THE NEXT BIG MOVE IN HOMEBUILDING
THE COMPELLING CASE FOR OFF-SITE CONSTRUCTION

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AFTER THE STORM HITS: HOW CITIES BOUNCE BACK FROM NATURAL DISASTERS
THE SOBERING TRUTH ABOUT CONSTRUCTION LABOR
HOMEBUILDING TRENDS
Welcome back to another issue of Engineered Wood magazine! We are excited to bring you articles covering some forward-thinking concepts and trends, major industry happenings affecting us today, and some tried and true products that continue to provide solutions to different players within the industry.

Looking to the future, industry professionals are rethinking how they can do more with less. One example is through the use of off-site construction. In our cover story (pages 10–15), we hear from some of the experts who are looking at each building holistically as an engineered system rather than as individual, separate components.

Designers and builders are also exploring the role of technology within the industry through AR/VR (page 08) and gadgets making homes smarter (page 09).

Today, our industry is working in real time to address building resiliency as major markets continue to battle record-breaking natural disasters and catastrophes. In “After the Storm Hits” (pages 04–05), we discuss how the industry is learning and tightening as it bounces back from natural disasters like California’s wildfires and hurricanes Harvey and Irma.

Finally, while the industry continues to evolve, some things remain a constant. For us it’s LP® TechShield® Radiant Barrier Sheathing, which celebrates 20 years on the market in 2018. LP is proud to have helped pioneer the category and serve as the original and #1 brand of radiant barrier sheathing. Explore the technology, benefits and breadth of radiant barrier sheathings in the infographic on page 17. Spoiler alert: radiant barrier shares a history with NASA.

Keep reading for articles on repair and remodeling, building resiliency, new urbanism, technological advances and more.

We value your readership and would love to hear from you on the topics that interest you most. Feel free to send us an email at editor@engineeredwoodonline.com and offer suggestions for upcoming issues of Engineered Wood magazine.

Thank you for your continued support.

KRISTIN H. NELSON
MANAGING EDITOR
Kwikset Smart Locks
Kwikset is a residential lock manufacturer that specializes in smart key technology. According to Kwikset, their patented SmartKey products are designed to provide homeowners with the highest level of security coupled with quality, technology and durability. The smart lock collection also comes in a variety of styles and finishes for both interior and exterior doors for smart home enthusiasts, designers and homeowners.

+ [kwikset.com](http://www.kwikset.com)

DroneDeploy
Designed for professionals in agriculture, construction, surveying and more, the DroneDeploy app pairs with your drone to produce aerial imaging and 3D mapping to help users save time and guide their decisions. Per the manufacturer, the app helps the user quickly access and analyze data as well as annotate and share maps directly with team members from a mobile device. DroneDeploy has mapped over 10 million acres in more than 150 countries, and the app is available on both the App Store and Google Play.

+ [dronedeploy.com](http://www.dronedeploy.com)

Chameleon Power
Instead of relying solely on product images for home improvement projects, Chameleon's online visualization platform enables users to view actual products in real-world settings like home exteriors and rooms. The user is able to upload images and manipulate them through visualizers, simulations and interactive settings to view different textures, colors and products to create a realistic photo outcome. The software creates a unique product digitally that takes into account the full depth of the real world, aiding in the decision-making process for buyers.

+ [chameleonpower.com](http://www.chameleonpower.com)

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Putting Our Legacy to the Test
Zicka Homes Uses LP Legacy® Sub-Flooring for Strength and Stiffness in Custom Home

LOCATION
Cincinnati, Ohio

PROJECT SUMMARY
Zicka Homes is the largest custom homebuilder in Cincinnati, with nearly 50 years of experience creating beautiful homes and communities. In July 2017, Zicka Homes President Julie Zicka used LP Legacy® sub-flooring on a 3,300 sq. ft. custom home.

PROJECT OBJECTIVES
Zicka Homes sought a great warranty, price and product durability in a premium sub-flooring.

SOLUTION
LP Legacy sub-flooring was installed on both the first and second floors of the home. According to Zicka, the sub-flooring was easy to install and extremely solid.

In addition to offering a unique Covered Until It’s Covered™ No-Sand Warranty and Lifetime Limited Warranty that lasts as long as the home, LP Legacy sub-flooring uses Gorilla Glue Technology®. The same adhesive technology that makes Gorilla Glue perfect for The Toughest Jobs on Planet Earth® also makes LP Legacy sub-flooring one of the strongest and stiffest you can buy. The homeowner, Ted Fitz, is also the Vice President of Research and Development for Gorilla Glue Company. "Before we decided to build our home with LP Legacy sub-flooring, my first job as head of R&D at Gorilla Glue was to make sure the product was worthy of the Gorilla name, which is something we take very seriously,” said Fitz. “Once we decided the product was worthy of the Gorilla name and performs to our expectations, using it on my home became an easy choice.”

