

Challenge and Response

Strategies for Survival in a Rapidly Changing Forest Products Industry

by Al Schuler, Craig Adair, and Paul Winistorfer

The U.S. has long been the world's largest market for wood and wood products, fueled by its demand for wood-frame housing. But forest product markets are changing, both in terms of where the products originate (domestically or abroad), and what products are being produced and consumed.

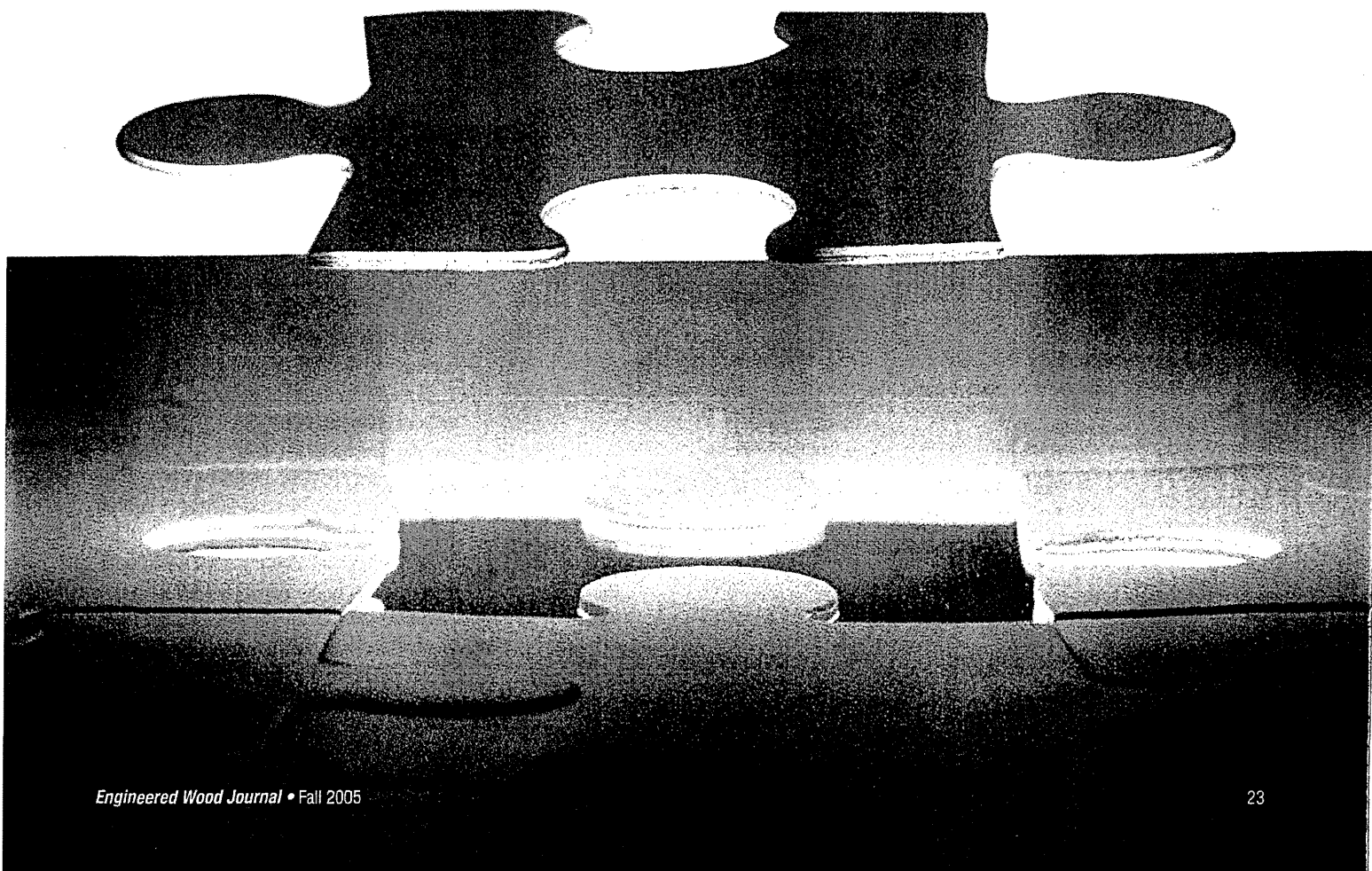
Source changes are being driven by globalization trends, technology advancements, and demographic issues, such as skilled labor shortages, which are forcing builders to change not only the way they build houses but also their choice of building materials.

