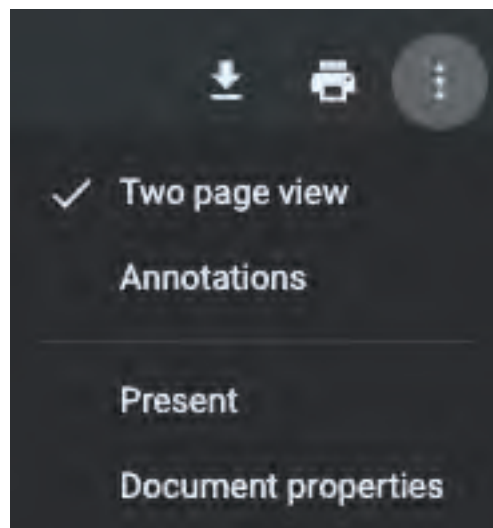


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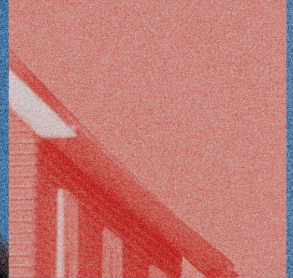
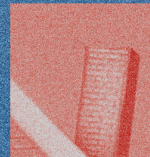
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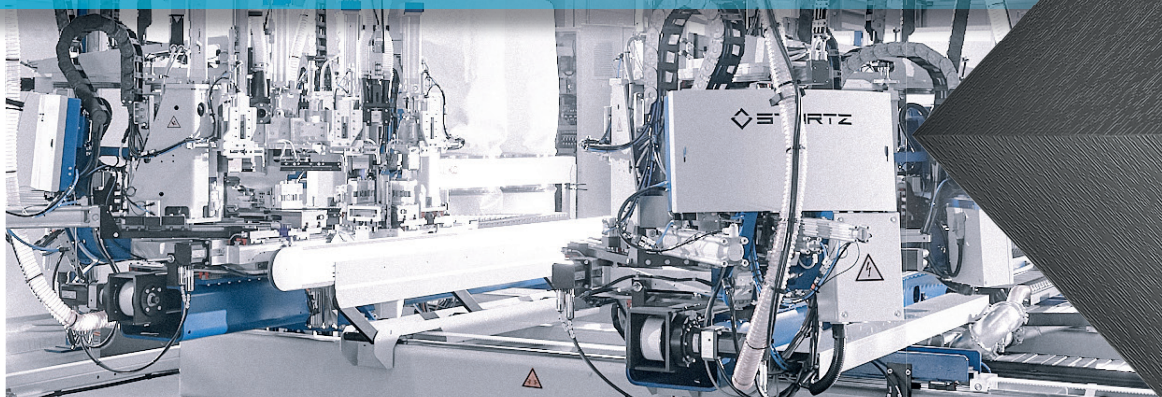


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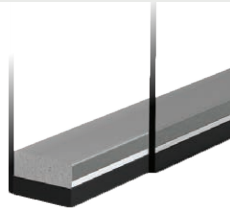
WORRY-FREE WINDOWS



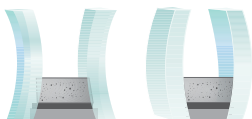
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Katy Devlin // Chief Content Officer
Tara Lukasik // Associate Director, Content & Programming
Laurie Cowin // Editor, Window + Door
Norah Dick // Editor, Glass Magazine
Rachel Vitello // Associate Editor
Cory Thacker // Creative Lead
Bethany Stough // Director, Communications & Digital Media
Wendy Vardaman // Digital Media Coordinator
Cathy Underwood // Production Coordinator
Jo Ann Binz // Circulation Manager

Advertising

Emily Kay Thompson // Vice President, Sales
ethompson@glass.org // 703/442-4890 ext. 150
Holly Robinson // Senior Sales Consultant // hrobinson@glass.org
703/988-3164
Tristan Scofield // Sales Consultant // tscofield@glass.org
703/442-4890 ext. 194
Cameron Francis // Media Sales & Sponsorship Manager // cfrancis@glass.org // 703/442-4890 ext. 132

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Window + Door™ (ISSN 1525-1195), Volume 34, Number 1 is published six times annually in January/February, March/April, May/June, July/August, September/October and November/December by the National Glass Association, 344 Maple Ave. West, Unit 272, Vienna, VA 22180, 703/442-4890. There is no charge for subscriptions in the United States for individuals in the trade and/or qualified requestors. All other subscriptions will be charged \$49.95 in the U.S., and \$79.95 outside the U.S. Periodicals postage paid at Vienna, Va., and other mailing offices. POSTMASTER: Send changes of address to Window + Door™, Subscriptions, Box 460, Congers, NY 10920. Canada Post: Publications Mail Agreement #40612608. Canada Returns to be sent to Bleuchip International, P.O. Box 25542, London, ON N6C 6B2. For all subscription inquiries, please call 1-800-765-7514. ©2025 National Glass Association. All Rights Reserved. Printed in the U.S.A.

News



Stay in the Know: Subscribe to Window + Door Weekly, our weekly newsletter that keeps you informed with everything fenestration every Wednesday

Andersen Corp. Acquires Bright Wood

Andersen Corp. will acquire Bright Wood Corp., an independent manufacturer of window and patio door components and engineered dimensional lumber in the U.S. The Bright Wood business will continue to operate under local leadership.

For more than 60 years, the family-owned company has been a supplier to the window and door industry. Under its new management, Bright Wood will continue to deliver the same products and solutions to its customers. With headquarters in Madras, Oregon, Bright Wood has more than 1,000 employees across 28 processing plants and five locations in the U.S.

Assa Abloy Acquires International Door Products

Assa Abloy has acquired International Door Products, a U.S. manufacturer of standard and custom fire-rated steel door frames. IDP was founded in 1977 and has about 80 employees. The main office and factory is located in Southfield, Michigan.

Cornerstone Building Brands Expands Manufacturing Campus

Governor Glenn Youngkin announced that Cornerstone

Building Brands will invest \$4.9 million and create 50 new jobs to expand production capacity at its Rocky Mount, Virginia, campus. The Franklin County production facility manufactures the company's PlyGem brand windows and doors.

Kolbe and Doma Partner on Home Entry Systems

Kolbe Windows & Doors and Doma have partnered to introduce a new generation of home entry systems. Doma Intelligent Doors by Kolbe offer custom-crafted, wood entry doors with integrated intelligence and automation. This technology will be available through authorized Kolbe dealers beginning summer 2026.

Key features include Doma WelcomeDrive, a quiet, motorized opener and closer that authenticates the homeowner and opens the door automatically as they approach, and embedded presence and identity sensors; advanced radar, motion and facial recognition sensors detect movement and identity for secure access.

Deceuninck North America Partners with Alpen

Deceuninck North America announced its partnership with Alpen High Performance Products to produce Deceuninck's

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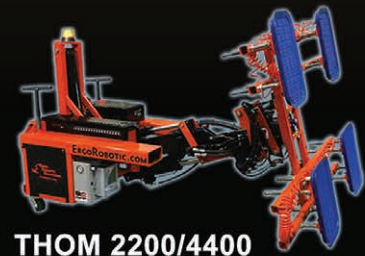
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News

European-style Elegant window series. Originally exclusive to the European market, Elegant windows and sliding doors provide seamless welds, slim profiles and flush geometry that deliver U-values as low as 0.09. The series maintains structural integrity and thermal performance in oversized units, meeting rising demand for large windows. Elegant windows incorporate fiberglass composite reinforcements that reduce weight, improve thermal efficiency, and support flexible hardware and installation options.

Thompson Creek Window Co. Launches New Market Expansion

Thompson Creek Window Co. has expanded into the Delmarva Peninsula, which covers areas of Delaware, Maryland and Virginia. Many of the company's customers in the D.C. Metro area have strong ties to this coastal region, and Delmarva represents an expansion opportunity for Thompson Creek to reach new homeowners as well as support those it has already served who spend time there, according to the company.

With more than 45 years of serving homeowners across the Mid-Atlantic, the company's expansion into Delmarva is a natural progression in its regional growth, covering the Peninsula from Lewes and Rehoboth through Salisbury to Ocean City. Thompson Creek serves customers in Maryland, Virginia, the District of Columbia, Pennsylvania, Delaware, and New Jersey.

Windsor Door Expands Garage Door Supply on East Coast

Windsor Door opened a new 20,000-square-foot distribution center in Raleigh, North Carolina, as part of its coast-to-coast expansion. From its headquarters in Little Rock, Arkansas, to facilities in California, Texas and now North Carolina, Windsor Door continues to grow. The Raleigh center offers a 30- to 45-minute turnaround

for loading, special order fulfillment within two to three weeks and delivery service within a 150-mile radius.

Lone Wolf Exteriors Expands into Austin

Lone Wolf Exteriors, a Dallas-Fort Worth based exterior renovation company, has expanded its residential window and siding replacement services throughout Texas, adding Austin to its service areas while introducing enhanced energy-efficient solutions. The company specializes in black replacement windows and other custom window options through its partnership with Mezzo Windows.

Associated Materials Innovations Expands Arizona Facility

Associated Materials Innovations completed a \$30 million investment in its Yuma, Arizona, window manufacturing facility. The investment includes a 100,000-square-foot expansion and four high-speed automated insulating glass lines with Super Spacer application.