OUTCOME
The home was completed in December 2017. Though it was the first time Zicka used the product, she was impressed with the moisture resistance, ease of installation, durability and reliable warranty. Moving into the future, Zicka said, “I will consider using it, especially on the bigger houses where it doesn’t get dried in within a month.”

To learn more about LP Legacy sub-flooring, visit LPCorp.com/Legacy and visit Zicka Homes at zickahomes.com.
After the Storm Hits
How Resilient Building Helps Cities Bounce Back from Natural Disasters

In recent years, natural disasters have wreaked havoc on cities across the United States—major flooding in Houston, hurricanes in Florida and Puerto Rico, and devastating wildfires and mudslides in California to name a few. Though this devastation often makes national headlines for weeks following the event, the communities will be rebuilding for years to come. In the aftermath of a major natural disaster, the rebuilding process offers an opportunity to assess all areas of improvement—be it the buildings themselves, the city infrastructure, or the municipal policies in place. Once the storm has passed, the local builders, architects, code officials, city planners and policymakers are challenged to then rebuild with greater resiliency in mind.

Weary Weather Patterns
The National Oceanic and Atmospheric Administration has reported that from 1980 to 2017 the United States experienced 25 drought events, 28 flooding events, 8 freeze events, 91 severe storm events, 38 tropical cyclone events, 15 wildfire events, and 14 winter storm events with losses exceeding $1 billion each.\(^1\)

According to some experts, it’s not in our imagination that natural disasters are occurring more often and with greater severity. When interviewed for an article on LATimes.com, atmospheric scientist Kerry Emanuel said, “We think that Harvey-type of rainfalls will become noticeably more frequent as the century goes on. We do think the incidence of the high-intensity events is going up, and that's sort of what matters for society.”

Custom homebuilder Patrick Martin, president of Marwood Construction—which specializes in high-end homes in the metro Houston market—is noticing the frequency firsthand. “A 500-year storm has become fairly common for whatever reason. We've had three in the last ten years. Harvey was classified as an 800-year storm,” says Martin. “Something is going to have to give because we're so dense, there is not a lot of right of way.”

The term “100-year flood” often causes confusion, as many homeowners assume that it’s a flood that occurs once every one hundred years. The term actually refers to a flood that has a one percent chance of happening within any given year. It’s a statistical measurement used by weather scientists and organizations like FEMA to categorize the likelihood of a flood occurring within the calendar year, not a measurement used to predict the timing of future floods.\(^2\)
Beefed Up Building Code

After Hurricane Harvey hit the greater Houston area, city code officials updated building codes in areas of 100-year floodplains. The code now requires that all new construction be built two feet above structures located in the 500-year floodplains to help mitigate flooding.

In Puerto Rico, city officials assessed the post-Irma damage and determined that it was not the codes themselves that were ineffective, but rather a lack of code enforcement. In an interview with the Wall Street Journal Ricardo Alvarez-Diaz, president of the Puerto Rico Builders Association, guessed that about 55 percent of structures in Puerto Rico are not built to code because the government does not have an adequate process for approving plans and visiting construction sites.

One organization spearheading the push for more stringent codes is the National Institute of Building Science. In a report titled “Natural Hazard Mitigation Saves: 2017 Interim Report,” they explain that building structures that exceed select requirements of the 2015 International Building Code can save the nation $4 for every $1 spent. While it might be idealistic to expect that all structures be built above and beyond the existing code, this organization makes a fair case. With a more proactive approach to resilient building, we might greatly lessen the damage and expenses in the aftermath when severe weather does occur.

Defense Against Mother Nature

While some states are focusing on building code enforcement, out west in California fire departments are literally fighting fire with fire. In an attempt to deter future forest fires, some California fire departments are setting small controlled burns in designated areas. These controlled fires are an attempt to eliminate the dead trees and underbrush that act as kindling and in turn exacerbate a non-controlled wild fire.

An Allied Fight

It goes without saying that severe natural disasters can have huge emotional and economic effects on businesses and homeowners for years after the event. Though the turmoil of being displaced from a home is hardly offset by an insurance check, it’s often the first sign of hope when it’s time to rebuild or relocate. Local builders and remodelers become allies for many homeowners who likely had no plans to make hugely important residential investments.

Knowing that natural disasters might be increasing across the United States, all members of the built environment can be warriors in the fight against the devastation of severe weather by staying at the forefront of resilient building practices, local code updates and the latest product innovations.

(1) https://www.ncdc.noaa.gov/billions/
(2) https://training.fema.gov/IEEdu/docs/hzarm/hzarmHandout%201-5.pdf
While the building and construction industry battles with a skilled labor shortage, it is also combating a substance abuse crisis with a portion of its current workforce. This epidemic is occurring in industries across the United States; however, in a sector that deals with precision and onsite hazards like heavy machinery, power tools, falls from heights and moving objects, the industry’s substance abuse rates are heavily scrutinized.