While most imported lumber and panels in the U.S. continue to come from Canada, softwood plywood imports from South America and softwood lumber from Europe are increasing rapidly. Of combined U.S. and Canadian structural wood panel consumption, 4.3 percent comes from offshore, up from just 0.4 percent in 2000. Total North American structural panel imports are now around two billion square feet and that figure is expected to continue rising as more foreign mills obtain certification for our markets.

Structural panel imports could reach three billion feet or more within five years. In addition to the 28 offshore mills currently

certified by North American accreditation agencies, there are another 20 to 22 foreign panel mills seeking certification through offshore accreditation agencies. Domestic producers also face significant new volumes of softwood lumber and structural panels entering the world market from plantations in New Zealand, Chile, Brazil, and emerging industries in Eastern Europe and Russia.

Another trend today is that more of each house is being manufactured in the factory (e.g., trusses, wall panels, and engineered floor systems), and shipped to the job site for final assembly. Conventional wood products, mostly solid sawn dimension lumber, are being replaced by engineered



demand and capacity imbalances

wood products that offer improved performance, durability, and efficiencies in site construction.

Nonwood products such as steel and concrete continue to make inroads into traditional wood markets, particularly in the South. The South accounted for 43 percent of housing starts in 2004, but termites and other durability issues can favor nonwood building materials.

Additionally, technological improvements in communication, computing, and distribution are driving changes in the supply chain. The supply chain is shrinking as more products go directly from the mill to the consumer with an ever-smaller market share moving through traditional distributors.

And more recently, consolidation in the residential construction industry has resulted in fewer builders producing a larger share of houses. The top 10 builders now produce 20 percent of the single-family homes in the U.S., up from 10 percent a decade ago. The larger builders are leading the transition toward more factory manufactured components and are

demanding more services from their suppliers, such as installed sales of windows, doors, and wall panels; price smoothing; and complete framing packages cut to specification.

Builders want to simplify the construction process by accelerating accurate assembly of components on the job site, devoting more of their time to locating and developing land, providing financing to potential buyers, and reducing litigation risks.

All of these trends assure that the North American wood products industry will face challenges ahead. So far, consolidation has been the major industry response to these trends. However, there is another basic response that can be made—moving up the “food chain” by adding value to the product mix through product innovation and customer services. But such a strategy will be successful only if industry invests more in research and development and in education to create a globally competitive workforce.

market diversification The U.S. has experienced record housing demand

skilled labor shortages

during the past five years. Conventional housing starts likely will reach two million units this year, according to National Association of Homebuilders (NAHB). The National Association of Realtors (NAR) forecasts that existing home sales will reach 6.9 million, and that new single-family home sales will reach 1.24 million in 2005. To these statistics, add another 150,000 manufactured home shipments. Consider also that residential remodeling expenditures totaled \$233 billion in 2003, and grew another five percent in 2004, thus accounting for 40 percent of all

residential construction spending.

Thanks to the strong housing market, product demand has not been a primary concern recently. Rather, the greater challenge now is the ability to compete, and the supply chain impacts on the rest of the forest system in North America that may result from the loss of the manufacturing base. We are, by most accounts, the high cost producer of raw materials, and the high cost producer of many if not most of our finished goods. When offshore producers and suppliers begin to infiltrate our wood-based housing value stream, particularly panels, engineered wood, and cabinets, challenges to our domestic supply chain infrastructure will be even more significant than what we face today.

A large percentage of our forest products are consumed in one market—residential construction. About half of structural wood panels and nearly 90 percent of I-joists are consumed in residential construction, while almost 60 percent of LVL goes to that market.

PRODUCT MATURITY If steel framing and concrete walls are able to gain market share, or if offshore suppliers figure out a way to tap into our housing markets, as was the case with furniture and moldings, that could spell trouble. Most of our products are commodities and other parts of the world can produce many commodities more cheaply than we can in North America. Since such a large share of forest products is consumed in residential construction, the

industry cannot afford to take its customers—builders and remodelers—for granted.