The new Super Spacer “Plus” glass package produced in Yuma rolled out in 2025, aiming to strengthen AMI windows sold in the Western region. Similar upgrades and enhancements are already underway for AMI’s operations in the Eastern U.S., with launches planned later this year.

People



Campos

The RiteScreen Company appointed *David H. Campos* as CEO. Campos succeeds *Chris Yankowich* as he retires. Prior to joining

RiteScreen, Campos was President and CEO of Broan NuTone. Before that, he was President, Americas of the Specialty Construction Chemicals division of GCP Applied Technologies. ■

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Boost Your Window Safety Strategy

New FGIA document gives performance guidance on window opening control devices **BY JANICE YGLESIAS**

As part of its ongoing effort to support window safety, FGIA released a new specification—AAMA 950-25, Specification for Window Opening Control Devices Installed on Operable Windows—for evaluating an operable window with an installed WOCD. This new document can be an important component to your window safety strategy.

While the Fenestration and Glazing Industry Alliance holds awareness campaigns about window safety each spring and fall, those in the industry know it is an important issue all year round. Window opening control devices, or WOCDs, were introduced as a window fall prevention device starting with the 2008 version of the ASTM International F2090 standard.

The International Code Council first referenced ASTM F2090-08 in the 2012 International Residential Code and International Building Code, which established when WOCDs were required to be installed on operable windows. When properly designed, tested, specified and installed, WOCDs can help prevent or reduce accidental falls through open windows by young children, while allowing the ability to open the window fully as may be needed to exit in the event of an

emergency. Improper use or failure to follow installation instructions may result in the WOCD being ineffective in preventing accidental falls through an open window.

ASTM F2090, Standard Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms, contains specifications for WOCDs regarding general requirements, performance tests, safety information, labeling requirements and installation instructions. AAMA 950 uses existing test methods found in ASTM F2090 to evaluate WOCDs installed on operable windows that have met the requirements of AAMA/WDMA/CSA 101/I.S.2/A440, North American Fenestration Standard/Specification for windows, doors and skylights. Operable windows with an installed WOCD evaluated through AAMA 950 must satisfy the minimum requirements for their operator type, performance class and performance grade of the North American Fenestration Standard/Specification.

ASTM F2090 covers other types of window fall prevention devices such as window fall prevention guards and window fall prevention screens, but these devices are outside the scope of AAMA 950. This new specification evaluates factory-installed WOCDs or those specified by the window manufacturer as a field installed kit. That said, aftermarket WOCDs sold or installed on a window without the knowledge of, involvement from, or testing by the window manufacturer are outside the scope of AAMA 950. The AAMA 950 specification includes a list of referenced documents, requirements for test specimens, a qualification of alternate constructions, information about test procedures, the pass/fail criteria, and what is needed for inclusion in the final test report. ■



Janice Yglesias is the executive director of FGIA. She can be reached at jyglesias@fgiaonline.org.



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What that means in 2026:

- More adoptions taking effect: states that voted in 2024–25 will see effective dates land in 2026.
- More variation: expect hybrids and state overrides that complicate multi-state product planning.
- More conservative specs: specifiers and builders lean on NFRC ratings earlier to avoid permit friction in stricter states.

A Busy Year for Codes, Chemicals and Compliance

State policies set in motion last year will become enforceable in 2026, setting the industry up for a more fragmented compliance map **BY JOHN CROSBY**

If 2025 was the year states set policy in motion, 2026 is when much of it becomes enforceable for the fenestration market. Manufacturers, dealers and installers should expect a more fragmented compliance map: tighter energy performance in some states, aggressive resilience rules in hazard zones, and environmental requirements reaching deeper into coatings, components, and packaging.

Energy codes: higher baselines, uneven adoption

The core energy story is not one national shift but a widening state-by-state split. The 2024 IECC raises fenestration expectations in multiple climate zones, including stricter U-factor limits and tighter tradeoff pathways for residential windows and skylights. As more states move to adopt IECC 2024 (often with amendments), the performance “floor” rises in those markets, while others lag on earlier code editions.

Colorado is an early example of state-level performance mandates going beyond model code. HB 23-1161 requires residential windows, doors, and skylights sold in the state to meet Energy Star Version 7 criteria effective January 1, 2026. Fortunately, WDMA convinced regulators to allow an alternative compliance pathway tied to IECC-aligned metrics. In 2026, watch for other cold-climate states to explore similar approaches—whether via code, incentives, or procurement rules.

California remains the market that resets national expectations. The state’s 2025 Building Energy Efficiency Standards (Title 24) became mandatory for permits applied for on or after January 1, 2026, tightening electrification and building-envelope pathways that indirectly push higher-performance fenestration. Even outside California, these cycles tend to ripple through western specs, big-builder standards, and national product portfolios.

Expect hybrids and state overrides that complicate multi-state product planning.

Resilience: wildfire and high-wind policy keep expanding

States are treating resilience as core infrastructure, not optional upgrades. In the West, wildfire rules are the near-term driver. California's 2025 Wildland-Urban Interface (WUI) Code took effect January 1, 2026, bringing updated requirements for construction in WUI zones—where openings and glazing assemblies are a key part of ember-resistance strategies. Expect local jurisdictions to expand mapped WUI areas after each fire season, widening the customer base for compliant assemblies. Other western states are increasingly pressured to align to WUI-style opening protection as wildfire risk grows.

In coastal and storm-exposed states, high-wind and impact standards remain a steady tailwind. Florida's code and approval ecosystem continues evolving around windborne-debris protection, reinforcing demand for impact-rated windows and doors in designated zones. On top of code, incentives are now shaping demand: Florida's revived My Safe Florida Home program is funded into the 2025–26 budget cycle and provides matching grants up to \$10,000 for wind-mitigation upgrades, including impact fenestration. In 2026, expect more state-run “home hardening” programs in disaster-prone regions, creating sharp, incentive-driven regional surges.

Environmental compliance: PFAS and packaging EPR move from abstract to operational

Two environmental trends are getting close to our supply chain.

First, PFAS regulation is accelerating at the state level. Hundreds of PFAS bills were introduced across dozens of states in 2025, with enacted laws and active proposals targeting product categories that can overlap our world—coatings, sealants, surface treatments, and manufacturing uses. Even where building products aren't explicitly called out, specifiers and purchasers are beginning to ask PFAS questions pre-emptively. In 2026, expect more disclosure requirements, category bans, and “PFAS-as-a-class” rules that put pressure on suppliers of weather-resistant coatings, adhesives, and gaskets.

Second, packaging Extended Producer Responsibility (EPR) is becoming a real cost center. Seven states now have packaging EPR laws on the books—California, Colorado, Maine, Maryland, Minnesota, Oregon, and Washington—with compliance milestones and fee structures rolling out through 2026. Producers must register with Producer Responsibility Organizations, report packaging volumes, and pay program fees. For fenestration, bulky protective packaging means high exposure. In 2026, companies that reduce packaging weight, increase recycled

content, or redesign for reuse will start seeing measurable fee advantages.

Housing policy: more units, faster timelines, different mixes

Finally, state housing legislation is creating market pull. Multiple states passed streamlining and infill-enabling laws in 2024–25 (ADU legalization, approval time limits, density bonuses, and preemption of local barriers). In 2026, that should translate into more multi-family and small-lot starts in reform states—meaning different fenestration mixes (egress, common-area glazing, standardized unit window packages) and tighter cost/performance balancing.

What to do now

1. Build a 2026 code pipeline map by sales region (IECC adoption timing, Energy Star v7 mandates, Title 24 states).
2. Stock resilience-ready offerings with clear labeling and install guidance for WUI and impact zones.
3. Audit coatings and packaging for PFAS exposure and EPR fee risk.
4. Train the channel to sell compliance: energy, wildfire, wind, and environmental narratives will matter more at the point of spec.

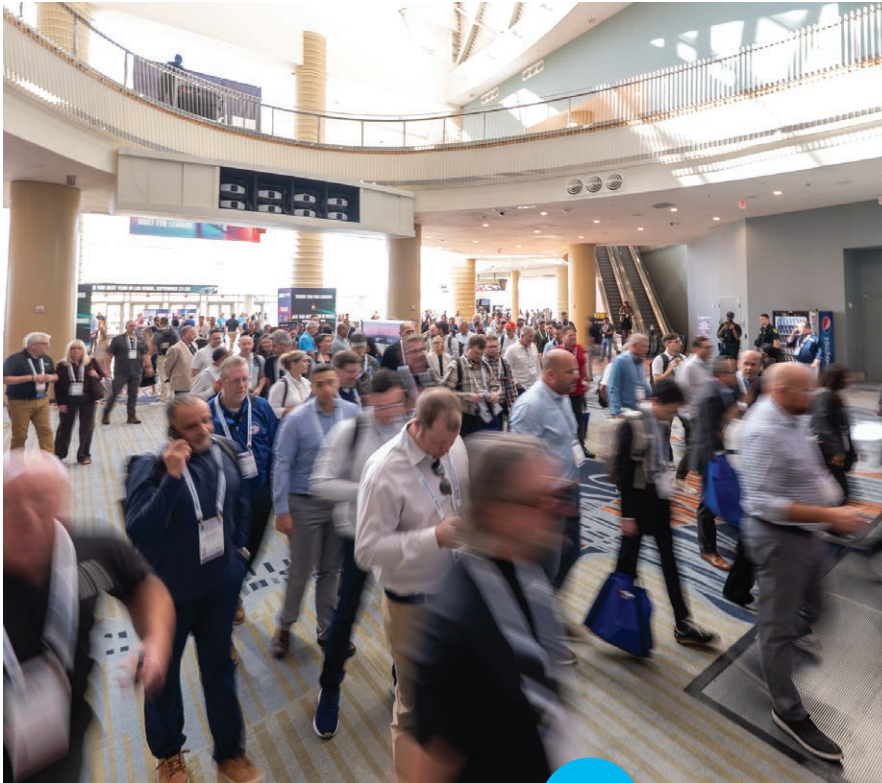
The takeaway: 2026 won't deliver a single regulatory shock. Instead, it's a convergence year—energy baselines rising in some states, resilience rules expanding in hazard zones, and environmental compliance reaching deeper into the product ecosystem. The winners will treat state policy tracking as a product and market-strategy function, not just a legal one. ■



John Crosby is the president and CEO of the Window and Door Manufacturers Association in Washington, D.C.