Key Areas of Concern
1. Serious injuries and/or fatalities
2. Quality concerns or poor workmanship
3. Time away from work
4. Workers’ compensation claims and related costs (direct and indirect)

Construction Coalition for a Drug- and Alcohol-Free Workplace

The Construction Coalition for a Drug- and Alcohol-Free Workplace, started by two industry associations that joined together in a banded fight against substance abuse, strives “to establish industry-wide recognition and advocate the implementation of a strong substance abuse policy, as well as provide industry best practices to help achieve the goal of zero substance abuse-related incidences on the jobsite.”

Theresa Kern, the National President of Women Construction Owners & Executives, USA and a member of the Coalition, has witnessed both the problem and corrective steps. Kern believes the prevalence of substance abuse exists because of the nature of the business. “Construction is a kind of rough and tumble, hurry up and get it done type of industry.”

But groups like the Coalition are working to change that. According to Kern, “The Coalition is trying to make the public aware, make craftsmen aware of it, and make drug testing more available.”

Through more routine and responsive drug testing, said Kern, the industry can better help with early identification and rehabilitation. “If you don’t put it into practice, if you don’t deal with it, if you don’t try to correct it—big deal,” she said. “If it’s not addressed, the answer is obvious. Our safety records are going to tank.”

Everybody in the industry, said Kern, is concerned about worker safety, but a more unified front and collective approach is paramount. Her recommendation is a larger database that more employers can reference to check employees’ backgrounds.

“What is getting out that if you are a drug user, don’t do construction,” explained Kern, who is also dedicated to helping employees rehabilitate. “You have to be aware of your situation. We don’t take everyone because there is a shortage. We take qualified, ready-to-work, drug-free people doing the best work they can do.”

* According to the Substance Abuse and Mental Health Services Administration using reporting from The National Survey on Drug Use and Health. The included data is representative of combined rates from 2008 to 2012.
Angie’s List Partnership Offers Exclusive Perks for LP BuildSmart Preferred Contractor Members

In February 2018, LP Building Products announced its yearlong partnership with Angie’s List, a leading online review platform, to promote LP® SmartSide® Trim & Siding to contractors and homeowners.

Through the partnership, LP SmartSide Trim & Siding is the only siding manufacturer advertised on the site throughout 2018. Members of the LP BuildSmart™ Preferred Contractor program (LPBuildSmart.com) will receive a free month of advertising on the Angie’s List website and access to the site’s database and services as a lead generation tool.

Homeowners trust Angie’s List to find reliable contractors and high-quality housing materials. Introducing LP SmartSide products to a large community of homeowners helps increase awareness of an engineered wood siding and trim that’s as durable as it is beautiful.

Builder Magazine and Meritage Homes Unveil the reNEWable Living Home

Meritage Homes Corporation, a leading U.S. homebuilder, and Hanley Wood’s Builder magazine teamed up with industry leaders to design and build the reNEWable Living Home in Orlando, Florida. The home is designed to showcase the needs of the estimated 60 million people living in multigenerational households.

The nearly 5,800 sq. ft. home features an open floor plan with spaces that can be manipulated to the individual buyer’s needs. In addition to meeting a family’s functionality needs, the home is engineered for performance and healthfulness with renewable energy sources and sustainable building materials. The reNEWable Living Home challenges conventional construction practices to bring families a state-of-the-art home they can afford.

Meet Katerra: The Tech Company Sparking a New Approach to Construction

As technology continues to be at the convergence of practically everything, techy startup Katerra is taking a new disruptive approach to the residential construction space. According to a recent New York Times article, “Katerra, which has its headquarters in Menlo Park, Calif., is essentially a one-stop shop for buildings, from architectural design through the actual construction. It obtains the materials itself and creates components at its factory in Phoenix. It has formed a network of suppliers around the world.”

With a vision driven by eliminating construction site waste, Katerra offers a turnkey soup-to-nuts approach, from design to production and sourcing, logistics and construction to labor management. According to Katerra exec Trevoe Schick (a Silicon Valley alum), this integrated mentality—which means designing for efficiencies and economies of scale—should help the industry by allowing developers to do more projects at a lower cost with a faster time to revenue. Learn more at katerra.com.
A “See” Change in Construction
How architects and builders are using VR and AR technologies

Virtual Reality (VR) and Augmented Reality (AR) are now revolutionizing the building industry just as profoundly as they’ve transformed the world of gaming.

VR is a computer-generated simulation of a real-life environment, while AR allows you to place something digital into the real world. With AR, a user can insert Building Information Management (BIM) models, like one created in the LP Solutions™ software, onto a vacant lot to see what the built structure will look like.

