



Oregon Wood Innovation Center

Connecting people, ideas, resources

FEBRUARY 2014

COMING OWIC EVENTS:

- March 6-7: [OWIC Innovation Days](#)
- March 11: [Improving Operations to Remain Competitive and Profitable \(Princeton, WV\)](#)
- April 15: [Controlling Mold & Sapstain in Logs & Lumber](#)

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WHAT'S NEW?:

Read the new [Wood-Based Entrepreneur's Toolkit—New Product Development](#)

Center for Advanced Wood Products Manufacturing & Design

Oregon's key competitive advantages over other commercial timber growing regions of the world are the high value of the timber that we grow, and the significant environmental protection of our forested landscapes. Yet despite the high value of our timber, we export some of our best raw materials to Asia instead of manufacturing products at home. The key to revitalizing the forest sector in Oregon is to dramatically increase the competitiveness of Oregon's manufactured wood products. Five global trends are creating new opportunities for the Oregon forest products industry to increase competitiveness.

Five Drivers of Change in Oregon and the Northwest

Emphasis on Rural Economic Development. The priority of the Oregon Business Leadership Council, the Governor, and the State Legislature is to create jobs in our rural communities. In Oregon, that means investment in natural resource-based sectors.

The Burgeoning Green Economy.

Architects now prefer to build with environmentally friendly renewable materials. At the same time, citizens are becoming more aware of the advantages of living and working in a healthy built environment. This awareness is significantly changing public attitudes about forestry and the wood products sector, and new markets for wood are opening in the non-residential building sector.

New Engineered Materials and Process Technologies.

Cross-laminated timber is a game changer for the non-residential building market. It is now possible to build tall buildings from massive timber products that offer enhanced structural properties. Research, testing and continued innovation is necessary for North America to catch up with Europe, where CLT is presently sourced. Many new products are possible.

The Resurgence of Manufacturing in the United States.

Public policy and a shifting economic landscape are prompting a growing emphasis on local manufacturing and the importance of locally sourced products – including building materials.

Growing Need for Active Management of a Huge Federal Forest Estate.

Large forest fires and forest health issues are changing public attitudes about forest management on federal lands. This means there will be a source of logs for domestic production of high value wood products related to management of forests with much longer rotations.

High-end homes of the future will be made of factory built modular components created from engineered wood products. Computer automation will link design to manufacturing with computer controlled and robots. Non-residential buildings will be similarly designed and constructed, creating an entirely new market for engineered wood products in 5–12 story buildings.

The northwest timber industry is perfectly positioned to offer new environmentally friendly products that are well suited to Oregon's natural resources, and can be competitively offered to a growing global market segment. Doing so would not only increase the value of Oregon's natural resources, but also enhance the overall value added, and grow manufacturing jobs in Oregon's rural communities, with substantial economic and social benefits for our state.

Education, research, testing and innovation are the keys to create the industry of the future. Marketing and cost performance must be improved if the manufacturing industry is to expand in domestic and international markets. Lack of access to a knowledgeable and technically proficient workforce and the challenges of implementing new manufacturing technology are factors currently inhibiting growth – particularly for small and medium size wood products companies seeking to expand product lines and markets. Northwest companies are calling for higher education to partner with industry to address these challenges by improving work-

force education programs, targeting applied research initiatives, providing highly trained employees, and testing new products and manufacturing technologies.

OSU's College of Forestry offers the premier forestry and wood products education and research programs in North America. Our Wood Science and Engineering Department will serve as the foundation for a new Oregon Advanced Wood Products Laboratory focused on the unique intersection of design, engineering, and manufacturing of engineered wood building components.

Faculty at the College of Forestry are well positioned to build on trusted relationships with Oregon's timber industry to create new research partnerships with manufacturers that will drive the innovation necessary for a resurgence in the Oregon wood products sector. We are also strategically partnered with the University of Oregon College of Architecture and Allied Arts to conduct interdisciplinary research in wood building design.

The Oregon Advanced Wood Products Laboratory

The College of Forestry is in the planning and design phases to construct a new building on our campus that will house the new research, education and training programs associated with advanced wood products for engineered building components. The features of the new laboratory will be:

- *A state-of-art building showcasing engineered wood products made in Oregon and housing the Department of Wood Science and Engineering.*
- *A learning environment for undergraduate and graduate student degree program offerings that incorporates elements of wood science, engineering, manufacturing process design, business, and utilization of wood in building design and construction.*
- *A 25,000 sq. ft. flexible high head bay for computer controlled manufacturing systems for use in applied research, product testing, demonstration, and education.*
- *Three classrooms for undergraduate education located in visual proximity to the advanced manufacturing lab, and one classroom integrated into the lab itself.*
- *A training and meeting room for industry use.*
- *A full suite of education and hands-on training programs to meet immediate needs of industry.*

OWIC 2013 Annual Report

Our 2013 annual report is now complete and on the OWIC website. See <http://owic.oregonstate.edu/annual-report-2013> As in prior years, the report is a brief summary of our activities in the prior year including workshops, webinars, publications, projects, outcomes & impacts, as well as a list of some of our work-in-progress.

As one example of OWIC impact from last year, we assisted Dirk Wallace with [SPEKPLY](#) in his new product development efforts. He said, "In the months since SPEKPLY con-

ducted our structural testing at OWIC we have made continuous progress in manufacturing logistics and gained traction in the design community at large. The data provided by OWIC has been instrumental when presenting SPEKPLY to architects, designers, builders and potential distributors. People are captivated by SPEKPLY's unique aesthetic, and OWIC's technical data helps tremendously in giving them the confidence they need to consider SPEKPLY for their projects... Most recently SPEKPLY has been selected as one of the key design elements for a new upscale Portland business."

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2nd Annual OWIC Innovation Days March 6-7, 2014

In previous OWIC newsletters, you have learned about our change to offering a BS degree in Renewable Materials. We are excited that at 70+ students, our undergraduate enrollment is now higher than any time in the last two decades. This means that we have a much higher need for internships for our students AND that there will be many more highly qualified people to fill your entry-level positions in the coming years. Last year, we developed a new event called OWIC Innovation Days in an effort to help connect our students with industry professionals and to share the state-of-the art in innovation in our industry.

This March 6-7 is the second annual OWIC Innovation Days. The evening of the 6th starts with a high-impact networking opportunity that allows you to interact with our Renewable Materials students. Dinner follows with students and faculty. Friday the 7th is a workshop on innovation in the forest sector and an opportunity for you to reserve a room to interview students for internships and permanent employment.

The first annual OWIC Innovation Days was a big success. We received extensive, positive feedback from industry members in attendance. Also, our students were excited about the opportunity to rub elbows with potential employers. As stated by one participant:

Becoming acquainted with industry professionals has been vital to my success thus far. Innovation Days was the perfect opportunity to revitalize relations with the old, and to connect with the new.

Camille Moyers, RM Undergraduate

If you want to compete for future employees from our program, it is important for you to be at this event! The key benefits for you attending are:

- The opportunity to network with our students, your future employees
- Learn of cutting-edge technologies that might be implemented in your business
- Learn about successful product, process, and business systems innovations

To register, go to: <http://oregonstate.edu/conferences/event/2014OWICInnovation/>





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Previous issues of the OWIC newsletter are available at: <http://owic.oregonstate.edu/newsletter/>