GlassBuild Brings the Industry Together and into the Future

The glass, window and door industries continue to innovate and collaborate **BY RACHEL VITELLO**



The future of glass and glazing was at the forefront of many conversations with those exhibiting at GlassBuild America 2025. From robotics to artificial intelligence, company leaders continue to innovate and automate. The 2025 show welcomed 589 exhibitors, of which 128 were new, and more than 9,600 participants over 232,600 square feet of exhibit space.

Trends in residential space

In the residential industry, the color black continues to show its strength in the window and door market. Veka launched its Obsidian all-black vinyl profile, and Deceuninck once

again showcased its Eclipse all-black polyvinyl chloride profile. Rockwell Security, a door hardware supplier, has also found that matte black remains a top choice, while bronze and brushed nickel, previously popular, are slightly decreasing in popularity.

A NuCoat representative says that while black remains very popular, earth tones are also coming back. NuCoat creates coatings, primers and finishes designed for PVC, fiberglass, and aluminum and steel surfaces. New to this year, NuCoat is also dipping its toes in the door market by creating a topcoat for fiberglass and steel doors.

Quality Enclosures, a shower door manufacturer, says homeowners are asking for larger pieces of glass. A company representative reiterates that customers also increasingly want matte black hardware, as well as satin brass. “[Customers] also want companies that are transparent and offer a high level of service,” says the company rep.

Continental highlighted its exterior solutions, a market that laminate suppliers such as Continental and American Renolit are entering. Some of Continental’s laminate solutions have a shine to simulate high-end powder coat finishes. The laminate can go on vinyl or aluminum, and the Continental representative sees a demand for matching films on doors and windows for cohesive aesthetics. Continental’s machinery partner, Fux, can accommodate bending. The representative sees a big demand for shapes and bending equipment, especially in the replacement market, as people are replacing windows from the 1980s when bent shapes were popular.



Watch videos to learn more about Intercept Extreme and Forel Dura Line. Hear from company officials about the collaboration between their companies, new innovations and see the machinery in action.





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Lamination – state-of-the-art

Continental is once again setting an example with Conti® mattex. The attractive, matte-sandy surface adds noticeable value to construction elements. It looks and feels like powder-coated aluminum. The innovative product is also impressive from a technical point of view: Conti® mattex is resistant to scratching and chemicals and is easy to clean. Equipped with proven cool colors and cool colors PLUS technology and available in current trendy colors, it is the first choice for exterior films, even in extreme climates.



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Companies continue to meet consumer demand for better sightlines. Veka, for example, introduced its VuePoint single-hung window that can operate up and down or be placed sideways as a slider. The frame is mounted alongside the drywall, and the sash is encapsulated in the frame, making sash components invisible to give 23% more viewing area, as well as enhanced performance attributes.

Robotics and AI

Several companies showcased robotic solutions at GlassBuild. A collaborative trio—GED Integrated Solutions, Vitro Architectural Glass and Technoform—introduced the new Intercept Extreme warm-edge spacer system for high-performance residential windows. This next-generation system is a display of the power of partnership, and GED's motto: intelligent automation. The new and improved system aims to solve manufacturing problems like volume of production, thermal performance and long-term durability.

Another partnership, Forel and Quanex, highlighted the innovative collaboration that is bringing automation and spacer performance to the next level. The new Forel Dura Line is designed to maximize output and optimize every stage of assembly. From spacer application to gas filling, it represents a new step forward in Forel's insulating glass unit technology.

Billco Manufacturing featured its Robotic Arm, created in partnership with Kawasaki. It can manage loading and unloading throughout the factory. Salem Fabrication Technologies brought its AMR, or autonomous mobile robot, to GlassBuild. The glass-handling robot is also a result of a partnership with Kuka, a supplier of intelligent robotics. The low-to-the-ground, square-shaped robot can lift and carry up to 1,200 pounds, say Salem reps. By reading QR codes affixed to a factory floor, the robot can then navigate its package to the next location.

“When it comes to tariffs, it's been coming in waves. We're just trying to meet our customers where they're at.”

AI has been a zeitgeist for several years now, and many people seem more comfortable using it in their own lives. Industry leaders say there's still further to go in explaining how AI can actually become part of their business. A+W Software recently introduced Mira, its AI order-entry system, which can read in-bound emails, including attachments, and then use Gemini and ChatGPT to complete order entries.

Christian Weichelt, chief marketing officer of Cyncly, says he tries to demystify what AI can do for their customers' businesses and discusses what's best for their individual company. “They need to pace adoption, and to have a goal in mind first so that we can help them reach it,” he says. “It's about using tech in an intelligent fashion.”

Automation aids in labor issues, helps homeowners

As many companies continue to grapple with a lack of skilled labor, automation and user-friendly additions are being added to machinery. RazorGage exhibited its AutoPusher System, which cuts fiberglass, wood and aluminum components. It is fully automatic in direct response to this need from customers. A company representative said they are also open to exploring the possibility of using robots for automatic loading and unloading in the future. “With the

current state of the workforce, it's increasingly important for customers to maximize yield, minimize mistakes and increase throughput,” he says.

Urban Machinery also expressed that automation is always something they are looking to increase with their machinery. While automating loading and unloading is difficult, they aim to create automated saws that help remove operator error.

A company representative for Pertici says, “Customers are always looking for user-friendly and intuitive” products and that “manufacturers like easy software” because employees working with machinery are not always skilled in that area. Rotox adds that customers need an easy and user-friendly interface. Matodi has also worked to create machinery that is user-friendly with pre-loadable templates to aid in the labor shortage.

Rockwell Security also recently added automation to its door hardware. Its new locking door hardware has an app connected via Bluetooth to help make home security easier for homeowners. A company rep says that “automation is a huge ask” among its customer base.

Tariffs and economic uncertainty

As tariffs around steel and aluminum still hang in the balance, companies are preparing for the impacts. While many are saying they are fortunate to not have felt the effects just yet, they are making sure to stay in constant communication with those in their supply chain to prepare for any future challenges.

A representative for Oz Machine said they have heard of some customers feeling the impacts of the tariffs, but many have tariff concerns written into their contracts with suppliers, so they are not being impacted too much this year. A company rep for TBP Converting says that not many people are building right now due to tariff and economic uncertainty. “When it comes to tariffs, it's been coming in waves,” he says. “We're just trying to meet our customers where they're at.” ■