Both technologies are rapidly gaining popularity with architects, builders and realtors—and they’re already a game-changer in the home improvement and remodeling business. Lowe’s now has a pilot program featuring Microsoft’s Hololens AR platform at many of its stores. The technology lets shoppers envision a kitchen in real time by letting them add or remove cabinets, countertops and more.

One of the pacesetters in AR for the building industry is Paris-based Augment, which has U.S. offices in New York and Orlando. Since 2013, Augment has been selling AR solutions to leading architectural and construction firms, including Aurecon, Clark Pacific, Gensler, Parsons and many others.

“In the design stage, you can use Augment to show the client an AR version of what the building will look like,” says Augment CEO Jean-François Chianetta. “Once the project goes into the construction phase, Augment gives builders a 3-D view of the structure in AR on top of the building plan. At the same time, the real estate company can use Augment to begin selling the property by showing prospective buyers how it will look in a precise, immersive way.”

A new home is the biggest investment most people will ever make. With VR and AR tools, they can instantly see how changes to the floor plan will affect their living space. From design to finished product, these technologies are taking the guesswork out of homebuilding and letting imagination soar.
It’s not surprising that Zillow’s list of the hottest homebuilding markets in the United States is topped by tech boomtowns, including San Jose, San Francisco and Seattle.

Homebuilders in these cities are working hard not just to meet housing demand, but to pay close attention to the design wishes of today’s tech workers.

“We’ve been seeing a variety of trends driven by homebuyers in the tech industry, particularly when it comes to floor plan features,” says Stephanie Estrellado, marketing manager at Bay Area homebuilder Taylor Morrison. “Bay Area consumers, especially Silicon Valley employees, often work from home at least part of the week, so it’s important for them to have a functional yet attractive space at home that encourages productivity.”

Technology naturally plays a big role in new home design in these fast-growing cities. Many feature “smart home” innovations like voice-activated security systems and thermostats that use AI to subtly adjust temperatures throughout the day. Homebuilder Lennar recently entered into a partnership with Seattle-based Amazon to add Alexa and Wi-Fi to new homes during construction.

Production builders like Taylor Morrison are taking notice of the tech boom, as noted on Builderonline.com, and are offering smart systems as standard on many of their homes. These integrated systems can allow the homeowner to use voice- or smartphone-activated controls to adjust lighting, HVAC and more. Taylor Morrison’s newest community is in Tracy, California, about an hour drive from San Jose.

The Seattle metro is another hot housing market. “Young families are buying just about anything that comes up for sale,” says Mike Schwartz, president of Mike Schwartz Construction, an award-winning custom homebuilder in Puyallup, Washington.

To keep up with demand, Schwartz relies on a lot of LP® SmartSide® engineered siding built on advanced technology. “I really like the product when it’s pre-finished because I can put it on a home in the wintertime and the exterior is pretty much done. You can really make fast progress during the rainy season.”

Want to build techy?
CHECK OUT SOME OF THE ITEMS THAT ARE COMING STANDARD IN TECH-DRIVEN MARKETS:

- Doorbell cameras
- Digital assistants and smart speakers
- Smart locks and home security systems
- Voice-activated lighting and thermostats
- Wi-Fi-enabled garage doors
- Weather-sensing irrigation systems
- Sensor-driven and self-learning connectivity systems
CAN OFF-SITE CONSTRUCTION BE THE NEXT BIG MOVE IN HOMEBUILDING?

How engineered wood products are driving this dramatic shift
On a recent business trip to Brazil, LP CEO Brad Southern glimpsed the future of homebuilding.

“An off-site construction company was using our OSB products to design and build homes in the factory, then assemble them at the job site in record time,” he recalls. “This value chain seems to be a natural evolution from the antiquated methods of the past. With this approach, engineering and design are critical elements—and both efficiency and quality increase. I believe it’s a win-win—not only for LP and the off-site construction companies, but for all homebuilders as we work together to increase the productivity and quality of the home construction process.”

Many industry leaders believe that engineered wood will be the primary driver of the off-site construction phenomenon. “We see ourselves as an engineering company,” says Gerard McCaughey, CEO of Entekra, a leading off-site homebuilder in California that currently uses LP® TechShield® Radiant Barrier Sheathing. “We look at the entire house as an engineered system rather than a separate roof truss, floor truss, prefabricated wall panels and so on. We’re very focused on the precision and accuracy of the total design and that’s exactly what engineered wood offers. If you put engineered wood products into a house, they’re dimensionally stable, dry and straight as an arrow—and that greatly minimizes the potential for warranty issues after construction.”
Not Your Father’s Manufactured Housing

Off-site construction comes in many varieties—from structural building components like roof trusses, floor trusses and prefab wall panels all the way to homes built entirely in the factory.

