Innovation that's part art, part science, all economic development.

It’s a $17 billion industry that could be even bigger. South Carolina’s forest products industry is one of the state’s leading industries — but it could grow exponentially through advancing the innovative, sustainable use of wood-based materials in commercial construction.

The Clemson Wood Utilization + Design Institute (WU+D) is the ideal combination of foresters, architects, engineers, constructors and building-industry stakeholders to open the doors to the broader, more innovative use of a truly sustainable building material — wood.

The WU+D unites industry and academia.

Only Clemson is able to link the collaborative capabilities that can touch every area from sapling to marketing. The University offers expertise in advanced materials, architecture, civil engineering, construction science, entrepreneurship and forestry, completing the chain that takes advanced wood products from the lab to the marketplace.

Through research and education, the Clemson WU+D hopes to

- develop forest-management methodologies that result in improved wood fiber production;
- forge new markets for the forest products industry;
- engineer innovative wood products that can better compete with steel, concrete and other building materials used in non-residential buildings;
- form partnerships with corporations needing product design consultation and testing; and
- prepare Clemson students — architects, engineers, materials and wood scientists, business and policy experts — for future leadership roles in designing and marketing sustainable, wood-based construction technology.
**Number 1. A case study in collaboration: CLT**

Clemson researchers have been studying the use of cross-laminate timber (CLT) in commercial construction. Already in use across Europe, the product is limited in use by state laws and building codes in the United States.

Research into this Southern yellow pine product has created a viable alternative to steel and concrete in construction that has great aesthetic appeal, creates demand for regional products and is a sustainable material. A University Creative Inquiry (undergraduate research team) has tested CLT extensively. Forestry experts are developing forest-management methodologies for improved wood-fiber production. Before the CLT project is complete the effort will call upon dozens of areas of expertise from forestry to manufacturing to building codes.

The products were also used on the Habitat for Humanity house built this year on the Clemson campus.

Working with the Solar Decathlon team, WU+D is sharing expertise, exploring new design ideas for building with wood and utilizing innovative wood materials. WU+D’s model of collaborative expertise is ideal for these innovative areas.

**Number 2. A case study in collaboration: Solar Decathalon 2015**

The U.S. Department of Energy recently named a Clemson University team as one of 20 from universities around the world competing in the Solar Decathlon 2015. Judged in 10 areas, from architecture and engineering to home-appliance performance, the team is charged with demonstrating how energy-efficient and renewable energy technologies and design save money and energy while protecting local communities and boosting economic growth.

WU+D is not only providing expert advice to the team, it is working with industry partners to provide wood building products that are both energy efficient and sustainable.

The products were also used on the Habitat for Humanity house built this year on the Clemson campus.

WU+D needs leaders. Now is the time to step forward as a founding partner or corporate member of WU+D, to advance the potential for WU+D and to fully realize the benefits it can bring.