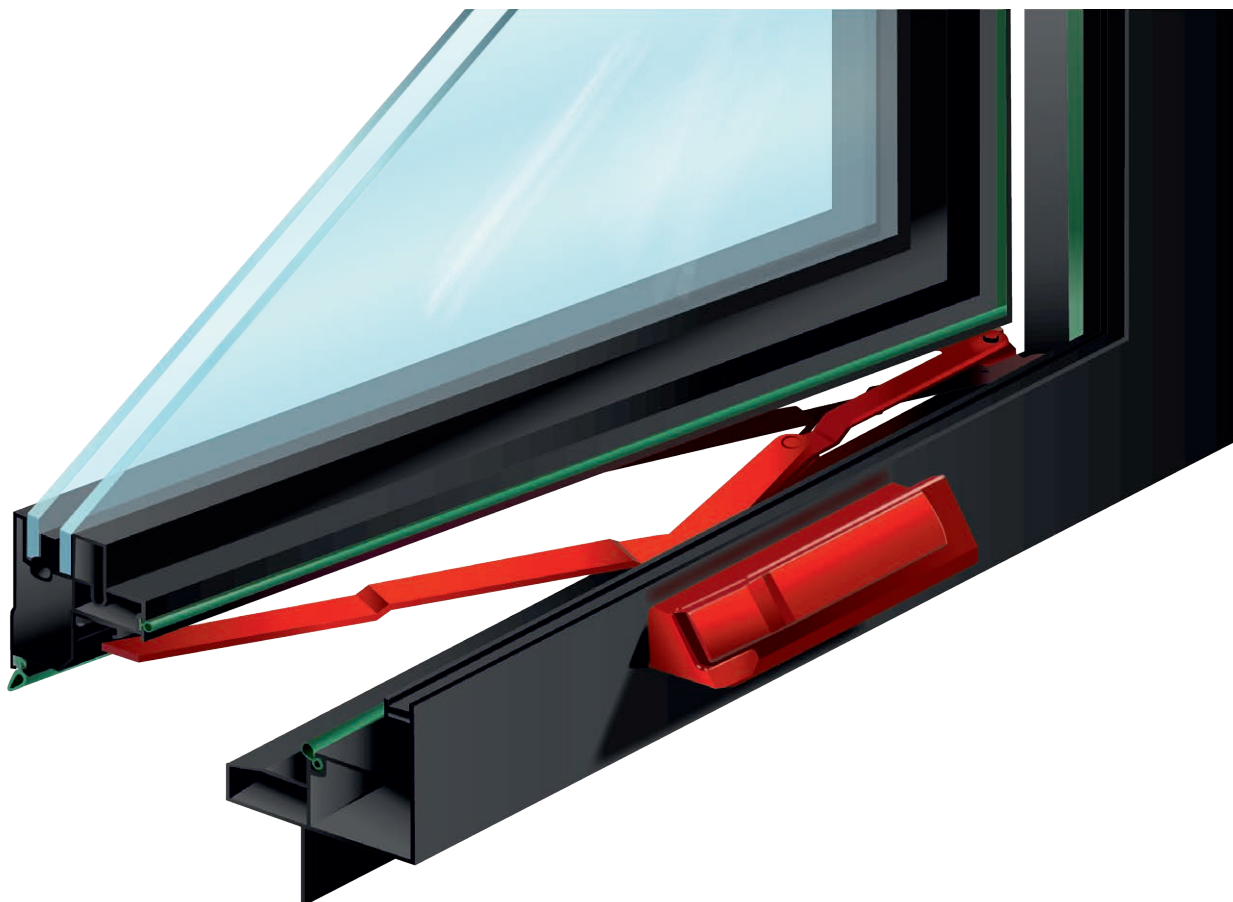
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A SOLUTIONS INDUSTRY

2025 was another challenging year. The industry is responding with innovation and collaboration for a stronger 2026

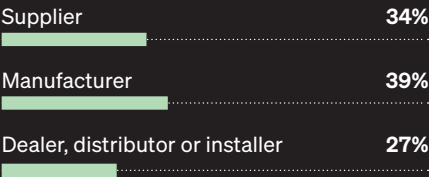
By Laurie Cowin

The fenestration industry is a resilient one. It’s an industry that’s navigated years of economic highs and lows, a global pandemic, supply chain disruptions, feast and famine in demand and more. Through all of this, one thing is abundantly clear: it is an industry focused on solutions. No matter what challenges hit it, fenestration always responds with solutions. This year’s Industry Pulse report further exemplifies the solutions-based mindset at which the fenestration industry is so adept.

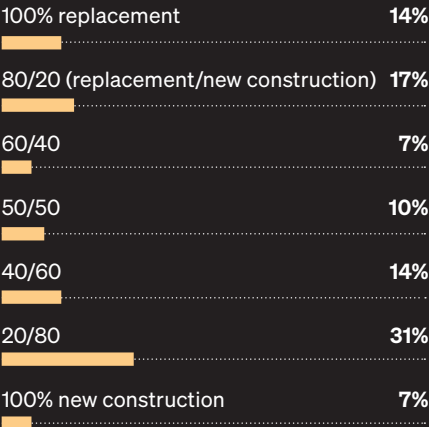
Key industry challenges come as no surprise: labor, rising costs and the national housing shortage. Those challenges also create tremendous opportunity. “One of the largest opportunities is tied directly to the national housing shortage,” says Greg Koch, vice president of sales and marketing, Deceuninck North America. “The new construction market is constrained by labor availability, land limitations and rising building costs. These pressures slow down housing starts at a time when demand continues to grow, which creates an urgent need for solutions that help builders work faster, more efficiently and more affordably.

“As the industry works to address the broader housing crisis, scalable, efficient and easy to fabricate systems will be an important part of closing the gap between housing supply and housing need,” he says.

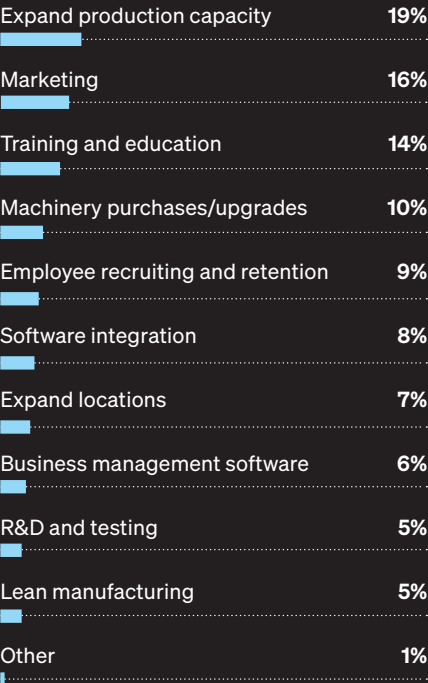
Meet the respondents



HOW MUCH OF YOUR BUSINESS WAS REPLACEMENT VERSUS NEW CONSTRUCTION IN 2025?



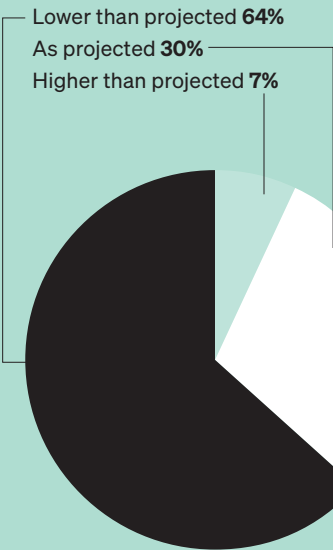
WHERE DO YOU PLAN TO FOCUS YOUR INVESTMENTS IN 2026?



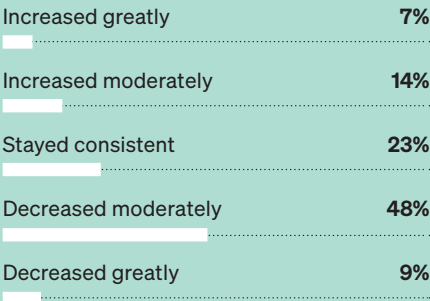
01

SALES AND THE MARKET

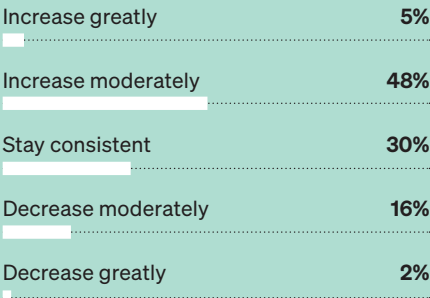
DID 2025 SALES MEET YOUR PROJECTIONS?



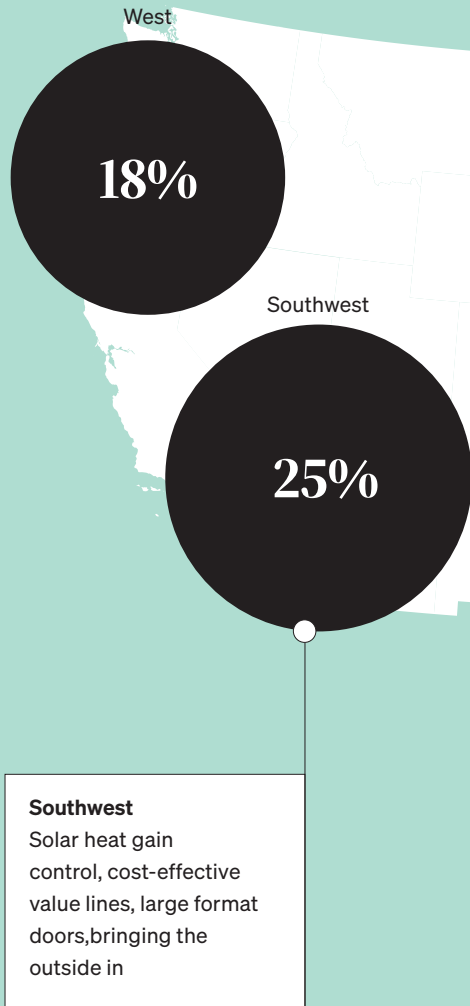
HOW DID PROFIT MARGINS IN 2025 COMPARE TO 2024?



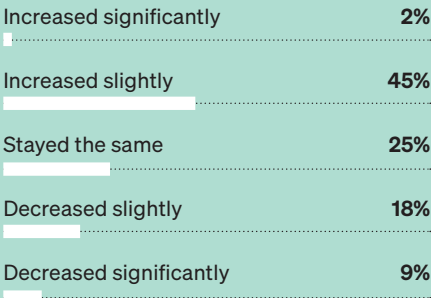
WHAT ARE YOUR SALES EXPECTATIONS FOR 2026?



WHICH GEOGRAPHIC AREAS DO YOU EXPECT TO SEE THE MOST GROWTH IN 2026?



HOW HAVE CUSTOMER ORDER VALUES CHANGED OVER THE PAST YEAR?