Off-site construction is already revolutionizing the homebuilding process in Europe, Asia and Latin America. About 70 percent of new wood-framed homes in Scandinavia are built off-site. But it’s been a tough sell in the United States so far due to the lingering stereotype of the “manufactured home” rolling down the highway on the back of a truck. To help erase the stereotype, off-site construction is fast becoming the preferred method for hospitals, fast food restaurants and hotels.
stigma, Clayton Homes recently launched an ad campaign called “Have It Made” that showcases the beauty and quality of today’s factory-built homes. There’s even a growing market for luxury prefab homes.

Organizations like the Off-Site Construction Council, the Modular Building Institute and the Structural Building Components Association are helping promote the new paradigm. They pose a simple question: We don’t build cars and computers in the buyer’s yard in the hot sun and rain, so why should we build homes that way? Off-site construction offers undeniable benefits: lower labor and material costs, far faster construction time, enhanced safety and more. The big benefit for homebuyers is higher quality homes at a more affordable price.

**Where Off-Site Is Making Inroads**

Off-site construction is fast becoming the preferred method for commercial construction, including hospitals, fast food restaurants and hotels.

Marriott International, the world’s largest hotel company, recently announced plans to use prefabricated modular construction to build 50 new hotels. According to the company, a traditionally built Courtyard by Marriott hotel takes 12 to 14 months to complete. With modular construction, that time shrinks to as little as eight months.

In its most recent survey of commercial and multifamily builders, the Off-Site Construction Council found that 93 percent of respondents are already using prefabricated components. For example, Google’s parent company Alphabet Inc. recently ordered 300 modular apartment units to serve as short-term housing for its employees. But in single-family homebuilding, off-site construction accounts for only 4 percent of new home starts. “It’s actually around 8 percent in the Northeast, but only about 1 percent in the Southeast and some western states,” says Tom Hardiman, executive director of the Modular Building Institute. “Nonetheless, the labor shortage is having an impact in pushing more builders to consider modular and off-site.”

“Probably the biggest barrier to broader utilization of off-site construction is overcoming traditional attitudes, the feeling that ‘this is how we’ve always done it,’” says Ryan Colker, vice president of the National Institute of Building Sciences, which launched the Off-Site Construction Council in 2013. “The off-site construction we’ve seen in the residential space thus far has focused on using the same elements, just put together in a different location. But roof trusses are the same, whether they’re built in a factory or on the job site. There’s an opportunity now to increase the level of finished product used in residential construction. For instance, wall panels can come with integrated windows, insulation, electrical and plumbing. Unlocking the next level of benefits in off-site construction will require thinking of homebuilding not as a linear process but as combining processes into functional components that can be aggregated and brought to the jobsite at one time.”

Off-site construction requires greater upfront collaboration between architects and builders. “Utilizing off-site construction
A MARRIOTT HOTEL TAKES 12 TO 14 MONTHS TO BUILD. WITH MODULAR CONSTRUCTION, THAT TIME SHRINKS TO AS LITTLE AS 8 MONTHS.

“Source: Marriott International

doesn’t necessarily change what architects do, but they need to think and plan differently,” adds Colker. “Coordination and early decision-making are essential.”

A Closer Look At Off-Site Benefits

Here are a few of the reasons off-site construction is transforming homebuilding around the world:

SIGNIFICANTLY FASTER CONSTRUCTION TIME

Carol Galante, a professor at the University of California-Berkeley, recently published a study concluding that off-site processes could cut construction time up to 50 percent in multifamily housing. On the residential side, one study found that prefab framing could shave 66.5 hours off construction time. But build times continue to shrink. Entekra’s Fully Integrated Off-Site Solution (FIOSS)™ enables four workers to fully frame a 2,300 sq. ft. home to precision quality in just five hours.

MORE RELIABLE SCHEDULING

Weather delays have long been a problem for homebuilders. With off-site construction all the work is done inside, so there are no delays due to inclement weather.

FEWER WORKERS REQUIRED

Off-site construction helps remedy the chronic shortage of skilled labor in construction. Framing crews can be much smaller because they’re assembling the house, not building it from scratch. “Roof trusses and prefab walls help deal with the fact that housing demand is growing, yet we’ve lost a lot of workers,” says Phil Knepp, EWP sales and design manager at K&K Industries, a building components manufacturer that uses LP® SolidStart® LSL.

BIG BOOST IN QUALITY

“Off-site manufacturing dramatically increases quality and precision,” says Entekra’s McCaughey. “It’s not just the automated equipment on the factory floor. It’s also the design and engineering software that we’ve invested heavily in. Europe is leading the way here. My previous company [Century Homes] was the largest off-site home producer in Europe. We were producing 8,000 houses per year out of five factories. Now we’re bringing that design and engineering expertise to America, along with advanced German and Swedish automation.”
the old home gets torn down, and the Blu home gets placed on the new foundation within weeks. In contrast, it typically takes two years or more for traditional teardowns and stick rebuilds in California.

