Think Global, Build Local

A Brief Tour of the Latest in Sustainable Building Products From Around the World

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MBAKS

The Puget Sound region is leading the nation when it comes to green construction, and local certification programs like Built Green are codifying what it means to be truly sustainable. Just this year, the U.S. Department of Energy awarded a quarter of its Housing Innovation Awards, an honor that considers builders from all 50 states, to Washington builders.

But there is always more to learn in the fast-advancing field of green construction. One of the best places to find companies and products that think outside the box is, well, outside the box of national borders. When you look abroad, you'll find hundreds of exciting new ideas, brands, and technologies that represent both the latest in science and centuries of accumulated wisdom from the cultures that developed them.

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Sonja O'Claire, manager of Built Green, explains that "while local materials have historically been the greenest option, the positives of adopting carbon-reducing innovations from around the planet can sometimes outweigh the negatives of global transport." But, she adds, "before buying international products, green builders should perform a life cycle assessment to weigh costs and benefits."

With that in mind, let's take a brief tour of some of the best products the world offers.

A bright bedroom arranged atop Amorim WISE cork flooring.

PORTUGAL

Popping the Cork on Flooring

From Portugal comes Amorim WISE cork flooring. Cork may not be the first thing that comes to mind when you're shopping for floors, but it's healthy, green, waterproof, and comes in an attractive variety of styles that can be placed in any room. Seattle-based Greenhome Solutions' Pieter Sundgren, an expert on the latest, greenest building products, explains, "WISE was created to target luxury vinyl products—with all their PVCs and chemicals—on the U.S. market." Comprised of cork granules and limestone, "WISE is structurally sound, very warm and insulating, incredibly stable, and reduces indoor noise with its natural sound-absorbing properties." Even better, WISE cork offers a negative carbon balance because it's made by repurposing a byproduct of the wine cork industry. A cork tree can continue growing even after its bark is harvested, and cork forests retain 73 tons of carbon dioxide for each wine cork created!

U.S.A., NEW ZEALAND

For Insulation, Count on Sheep

Fiberglass insulation packs harmful chemicals and clogs landfills. Enter an age-old solution: wool. It doesn't get any more natural than the stuff that keeps sheep warm and dry. Sundgren puts it best. "If I have a choice between hugging wool or fiberglass, I'll choose wool." Reno-based Havelock Wool produces fully biodegradable wool insulation sourced in New Zealand that naturally manages moisture while retaining warmth. Havelock wool achieves an insulation R-value of up to 4.3 per inch depending on the product—perfect for the damp Northwest. Sundgren explains, "Wool can absorb up to 30% of its weight in moisture without losing R-value, unlike fiberglass." And because it's produced in traditional textile mills instead of through a petrochemical process, wool production is safer, more renewable, and less energy-intensive.

MEXICO, SWITZERLAND

Laying Green Foundations

Like it or not, concrete is essential for construction—it's the second most-used substance on Earth after water. Unfortunately, the production of concrete emits lots of carbon (4–8% of all carbon dioxide emissions globally). That's what makes CEMEX's Vertua Net-Zero CO_2 Concrete so exciting. By replacing traditional Portland cement with lower-carbon supplemental cementitious materials, CEMEX claims a carbon footprint up to 70 percent lower than conventional concrete, with the remaining 30 percent "neutralized" through carbon offsets. Vertua concrete is not yet sold in Washington, but keep an eye out for it and other forms of reduced-carbon concrete like Swiss-developed Limestone Calcined Clay Cement.

While you're waiting, O'Claire says, "there are many supplementary cementitious materials available that can improve quality while lowering carbon emissions and diverting toxic materials from landfills." She suggests specifying concrete mixes that have environmental product declarations (EPDs) and use at least 25–50% supplemental materials.

NORWAY

The Power of Wood

Hailing from Norway and sustainably sourced from FSC® certified forests, Kebony wood products pack both natural beauty and rugged durability—suitable for cladding and decks exposed to the worst weather the Pacific Northwest can throw at them. A thermally-modifying process transforms pine and similar wood species into a product that matches and sometimes exceeds tropical hardwoods but without environmental degradation. Sundgren says, "Kebony is as strong, weather-resistant, and beautiful looking. We need to eliminate tropical wood in the market. The challenge is there hasn't been a replacement product for it. Kebony is that replacement product."