Inland markets

Aesthetics plus fast lead times often outweigh premium performance

Northeast

Thermal efficiency, multi-pane glass, hung window vs. casements for traditional look/restoration

Midwest

14%

Northwest

18%

Southeast

23%

Coastal markets

Corrosion resistance, structural ratings, impact glass, robust hardware, impact windows and doors, large format doors bringing the outside in

control, cost-effective value lines, large format doors, bringing the outside in

- Coastal markets - Corrosion resistance, structural ratings, impact glass, robust hardware, impact windows and doors, large format doors bringing the outside in
- Inland markets - Aesthetics plus fast lead times often outweigh premium performance

Koch says regional needs shape how Deceuninck engineers and supports its product platforms. “We design those platforms with enough interchangeability to adapt to different exterior finish styles. This allows us to serve distinctive regional demands without creating unnecessary system complexity,” he says.

Coastal markets, for example, require impact resistance while western areas have strong demand for modern colors, dark finishes and products that perform in dusty environments. Florida requires high DP ratings and structural performance while northern climates prioritize energy efficiency and thermal performance. “These regional differences guide our engineering and product planning, and our interchangeable platforms help fabricators serve their markets effectively while keeping production streamlined,” says Koch.

Last year was a tough one for sales, with the majority of survey respondents noting sales did not reach projections and profit margins also were down. Order values, however, increased for nearly half of respondents, with another quarter indicating values stayed the same. This could be representative of a trend toward larger projects. The Farnsworth Group’s 2025 Q3 tracker revealed seasonal upticks but structural strains. “Some pressure may stem from busy-season activity. Data suggest a deeper capacity issue as homeowners pursue larger projects,” their analysis reports.

Despite a rocky 2025, companies exude optimism for the coming year with most expecting an increase or sales consistent with 2025.

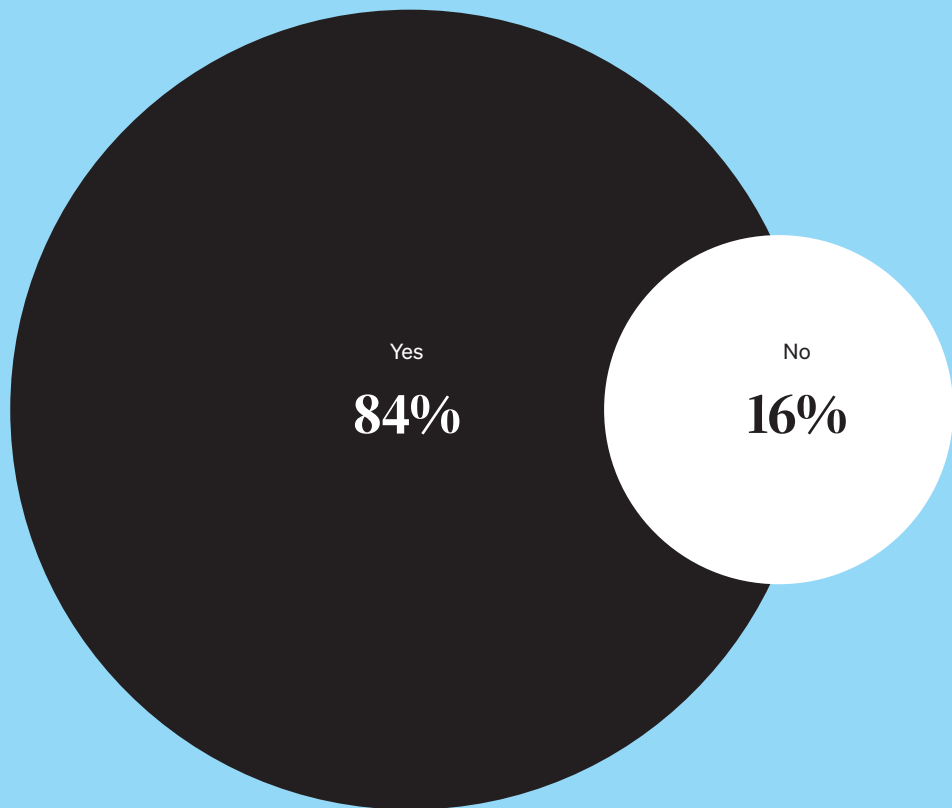
Companies also note regional market trends in terms of product demand. Michelle Nissen, VP Product Management and Engineering, Quanex, shares the following observations about how regional differences influence product offerings:

- Northeast - Thermal efficiency, multi-pane glass, hung window vs. casements for traditional look/restoration
- Southwest - Solar heat gain

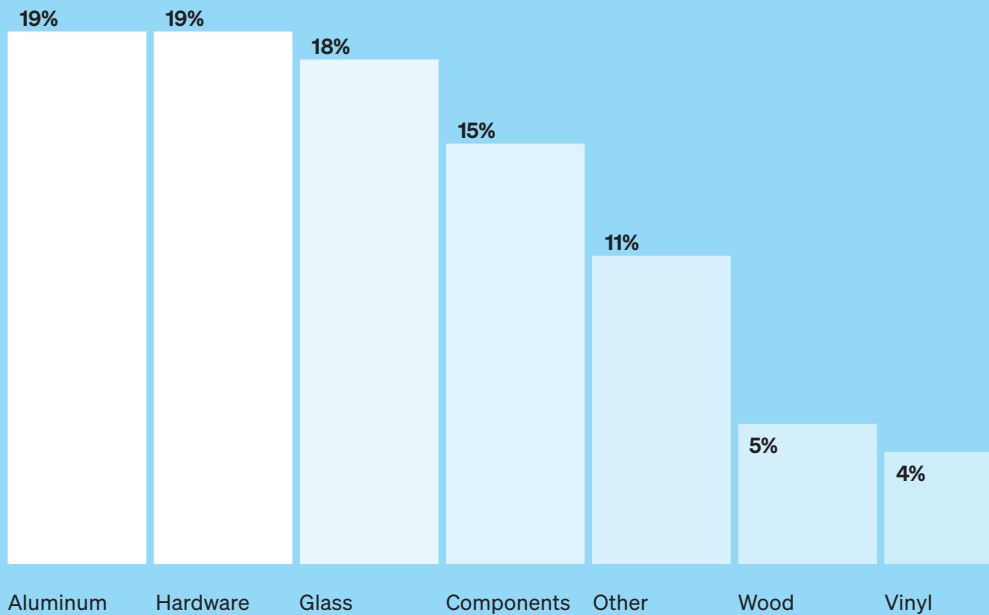
02

MATERIALS AND SUPPLY

DID YOUR MATERIAL PRICES INCREASE IN 2025?



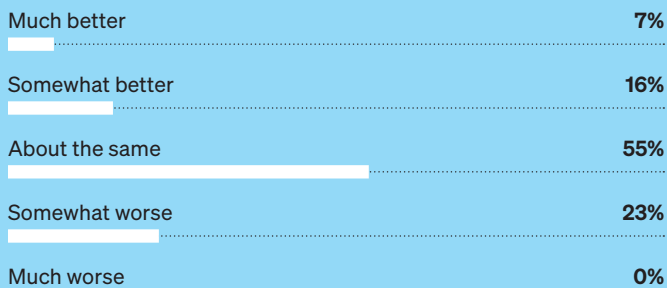
WHAT MATERIALS ARE MOST DIFFICULT TO ACQUIRE?



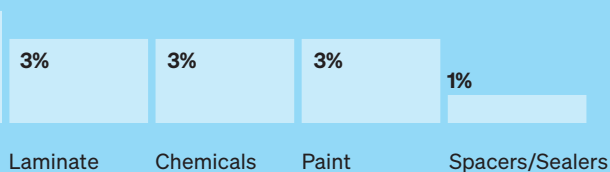
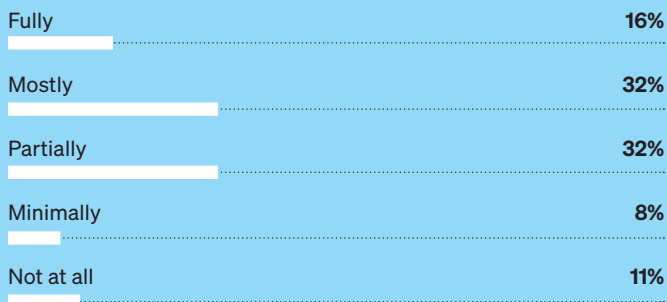
75%

ANTICIPATE MATERIAL PRICE INCREASES IN 2026

HOW IS SUPPLY CHAIN RELIABILITY COMPARED TO ONE YEAR AGO?



HOW SUCCESSFULLY HAVE YOU BEEN ABLE TO PASS COST INCREASES TO CUSTOMERS?



M

aterial prices continue to rise, with most experiencing higher costs in 2025 and three-quarters expecting further increases in 2026.

Survey respondents indicate aluminum, hardware and glass are the most difficult materials to acquire, which is largely consistent with last year and significantly improved from the 2024 Industry Pulse, when 35% of respondents had trouble acquiring hardware and components and 28% struggled to find glass.

Supply chain issues have generated opportunities for creative solutions and industry advancement. “Constraints forced us to rethink sourcing, reduce SKU complexity, leverage our broader operations footprint and work more strategically with suppliers,” says Quanex’s Nissen. “Unexpectedly, these pressures helped us test alternative materials we may not have considered otherwise and strengthen communication and forecasting with key customers.”