The growth in off-site construction will also spur more sales for LP products. “Our quality, high-performance products like LP® TechShield® Radiant Barrier Sheathing and LP Legacy® Premium Sub-Flooring are natural fits for the in-plant production process,” says Southern. “The factories also consume a lot of commodity OSB. But the really interesting play could be LSL, which is engineered straight and strong. The business model for off-site construction really emphasizes design and engineering. Because these companies pay close attention to plant throughput and quality, it will be easier for them to see the value of LSL as a substitute for traditional lumber.”

Greater Job Site Safety
Because components built off-site are lowered by crane, crew members don’t have to climb as high on scaffolding to do their work.

Making Homes More Affordable
Thanks to faster build times with smaller crews, off-site construction will eventually help lower the cost of building new homes.

Off-Site’s Bright Future
Twenty years ago, the phrase “luxury prefab” home would have seemed ludicrous. But that’s exactly what companies like California-based Blu Homes are now offering. Blu’s factory-built homes typically take half the time of building a custom home. If using Blu to build a new home on a current lot, buyers can even comfortably live in their existing home until permits are obtained for the new home. Then

Insight from Brad Southern, CEO of LP Building Products
The overriding issue in our industry today from the demand standpoint is the shortage of skilled laborers. The main thing we hear from builders, contractors, designers and dealers is that they are struggling to hire the help they need in order to advance and grow.

In a recent conversation I shared with John McManus, head of residential content at Hanley Wood, he posed the question of “whether residential construction’s capacity constraint is more about a quantity of missing skilled and semi-skilled laborers, or rather about the quality of human talent and ingenuity necessary to overcome the barrier of missing headcount.”

As an industry, we have a ways to go to fix the unfortunate cycle driven by a lack of newcomers to our workforce and how that inhibits our technological growth and adoption. Which, in turn, inhibits us from attracting new talent. But let’s save that spin cycle for another day.

The way we can help that situation is by making sure builders, contractors, designers and dealers understand that the products we have today create value for them in the areas of efficiency, waste reduction and the reduction of labor needs. The industry is honing in on a strong performance mentality to do more with less. As installation, quality assurance and callbacks can eat away at timelines and labor resources, we can provide a way to get more efficient labor utilization at the build and even after the build—which puts time on your side and money back in your pocket.

From where we stand, we see the entire industry rapidly evolving and growing demand for high-performance, specialty products that fit niche needs. Based on our understanding of the industry and deep conversations with you, our customers, we are focused on six key areas: fire resistance, moisture management, durability, acoustics, energy efficiency and aesthetics. We approach each of these areas with the guiding lens of how to pass through efficiency and long-term time and material savings to our customers and so forth. Just like we pioneered our engineered wood product 45 years ago, we maintain our focus on creating better products and innovative solutions that fit the changing needs of our industry. •
In 1979, Sprenger Midwest was formed for wholesale distribution of lumber, plywood and other forest products to retail lumber dealers and industrial accounts in the Midwest. Since its beginning, the company has grown in part due to its mill sources and product line, but also because of its approach to sales and emphasis on customer satisfaction. While success can be measured in sales, Sprenger Midwest makes customer satisfaction the number one goal. To achieve this, the company strives to give its customers a product that both meets needs and matches expectations by prioritizing relationship building through good listening and communication skills. Knowing that some customers can behave as if price is the only factor in a buying decision, the company aims to convey value and long-term return on investment of high-performance products like LP® FlameBlock® Fire-Rated OSB Sheathing and LP Legacy® Premium Sub-Flooring to its customers through a variety of strategies and tactics.

**MARKETING TIPS**

**SELLING VALUE TO YOUR CUSTOMERS**

**SHOW & TELL PRODUCT RELEVANCE**

Back up claims of quality by detailing product features. When possible, show the product features. If a product is more expensive, explain what value the product offers that can’t be found elsewhere. Remember, a loyal customer is an educated customer.

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**FOCUS ON THE CUSTOMER**

Build a trustworthy relationship by asking questions to find out what the customer wants, needs and expects from a product, rather than pushing a personal agenda.

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**SHARE SUCCESS STORIES**

Call attention to your company’s strengths and skill set. By sharing company history as well as customer testimonials and reviews, you instill confidence in both your company and the value behind the products or services you provide.

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**KEEP UP WITH INDUSTRY TRENDS AND TECHNOLOGICAL BREAKTHROUGHS**

Stay up to date on industry trends to keep pace with your customers, build credibility and offer more relevant information.

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**LEVERAGE SOCIAL MEDIA MARKETING**

Improve brand loyalty and increase brand recognition through strategic social media messaging. Not only can social media help your company maintain relationships with existing customers, it can also extend your reach into untapped audiences.

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“Our Sprenger rep, Scott Knutson, took the time to learn about our business. Many times it’s about price, but not always. Anyone can come in with a good price…That’s why Scott’s Lumber is a large customer of Sprenger Midwest. They took the extra time to understand our business and how their business could fit in to provide value.”