JAPAN

Secure the Perimeter

Imported by Interra USA, Joto-Vent crawlspace ventilation systems have been ventilating foundations in Japan for 45 years. Joto-Vent tech evolved out of traditional Japanese homes, which were historically slightly raised to control moisture in a damp environment, preventing rot while extending the home's lifespan. Perimeter vent systems are designed to maximize airflow in attics and crawlspaces, protecting homes from moisture, mold, and pests. Joto-Vent systems can also help reduce and prevent earthquake damage with their strong, unbroken foundations—something worth seriously considering in our seismically cranky region.

GERMANY

Powerhouse Appliances

Miele has led the way in bringing high-end German appliances into American homes, and the company continues to push handsome design, durability, and energy-efficiency to their limits. Several of their next-generation dishwashers and tumble dryers and a new refrigerator were designated ENERGY STAR Most Efficient certified products in 2021. When putting together a kitchen or mudroom, consider G 7000 Series Dishwashers, T1 Series Heat-Pump Dryers, or the K 31222 Ui Built-Under Refrigerator to create a sleek, energy-efficient finish that will dazzle your clients.

JAPAN

Pump Up the Volume With CO_2

At first glance, the Japanese-developed SANCO2 CO_2 heat pump looks like a conventional heat pump. But it has a secret weapon: it uses CO_2 as a refrigerant. Typical heat pumps use refrigerants with over 1,000 times CO_2's global warming potential. Additionally, CO_2 is highly efficient even at temperatures as low as -20 degrees Fahrenheit. Five times more efficient than conventional electric water heaters, the SANCO2 requires significantly less electricity to work, even while raising water temperatures to 150 degrees at 0.3 gallons per minute.

This impressive efficiency can help a home get closer to net zero. Explains O'Claire, "Heat pump technology is one of the most efficient heating and cooling technologies we have, and the SANCO2 heat pump removes a lot of the environmental concerns around the increasing use of refrigerants in our homes."

JAPAN

The Power of Fire

An alternative to chemical treatments, thermally modifying wood by "cooking" it changes it on a cellular level. Stripped of organic compounds, it no longer absorbs water or needs sealer or paint for preservation, keeping rot and mold at bay. The Japanese method *yakisugi* heats the wood by charring the surface with fire. The result is *shou sugi ban*—marketed as burnt timber cladding in the U.S.—an attractive wood that is resilient, fire- and waterproof, and insect-resistant. Both Japanese and North American companies produce wood utilizing the *yakisugi* method.

SWEDEN

Resilient Wood

Hardwood floors, highly popular and often healthier than carpeting, are susceptible to costly wear and tear. When it comes to wood, durability and water resistance are key for long-term resilience. That's why Valinge in Sweden has developed hardened wood flooring three to five times stronger than conventional solid wood or engineered hardwood. Pieter Sundgren describes it as "a very cost-effective, very beautiful wood product that has a few additional benefits that conventional wood products simply don't have. It's wood on the top and wood at the bottom with an extremely high-density fiberboard core that has been so densely compressed the end result is strength, durability, and impact-resistance. You get the look, feel, sound, and property of real wood with the advantages of laminate."

To learn more about green products from the U.S. or abroad, visit Built Green at builtgreen.net

SWITZERLAND, FRANCE

Supremely Solar

SunStyle® solar roofs bring together protection from the elements and highly-efficient roof-wide electricity production, with stunning and durable dragon-scale-pattern shingles styled after Swiss Alpine homes. Their roofs have small footprints, are relatively easy to install, and often produce surplus power. Anthony Maschmedt of Dwell Development is effusive about the product. "This fully integrated roof system will be a game-changer in the green building sector." Maschmedt plans to install it on a historical renovation of a 1919 Seward Park home. "Our goal is to achieve net zero, and this solar roof will help us get there. It's amazing."