Material science advancement also influences how windows and doors are manufactured. Deceuninck’s Koch references the company’s Innergy thermal reinforcements, which he says have “fundamentally changed how we approach both structural performance and thermal efficiency in PVC window and door systems.”

Traditional reinforcement involved metal inserts that while strong, he says, penalized thermal efficiency. This new fiberglass-composite material enables comparable rigidity and stability while offering superior energy performance, he explains. “Beyond efficiency, the material science behind Innergy has opened the door for more creative and flexible system engineering,” he says.

Nissen believes glass technology will become a “strategic differentiator,” she says. “Advances in coatings, dynamic glass, multi-layer configurations and longer-lasting gas fills will allow for higher-performance window packages that meet evolving energy codes; tiered product strategies that let customers choose performance levels with clear ROI; and more regional customization based on climate zones.”

Carlos Amin, VP of Sales, ES, says glass technology offers tremendous opportunity for improvement through low-E coatings, warm-edge spacer systems, gas-fill retention and more. Manufacturers such as ES continue to monitor and research next-gen coatings and high-performing configurations to remain competitive in a high-efficiency market.

03

PRODUCT TRENDS

WHAT PRODUCT CATEGORIES WERE MOST IN DEMAND IN 2025?

Vinyl windows	23%
Fiberglass entry doors	11%
Multi-panel doors	10%
Traditional patio doors	8%
Impact-resistant products	7%
Aluminum windows	7%
Hybrid/clad windows	6%
Fiberglass windows	5%
Steel entry doors	5%
Wood windows	4%
Energy Star-rated products	4%
Automated windows and/or doors	2%
Smart home technology	2%
Security products	2%
Other	2%
Interior doors	2%
Wood entry doors	1%
Composite entry doors	1%
Pivot doors	1%

WHAT PRODUCT CATEGORIES ARE MOST PROFITABLE FOR YOUR BUSINESS?

Premium/high-end products	23%
Custom/specialty products	20%
Replacement/retrofit market	19%
Mid-range products	18%
Residential new construction	14%
Entry-level/economy products	7%

WHERE WILL YOU FOCUS PRODUCT DEVELOPMENT DOLLARS IN 2026?

Functionality	35%
Aesthetics	23%
Energy efficiency	21%
Technology and "smart" functions	16%
Other	5%

68%

OFFERED NEW PRODUCTS IN 2025

80%

PLAN TO OFFER NEW PRODUCTS IN 2026

Large-format units continue to influence what products are specified and how they're made. "The most influential design trend we're seeing is the growing demand for large-format units with modern, minimal sightlines," says Koch. "Architects, builders and homeowners are expecting expansive views and clean aesthetics, and that has reshaped how we design and engineer our systems. These larger openings require profiles that deliver strength, stability, and thermal performance without adding visual bulk, which has driven significant innovation in both profile geometry and reinforcement strategies."

Amin has noted a shift toward cleaner sightlines, larger glass areas and slimmer profiles. ES has responded by expanding its modern design offerings in aluminum and PVC lines.

"These designs require adjustments in manufacturing — including tighter tolerances, updated tooling, and in some cases new reinforcement strategies — to maintain structural performance while achieving the slimmer, more modern look," he says.

Almost a quarter of survey respondents expect premium and high-end products to be most profitable for their businesses, a finding reflective with the Q3 2025 Window & Door Market Survey, a partnership with John Burns Research and Consulting and Window + Door.

Chris Beard, VP, Building Products Research at JBREC, shared at GlassBuild 2025 that the luxury and affluent consumer segment is a strong and growing segment in the industry. He notes the affluent segment is less sensitive to higher mortgage rates and often benefit from the "wealth effect" of high property values and a strong stock market. Additionally, custom remodelers and building material

"We educate customers by simplifying complex performance metrics into clear comparisons: U-value improvements, energy savings, noise reduction, durability, and design differences."

dealers report strong demand in the luxury and custom home categories.

Sustainability and Performance

Where companies will prioritize product development varies. Whereas last year energy efficiency was a top priority, this year that fell to third position behind functionality and aesthetics.

Although performance may not be the top area of development, it's still a critical part of the industry, both in manufacturing and in communicating performance benefits to homeowners. "We educate customers by simplifying complex performance metrics into clear comparisons: U-value improvements, energy savings, noise reduction, durability, and design differences," shares ES' Amin. "We use visual aids, side-by-side displays, and real-world examples to help them understand how tier upgrades translate into long-term value."

The U.S. centers most conversations around U-values and meeting tighter state and local and energy codes, observes Amin. ES positions its double- and triple-pane options depending on climate and customer priorities. "Double-pane remains cost-effective and suitable for milder regions, while triple-pane is positioned as a premium solution for customers seeking superior comfort, lower U-values, and long-term energy savings," explains Amin.

Recyclability

Companies also continue to explore and invest in recycling. ES's products incorporate recyclable materials like aluminum, PVC and glass, says Amin. "We follow environmental best practices and maintain ISO 14000 compliance with a focus on responsible material selection and waste reduction."

Circularity is a conversation point in the sustainability algorithm. Koch shares Deceuninck prioritizes strengthening the long-term sustainability, performance and scalability of the product portfolio, with a particular focus on the sustainability side of the business. "We are actively expanding our ability to consume internal scrap and customer end cuts, and we continue to invest in facility improvements that support greater circularity in our material stream," he says.

Amin notes ES continuously evaluates the circular-economy models as they become more practical in the U.S. market.

Sustainability is increasingly a standard part of design rather than a separate thought. "We treat sustainability as a design element versus an afterthought," says Quanex's Nissen. "Our aim is to develop solutions that enable improved for 'practical sustainability'—choices that deliver performance and environmental value without price shocks to the customer."

04

AUTOMATION & INVESTMENTS

WHAT IS HOLDING YOU BACK FROM ADDING PRODUCTION CAPACITY?

We don't need to	55%
We don't have the physical space	15%
It costs too much	15%
Other	10%
We don't have enough labor	5%

S

lightly less than half of survey respondents added production capacity last year, and nearly half plan to add production capacity this year. Recent industry expansions include Cornerstone Building Brands' \$4.9 million manufacturing campus expansion in Virginia, Thompson Creek Window Company's market expansion into the Delmarva Peninsula, United Window & Door's 40,000-square-foot expansion in New Jersey, Marvin's new manufacturing facility in Kansas City, Kansas, and more. (See more expansion news on windowanddoor.com/news/expansions-partnerships.)

Automation

Quanex's Nissen says the biggest automation opportunities exist in IGU assembly and sealing, frame fabrication and material handling and quality checks using vision systems.

Powerful though automation is, human expertise remains essential.

45%

ADDED PRODUCTION CAPACITY IN 2025

48%

PLAN TO ADD PRODUCTION CAPACITY IN 2026

“Automation will handle repetition. People will handle innovation.”

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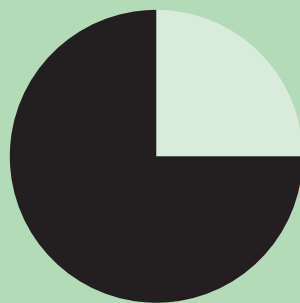
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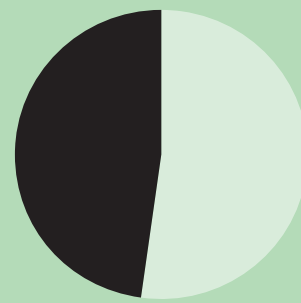
The Industry Pulse

WHAT DRIVES THE DECISION TO IMPLEMENT AUTOMATION?

Improving quality	23%
Increasing throughput	28%
Replacing outdated equipment	25%
Addressing labor shortages	20%
Other	4%



75% PLAN TO OR ARE CONSIDERING IMPLEMENTING/EXPANDING SOFTWARE IN 2026



48% USE AI IN THEIR BUSINESS

Nissen notes areas that require human expertise include: final QC and craftsmanship on specialty/custom products, problem-solving on complex solutions and customer collaboration and design development. “Automation will handle repetition,” she says. “People will handle innovation.”

Companies invest in automation for myriad reasons, including a tight labor market, consistent throughput and overall efficiency. Finding what automation is right for what company isn’t straightforward, though. “When we go in and we speak with a customer, it’s not only about what their overall production is, but also their product mix, what their challenges are with their labor force, and then looking at what makes the most sense for how they make their product,” explains Mike Biffl, Sturtz Machinery. “Everybody has a different operating procedure when they get out on their plant floor, and so the goals that they have are different. It has to be a consultative approach. It’s important to do a lot more listening than talking.”

Joseph Machine’s CEO, Anthony Pigliacampo, agrees. “What we often find is what customers reach out to us wanting and what they end up actually purchasing are two completely different things,” he says. “The complexity of their specific window systems and how they make it, and even the sizes that they make, can often make certain types of



Listen to experts from Erdman Automation, GED Integrated Solutions, Joseph Machine and Sturtz Machinery discuss automation, technology and machinery.

automation work well or be terrible fits. One of our jobs with our team is to help them understand that and identify the areas where automation can achieve their goals.”