Mark Kozel
Scott’s Lumber
Roof decks that use radiant barrier technology are superior to those with standard sheathing products when it comes to building an energy efficient home.

Radiant barrier has been used on nearly every NASA mission since the Apollo program and was inducted into the Space Technology Hall of Fame in 1996.

9 BILLION
Square Feet of LP® TechShield® Radiant Barrier Sheathing Installed and Counting

285,000,000+
LP TECHSHIELD PANELS SOLD

1998
LP TECHSHIELD LAUNCHES
Only radiant barrier with patented VaporVents™ technology

2,400,000
INSTALLED ON 2.4 MILLION HOMES

HOW RADIANT BARRIER CONTRIBUTES TO HERS SCORES AND GREEN BUILDING CODE

THE BUILDING SCIENCE:
HOW RADIANT BARRIERS WORK

WITHOUT LP TECHSHIELD

WITH LP TECHSHIELD

Radiant Heat Blocked
Attic Temperature Reduction

97%
30°F

Blocks up to 97% of the radiant heat in the panel from emitting into the home’s attic, lowering attic temperatures by up to 30°F

- Zone 1, HERS/ERI Index: ≥ -3
- Zone 2, HERS/ERI Index: -3
- Zone 3, HERS/ERI Index: -3
- Zone 4, HERS/ERI Index: -2
- Zone 5, HERS/ERI Index: -1
According to the latest Leading Indicator of Remodeling Activity (LIRA) from Harvard University’s Joint Center for Housing Studies, homeowner spending on remodeling and repairs will rise this year to about $340 billion—a 7.5 percent increase from 2017. Homeowners are getting daily inspiration from popular home improvement shows like *Fixer Upper* and *Flip Or Flop*.

The bullish market for repairs and remodels (R&R) has even lured investment bank Goldman Sachs into the action. The Wall Street giant recently began offering home improvement loans that will let homeowners quickly finance projects up to $40,000 without the month-long process of getting a home equity line of credit (HELOC).

“The Repair & Remodel market is really hot right now,” says Lane Williams, LP’s R&R segment marketing associate. “You can tell from the many home improvement shows on television that there are diverse needs—from people who flip houses to those who have lived in a home for a long time and now want to upgrade.”

Siding replacement will be one of the most robust R&R activities this year. According to *Remodeling* magazine’s newly released 2018 Cost vs. Value Report, nearly 77 percent of the cost of siding replacement is recouped by the increase in home resale value. The average cost of siding replacement in the United States is $15,072, which is offset by an increase in a home’s average resale value of $11,554. In its latest forecast, the Freedonia Group predicts that siding sales in the United States will grow 7.7 percent annually through 2021.

LP’s R&R segment is well positioned to take advantage of this increase in siding demand. LP® SmartSide® siding was recently voted *Remodeling* magazine’s preferred brand of engineered wood siding. In addition, Angie’s List announced an exclusive partnership in which LP SmartSide products will be the only siding products advertised on the influential site in 2018. [See story, page 07.]
“We pride ourselves on the game-changing durability, beauty and workability of LP SmartSide products,” says Williams. “The recognition we get through these awards and partnerships will continue to build brand awareness with both remodelers and homeowners.”

The R&R segment team oversees the LP BuildSmart Preferred Contractor Program, which provides product training, lead generation and rewards for participating remodelers who use LP SmartSide products. “The program gives members all the resources needed to be successful, built around a really strong co-marketing effort,” says Williams. “LP BuildSmart members have access to job-estimating tools and financing options that they can use to grow their business.”

“The LP BuildSmart program is primarily focused on installation and product training as a core foundation,” says Brent Taylor, president of O.C. Taylor in Raleigh, North Carolina. “That’s what sets it apart from competitors’ programs that seem to only care about exclusivity and usage. The BuildSmart team is wonderful to interact with, and they’re only a phone call away if a question arises.”

Lately, Taylor’s customers are showing a preference for colors and textures inspired by the great outdoors. “My clients prefer the textures found in nature,” he says. “The LP SmartSide cedar texture fits into this category, as well as the realistic cedar shake profiles. Grays have been some of the most popular colors, plus the tried-and-true earth tones. I even had a client who liked the LP SmartSide primer color so much that I had Sherwin Williams color-match it.”

This year, the demand for siding and other R&R projects is a coast-to-coast phenomenon. “We’re anticipating very even growth all across the country in 2018,” says Williams.
Suburban Planning Reduces Traffic and Noise

Does suburban living conjure up thoughts of kids on bicycles speeding around spacious single-family lots, neighborhood potlucks on cul-de-sacs and the chirp of crickets lulling you to sleep at night? In many parts of the United States, that image—albeit pleasant—is changing with urbanist design principles in suburban areas. One of the major components of new urbanism is to create more interconnected streets and to reduce dead-end roads and cul-de-sacs.