Plans have been announced for eight to 10 billion square feet of new OSB capacity to be built in the U.S. and Canada within the next five years. Most of this capacity probably will be designed to manufacture typical floor, wall and roof sheathing. If the OSB share compared to plywood moves from just over 70 percent in 2004 to just over 80 percent by 2010, it will create demand for only an additional three billion square feet. OSB

Research and development needs

would need to capture 100 percent of the residential sheathing market, including all of the foam and fiberboard wall sheathing, to find a market for all of the proposed new capacity.

One of the challenges facing all manufacturing sectors is producing to demand—i.e., meeting customers' unique needs and wants—rather than simply producing to capacity in the hope that a market will be there. The global automotive industry, for example, faces this paradox annually and must offer deep discounts and purchase incentives to move excess capacity in inventory.

Producing to demand requires a more integrated, responsive and shorter supply chain. In practice, that means “moving up the food chain” by adding more net value to the product mix and by providing additional services. This strategy includes getting closer to key customers—helping them solve problems like dealing with labor shortages, site waste, and customer callbacks. Such approaches can yield better opportunities for margin improvement, return on investment, and overall profitability.

Some will no doubt move up the supply chain by divesting timberlands and other operations in order to become “consumer product”

technology and innovation

companies. Consolidation will help those that decide to stay in commodities. Others will have to find niche markets while some will disappear altogether.

Key to “moving up the food chain,” in addition to better marketing, is

research and development in support of product improvement innovations. Innovation and education will be called upon to lead the North American forest industry sector to competitive advantage against global forces that have plentiful raw material supplies, low manufacturing wages, fewer environmental and other regulations, less tort litigation, state of the art equipment and manufacturing capacity, and an increasingly world class manufacturing workforce.

Can education and innovation overcome competitive pressures on our forest product manufacturing base and the rest of the forest industry supply chain? We can draw on good examples from the U.S. metalworking industry, where the National Institute for Metal Working Skills (NIMS) is committed to developing a globally competitive American workforce. They are developing and implementing skill standards and certification and accreditation programs. Another example is the National Center for Pulp and Paper Technology at Alabama Southern Community College, which will lead the development of a national network for pulp and paper technology training.

Some key wood-based building materials are considered “mature.” They are at the late or declining stage of their product life cycle and consequently are vulnerable to competing technologies with their full array of new products and systems. This suggests a need to put more effort into developing new applications and expanding existing markets, such as

nonresidential construction, pallets, containers, advanced substrates for hybrid products,

and offshore housing for emerging world populations.

New processing technologies, the removal of trade barriers, and innovations in computing, communications and distribution have accelerated the design, production, and delivery of goods. These factors equate to unprecedented global competition for capital and markets and accelerate the competitive pressures to lower costs and improve productivity

As globalization expert Thomas Friedman notes in his book *The World Is Flat—A Brief History of the Twenty-First Century*, the rise of global trade means people in high wage countries have to find ways to move up the value chain, to have special skills that create superior products for which they can charge extra. “The ultimate challenge for America,” writes Friedman, “is whether we are prepared for a ‘flat world’—an interconnected world—where hierarchies are being eroded and playing fields leveled as other countries and people rise in importance and ambition. Money, jobs, and opportunity in the flat world will go to the countries with the best infrastructure, the best education system that produces the most educated workforce, the most investor friendly laws, and the best environment.”

Strategies for success in this new global business environment include developing a competitive workforce through investment in education at all levels, encouraging innovation, investing in research and development of products, systems and manufacturing; and responding more fully to the special product and service needs of customers. ●

Al Schuler (aschuler@fs.fed.us) is a research economist with the U.S. Department of Agriculture Forest Service, Princeton, W.Va. Craig Adair (craig.adair@apawood.org) is market research director at APA, Tacoma, Wa. Paul Winistorfer (pstorfer@vt.edu) is professor and head of the Department of Wood Science and Forest Products at Virginia Tech, Blacksburg, Va.

MERGER AND ACQUISITION PRESSURES