Software

John Staiano, COO – North America, A+W Software, identifies pain points in fenestration software, including complex configuration and quoting, a disconnected sales-to-production process, inefficient scheduling and visibility, and manual paperwork and miscommunication, all of which his

company aims to address in their software solutions.

“Dealers and end-customers now expect instant quotes, faster lead times and real-time order updates,” he says. “This has increased the demand for precise configuration, fewer manual steps, integrated document management, and digital workflows across the entire organization.”

Staiano views the fenestration industry as being “middle of the pack” digitally. “Many market leaders are pushing hard into digital sales tools, integrated BOM systems and dynamic pricing,” he observes. “Smaller manufacturers and dealers often lag due to resource constraints, though they’re rapidly catching up as customer expectations change.”

Labor has also created a sense of urgency to adopt software solutions. “Companies are more motivated than ever to digitize sales, order entry and documentation because they can no longer rely on growing admin teams,” says Staiano.

Generational shifts also affect adoption. Staiano says young leaders are more inclined to adopt digital tools. Long-time leaders, meanwhile, focus more on risk mitigation but are increasingly supportive because of labor and competition. “The most progressive companies blend experience with a willingness to adopt new technology,” he says.

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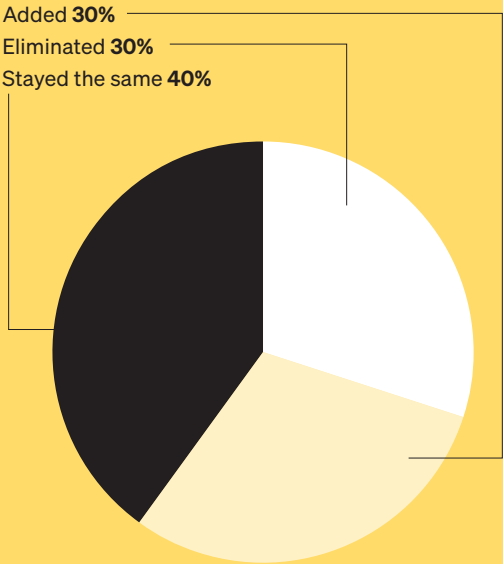
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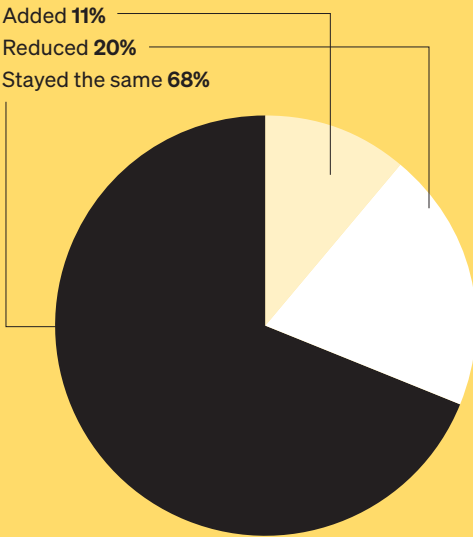
05

LABOR AND TRAINING

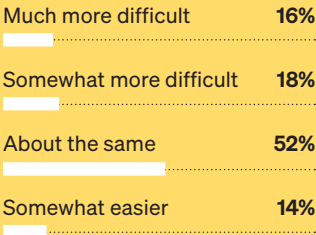
HOW DID YOUR STAFF LEVELS CHANGE IN 2025?



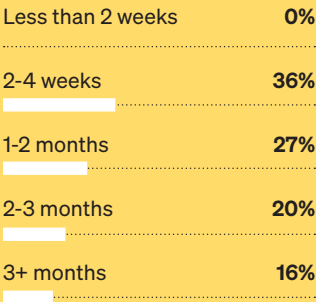
DID YOU ADD OR REDUCE SHIFTS IN 2025?



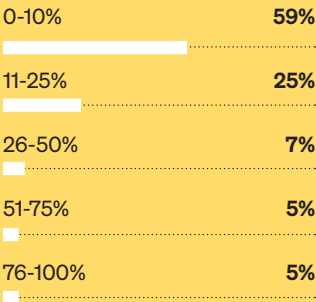
HOW WOULD YOU RATE THE DIFFICULTY OF FINDING QUALIFIED WORKERS IN 2025 COMPARED TO 2024?



AVERAGE TIME-TO-FILL FOR CRITICAL POSITIONS



WHAT PERCENTAGE OF YOUR OPEN POSITIONS REMAINED UNFILLED FOR 3+ MONTHS?



“Hiring a higher level/skilled person and having deeper background checks has been our strategy in hiring new team members”

\$1.47

RETURN FOR EVERY
DOLLAR INVESTED
IN REGISTERED
APPRENTICESHIP
PROGRAMS.

V

WHAT BENEFITS DO YOU OFFER YOUR EMPLOYEES?

Medical insurance	15%
Dental insurance	14%
401(k)	14%
Vision insurance	12%
Bonuses	12%
Maternity leave	8%
Paternity leave	7%
Professional development	7%
Tuition reimbursement/other training	6%
Profit sharing	5%

WHAT IS YOUR BIGGEST WORKFORCE CHALLENGE?

Finding skilled manufacturing workers	24%
Finding sales professionals	18%
Competing wages with other industries	13%
Training/skills development	13%
Finding skilled installers	11%
Aging workforce/lack of succession planning	11%
Employee retention	8%
Other	1%

Veka North America keeps workforce development at the forefront of its company goals. Joe Peilert, CEO and president of Veka North America, says that “every employee should expect us to develop them.” That’s a mission the company takes seriously. Peilert says Veka uses the German apprenticeship model and even has a “signing day” for onboarding apprentices.

The company’s Evolve Leadership Program is a one-year program with a strong mentoring element. Participating employees spend time in various departments learning all the roles involved with Veka’s business and understanding the complexities involved with making their products. “People rally around making something,” says Peilert.

Industry Pulse survey participants cite workforce solutions such as flexible hours, training programs, apprenticeship programs, automation and working with recruiters. “Hiring a higher level/skilled person and having deeper background checks has been our strategy in hiring new team members,” shares one respondent. “We believe adding team members of a higher level even though they cost more up-front results in a better return on investment.”

Potential solutions to help ease labor pool challenges, according to this year’s survey, include: immigration reform, more trade schools, apprenticeship programs, increased pay, more training and vocational classes in high school.

Apprenticeship programs are an area ripe for growth. In the National Glass Association’s December Thirsty Thursday webinar, national workforce leader Joshua Johnson said studies show companies get a \$1.47 return for every dollar invested in registered apprenticeship programs. Apprenticeship programs also reduce turnover. Whereas individuals who complete training programs often leave the company after they receive a credential, 94% of individuals who complete an apprenticeship program stay with the company. ■



BUILDING RESILIENCE

IN THE FACE OF A
DYNAMIC MIX OF
CHALLENGES AND
OPPORTUNITIES,
LEADING CONSTRUCTION
ECONOMISTS SAY
RESILIENCE AND
INNOVATION CAN HELP
COMPANIES POSITION
THEMSELVES FOR
SUCCESS IN 2026

BY **TARA LUKASIK**

ILLUSTRATION
BY **CORY THACKER**



Visit windowanddoor.com to read more, including the commercial building outlook, how adaptive reuse will change the market and what Connor Lokar, ITR Economics, predicts about the economy.

S

ince our forecast last year, the editors at Window + Door have continued to watch a rapidly changing economic environment, paired with a policy environment that remains very fluid. Long-term interest rates remain stubbornly high, inflation rates have stalled, home building activity levels remain disappointing, tariff rates for construction continue to rise and shift, and construction labor shortages have grown due to restrictive immigration policies. Despite all this, the outlook for 2026 is largely unchanged from what we reported in January 2025—challenging for U.S. construction, with reasons for optimism in the coming year.

Maybe it's the American ethos of self-reliance—the sentiment that when times get hard, we respond with hard work, initiative and resilience to create opportunities and prosperity—that has the leading construction industry economists responding with “silver lining” forecasts while also hinting that we may be on the brink of a recession.

ECONOMIC OUTLOOK

An economic slowdown is emerging

The construction industry entered 2025 with strong momentum driven by major government investments like the Infrastructure Investment and Jobs Act and CHIPS Act. However, the macroeconomic environment has since deteriorated greatly thanks to rapid policy changes that have created uncertainty in the industry. Consumer spending has stalled, housing sales have declined and the job market is weakening.

The One Big Beautiful Bill Act, or OBBBA, will provide limited short-term economic stimulus while creating long-term fiscal challenges through increased deficits and debt, according to Dodge Construction Network. The near-term benefits come primarily from business incentives, including the qualified business income deduction, R&D expense provisions, and qualified opportunity zone renewals, though these last renewals-related construction projects won't begin until 2027. Then there's the bill's fiscal cost: the Congressional Budget Office estimates OBBBA will add \$3.4 trillion to deficits over 10 years, pushing the debt-to-GDP ratio from approximately 100% currently to around 130% within a decade, potentially causing severe long-term economic damage.

Examining the economy from a broad perspective, Michael Guckes, chief economist at ConstructConnect, says the "GDP forecast shows modest growth for the foreseeable future, with projections of just over 2% for 2025 and 2.3% for 2026—nothing to get too excited or write home about."