Cul-de-sacs and dead-end streets help keep neighborhood traffic under control.

**TRUE or FALSE**

A perceived benefit of cul-de-sacs and traditional suburban sweeping roadways is a slower, decreased traffic flow. The reality, however, is that traffic is more dangerous in the “loops and lollipops” roadways of traditional suburban neighborhoods than in more interconnected new urbanist-based neighborhoods.

“When you are using the design principles of new urbanism properly, the streets are actually safer,” explained Brian White, founding principal at Town Planning & Urban Design Collective. “Streets are narrower, there is on-street parking, there are more people around. All these things slow traffic in different ways, not with speed humps and dead ends.”

Gridded roads make transportation more direct and easier to predict. But by straightening roads and having more through-streets, traffic more evenly spreads across all streets.

“Cul-de-sacs are largely unnecessary and make all the traffic go onto other roads, causing traffic, speeding, and all the things that make roads unsafe,” said White. “You need an interconnected network of streets so no one street becomes the main artery.”

To combat this inevitable dead end because of topography or other environmental aspects, White recommended, “First, don’t make it a big cycle. It can still have the radius in it for a firetruck to turn around, but make it more of a square park.”

In closer proximity, people will naturally hear their neighbors more.

New Urbanist neighborhoods create more noise.

**TRUE or FALSE**

“Because there is a network of streets, no one street has too much traffic on it so you don’t really have traffic noise issues,” said White.

In new urbanist communities, it is not uncommon to hear people pushing a stroller down the sidewalk, couples enjoying a courtyard and an outdoor concert in a shared greenspace.

“It becomes different from your old experience, but it’s wonderful in its own way,” said White.

In addition to thoughtful design, builders and architects can also turn to leading industry products for assistance in sound control measures. According to White, “If not done properly, some of the greatest sound-related issues you can have are the sounds of people walking overhead or in the next unit.”

LP FlameBlock® Fire-Rated OSB Sheathing can be used in the Intertek Listing LPB/WPPS-60-01 assembly to meet rigorous fire codes for zero-lot-line construction. The 2x6 framing creates a deeper wall cavity for more insulation. Using mineral wool insulation in a 2x6 wall assembly increases the Sound Transmission Class (STC) rating compared to standard fiberglass insulation. This means that less outdoor noise penetrates the wall. Plus the additional mineral wool insulation in 2x6 assemblies can also achieve an R value of 23 compared to the typical R-15 in 2x4 walls.

Additionally, LP SolidStart® I-Joists and LP FlameBlock I-Joists provide builders with easy-to-install floor joist solutions that also offer added sound control capabilities.

By incorporating high-performance products like these, builders can typically see decreased labor and framing costs compared to installing their traditional, more time-consuming counterparts.

Said White, “Any products that easily combat sound without making the price of the unit astronomical would be welcome for sure.”

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A lot of colleges prepare students for careers in construction and architecture, but two universities are quickly rising to the top of the list: the University of Tennessee and Virginia Tech. Both universities offer not just innovative curricula, but partnerships with industry leaders that are helping students make rapid career progress after graduation.

Last year, LP co-sponsored the Nashville Civic Design Center's (NCDC) Urban Design Studio: Timber Tower for Sustainable Future, where students from the University of Tennessee College of Architecture and Design envisioned a wood-framed high-rise building in downtown Nashville.

During the semester-long study, students under the instruction of UT faculty member Ted Shelton alongside community members and city officials learned about designing with timber structural systems and the opportunities provided by renewable resources like engineered wood.

“While the UT project was strictly theoretical, the opportunity for students to explore new technologies and design considerations will be impactful for our region and could lead to policy changes to allow this type of construction project in Nashville,” said NCDC CEO Gary Gaston.

Throughout the semester, students received technical instruction from Benton Johnson, a leader in the urban mass timber movement known for designing many of the world’s tallest buildings. The studio is part of the college’s Governor’s Chair for Energy + Urbanism, a unique partnership of the Oak Ridge National Laboratory; Skidmore, Owings & Merrill; and UT.

At Virginia Tech’s Myers-Lawson School of Construction, graduates get something that’s rare these days—multiple job offers and a 100 percent job placement rate. “We run two career fairs each year where leading firms recruit,” says Dr. Brian Kleiner, Myers-Lawson’s director.

“We have two undergraduate degree paths,” says Kleiner. “On the engineering college side, we have the Construction Engineering & Management degree. And on the architecture college side, we have the Building Construction degree. The latter is really a construction management degree, so close to 100 percent of graduates go on to climb the construction management ladder. Many of our construction engineering graduates also get jobs in construction management, although there’s a fair percentage that begin their careers with ‘construction engineering’ in the job title. Irrespective of whether students take the engineering or non-engineering path, they have multiple offers and a 100 percent placement rate after graduation.”
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