"As of right now, the construction industry as a whole is sort of on the same knife edge as the rest of the economy. It's slowing down. It's not really clear whether it's in recession or not, but it is awfully close and very uncomfortable," says Eric Gaus, chief economist, Dodge Construction Network.

Labor market cools off

The construction industry's most significant direct impact from OBBBA stems from the massive expansion of Immigration and Customs Enforcement and the resulting large-scale deportations. Foreign-born workers constitute approximately 30% of the construction workforce nationally, according to statistics from the U.S. Census Bureau, though this figure reaches 35% to 40% in some states like California and Texas, with a substantial portion being undocumented. This concentration

ECONOMIC OUTLOOK TAKEAWAYS
► Economic growth is expected to be below potential, which correlates to a sizable downside risk in the near term for construction activity.
► Consumer spending is expected to slow down, from 2.8% growth in 2024 to 2.1% in 2025 and 1.1% in 2026.
► The labor market is expected to weaken; unemployment will tick up from 4.0% in 2024 to 4.2% on average in 2025 and 4.7% in 2026.

RESIDENTIAL UNITS & VALUE FORECAST
UNITS
2025
Total Residential: -1% to 1,550,000 units
Single Family: -5% to 909,000 units
Multifamily: +6% to 640,000 units
2026
Total Residential: +2% to 1,590,000 units
Single Family: +1% to 917,000 units
Multifamily: +5% to 670,000 units
VALUE
2025
Total Residential: +0% to \$395 billion
Single Family: -6% to \$251 billion
Multifamily: +13% to \$144 billion
2026
Total Residential: +6% to \$418 billion
Single Family: +4% to \$262 billion
Multifamily: +9% to \$156 billion
Source: Dodge Construction Network

of foreign-born labor has attracted ICE attention, though numerous uncertainties make it difficult to predict the exact impact. Beyond construction specifically, Dodge says increased ICE enforcement has significantly altered projections for household formation, which has been primarily driven by immigrant rather than domestic population growth.

Immigration policy presents the most significant wildcard for 2026, says Ken Simonson, chief economist, Associated General Contractors of America, who emphasizes that construction is "much more dependent than the broader economy, 34% versus 18% of the broader workforce, on foreign-born workers," with some states like California, Texas, New Jersey, Maryland, and Washington, D.C., showing "50% or more foreign-born" workers in construction trades. While "not many firms have been affected yet by jobsite raids," Simonson warns that "the Department of Homeland Security has gotten tremendous boost in funding and staffing... and next year could be an active one for affecting jobsites."

Simonson also notes that "total construction employment has been tapering off pretty steeply over the past three years." The employment picture reveals a stark divide: residential construction "has been shedding jobs on a year-over-year basis since early this year," while non-residential construction continues to add jobs "but it's also slowed down." The weakness is spreading geographically, with only 28 states showing employment increases compared to 35 to 45 states a year earlier, and the decline now affecting previously strong regions, including the West Coast, Northeast, Rocky Mountains, and for the first time, some Southeast states.

Challenging material costs

Construction cost pressures are mounting on multiple fronts, according to ConstructConnect's Guckes, and material costs are currently up about 5% year-over-year,

but he warns that “we are in early innings when it comes to construction material prices and where they could go.” He draws comparisons to 2018-2019 when 25% tariffs on aluminum and steel drove construction material prices as high as 8%, noting that current trade policy “is much more aggressive this time around.”

The key to navigating these economic headwinds, says Guckes, is being ruthless in controlling costs. “If you want to protect your profitability, you have to be absolutely ruthless in terms of controlling costs this year and next year,” says Guckes. “Figuring out creative ways to manage the supply chains, to control your profit margins, because we’re already seeing pressures everywhere. Firms have been sacrificing their profit margins to help keep prices stable, but that is only a temporary fix. For 2026, be ruthless, control costs and make sure that you’re bidding.”

RESIDENTIAL OUTLOOK

Dodge’s Eric Gaus highlights a significant divergence between single-family and multifamily sectors. Residential construction, particularly multifamily, will be a major driver supporting growth over the coming year. However, Gaus notes that single-family housing “has been coming down quite a bit throughout the year,” while multifamily “has remained relatively strong” with good pipeline indications continuing into 2026.

AGC’s Ken Simonson predicts that residential construction faces continued headwinds, with single-family down 2%, multifamily down 9% and improvements down 8%. While Simonson believes “we may be near the bottom on single-family and multifamily,” he notes that “30-year mortgage rates at 6.25% remain not low enough to bring first time home buyers back to the market,” suggesting “any recovery in residential will be pretty slow and modest.”

Single-family housing

The single-family housing market faced significant headwinds in 2025, with construction remaining underwhelming due to persistent affordability challenges. Mortgage rates hover between 6.5% to 7%; home prices are historically elevated, and growing recession risks combined with a weakening labor market have caused many potential buyers to delay purchases.

In Dodge’s annual economic forecast, Eric Gaus revealed that the outlet has revised down its single-family housing forecasts considerably. “We are actually pulling back our forecasts of single-family housing because we don’t see as many units needed five years from now,” he says. This revision stems from a counterintuitive factor: declining population growth due to changes in immigration policy. “We’re not getting as many people coming to this country from abroad because of our new stance on immigration policy and therefore that’s where we got a lot of our growth in households and if we don’t have more households we don’t need quite as many houses.” He suggests the housing shortage might partially resolve itself through reduced household formation rather than increased construction.

Addressing the housing affordability crisis that has dominated the narrative for four to five years, Gaus estimates the national housing shortage at approximately 1.2 million units that still need to be built to achieve market balance. However, the shortage has evolved since 2022, when it peaked at around two million units.

Gaus emphasizes that the core issue is housing affordability rather than raw supply. “Where they are built and what type they are really, really matter. So, they need to be affordable and they need to be in those states for us to overcome that shortage.” The challenge is that states with the greatest need also have the most difficult zoning restrictions to navigate.

As the housing shortage gradually resolves over the next five years, demand for new construction is expected

to normalize, resulting in a relatively flat outlook for single-family starts. Dodge forecasts single-family housing construction will finish 2025 down 5% to 909,000 units, followed by only marginal improvement of 0.9% to 917,000 units in 2026. Looking beyond 2025, slower immigration rates will further constrain household formations and overall housing demand, contributing to the subdued growth trajectory.

Kermit Baker, chief economist, American Institute of Architects, emphasizes that “housing recovery is really central to the health of the broader construction industry, but little can be done at the federal level to solve the housing problem.” He notes that different regions are taking creative approaches: California has made it easier for homeowners to put an accessory dwelling unit on a single-family lot. ADUs now represent 15% of new single-family units, up 5% from seven years ago.

Multifamily sector

In contrast, the multifamily sector shows more promise for 2025, driven by buyers priced out of single-family homes who are turning to rentals or townhouses and condominiums. After multifamily completions peaked in Q1 2024, planning activity has steadily increased, correlating with year-to-date growth in multifamily starts. The rental vacancy rate stood at 7.0% in Q2 2025 as the market absorbed new projects. Dodge predicts multifamily starts will expand 6% to 640,000 units in 2025 and another 5% to 670,000 units in 2026, before pulling back through the remainder of the forecast period due to weaker demographic trends and reduced housing demand.

While not as large as the 2022-2023 surge, Dodge’s Eric Gaus sees “another mini wave” of multifamily projects starting, driven by persistent shortages in high-cost markets. Planning data shows multifamily will remain strong through the rest of 2025 and into 2026. ■

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02

03

01

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Insights in Fenestration

By Marco Patermann

Like many industries, the fenestration industry had a year of both challenges and growth in 2025. From global market disruptions to supply chain challenges, there was quite a bit of uncertainty around building materials, including windows and doors. But with every setback comes opportunities to move forward stronger.

This unpredictability forced manufacturers to make difficult decisions about absorbing costs versus passing them to customers, ultimately reinforcing the critical importance of long-term partnerships. The experience echoed lessons from the pandemic about supply chain resilience and demonstrated that strong customer-supplier relationships become competitive advantages during market disruptions.

What to know for 2026

The industry is poised for growth beyond traditional windows, with expansion across the entire building envelope using laminates for cladding, siding, trim and other exterior elements. Design trends are moving toward more homogenous building appearances with conservative color palettes and emerging interest in clay tones and green-grays. There's also increased emphasis on outdoor living spaces like canopies and four-season rooms, plus continued merging of interior and exterior design elements. The laminate market share is expected to grow significantly due to its features like flexibility, weather resistance, low heat build-up and variety of textures, positioning the industry for innovation and expansion throughout the building envelope. ■



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Centrum Wicker Park luxury residences in Chicago. Photo by Tom Kessler.



Floor-to-Ceiling Clarity in Chicago

Project: Centrum Wicker Park luxury apartments in Chicago

Products: Architecture and planning firm Hirsch MPG chose Solarban R67 glass by Vitro Architectural Glass for its solar control performance, energy efficiency, color clarity and fidelity, low interior and exterior reflectivity, and high level of transparency.

Description: Situated in the heart of one of Chicago's most dynamic and lively neighborhoods, Centrum Wicker Park's contemporary residences offer sleek floor-to-ceiling windows with abundant natural light and stunning city views. Solarban R67 glass ensures true-to-life tones and can be paired with Vitro's low-iron substrate offerings in a range of blue, green and earth-toned tinted glass. ■



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