



# The Global CLT Industry: Preliminary Results, 2016

## OVERVIEW

### AUTHORS

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### DESCRIPTION

A preliminary snapshot of the  
global CLT industry

### METHODS

Mixed: site visits and survey

### DATA SOURCE

Personal interviews, survey

### KEY FINDINGS

The industry is generally small-scale and consumes around 1 million m<sup>3</sup> annually

Highly diverse, sophisticated companies use different business models and technologies to produce custom products

Respondents are often invested downstream in the value chain, e.g., building construction

## Introduction

The global CLT, or more generally, mass timber panels (excluding glulam) industry is relatively new. With origins in Alpine Europe, this nascent segment of the forest industry is receiving high levels of attention among a variety of stakeholders. At times it is argued to be the future of building construction, creating a vast market for wood. However, what is the current reality of the sector? Estimates suggest approximately 1 million m<sup>3</sup> of global wood consumption annually<sup>1</sup>. This Brief describes preliminary results of an ongoing investigation designed to develop a comprehensive picture of the sector, as of 2016. In the following we provide a brief overview of methods and describe the sector.

## Methods

The information here is a combination of personal experience of the primary author, information from the trade journal *Holzkurier*, and an ongoing survey. The primary author has visited 20+ CLT operations since 2011. The survey, translated into Japanese, Spanish, French, and German was sent in 2016 (representing 2015 data) resulting in responses (as of August 15<sup>th</sup>) from 21 of the 47 identified companies. Results are preliminary, based on responses received thus far.

## Results

The information provided by respondents indicates a sophisticated industry where over 90% of production is a “specialty” product manufactured to custom orders (Figure 1). In fact, only one of our respondents indicated production of 100% blank, non-machined panels. This sharply contrasts with much of the forest industry that focuses on highly productive, commodity-focused operations.

With respect to market segments, respondents are focused primarily on multi-family housing, at nearly one-third of production (Figure 2). Medium size public buildings is second largest. Large-scale buildings represent only seven percent of the market for responding companies.

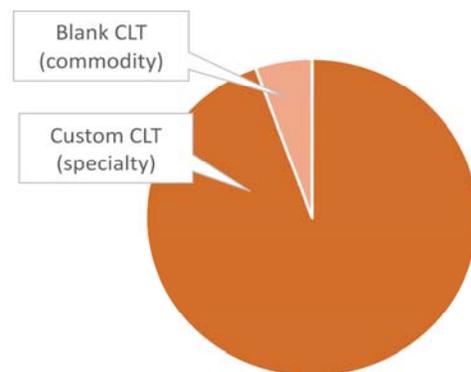


Figure 1: Specialization of Production (n=21)

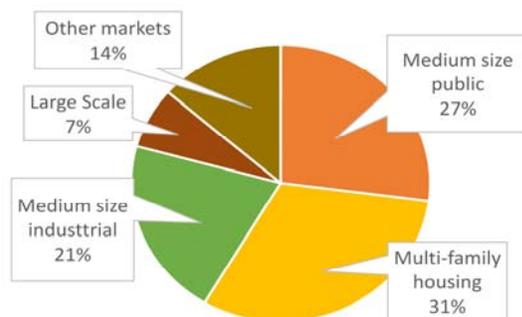


Figure 2: Target Markets (n=20)

Figure 3 provides an overview of the level of vertical integration of responding companies. Nearly one-quarter of respondents are involved with architectural design, just over one-third do building engineering, and just over 40% are involved with building construction. Although

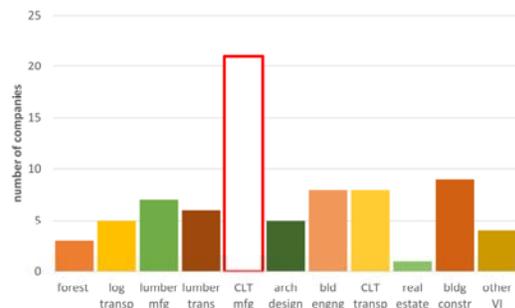


Figure 3: Level of Vertical Integration (n=21)

<sup>1</sup> Plackner H. 2013 Holzkurier (timber-online.net) 7/7/2013.

<sup>2</sup>Wagner, E., E.Hansen, and G. Ungson. 2007. Using Quality Function Deployment to Assess if a Strategy is Market-Oriented. Journal of Forest Products Business Research.44(1):16.

<sup>3</sup>Hansen, E. and E. Nybakk. 2016. When innovativeness determines market orientation: the forest sector and the Global Financial Crisis. BioProducts Business. 1(1):1-12.

the graphic does not depict a highly integrated industry sector, relative to much of the forest industry multiple respondents are heavily involved in downstream integration.

Manufacturing plants are predominantly on the small end of the scale. The information in Figure 4 is derived from multiple sources and represents annual per-shift capacity.

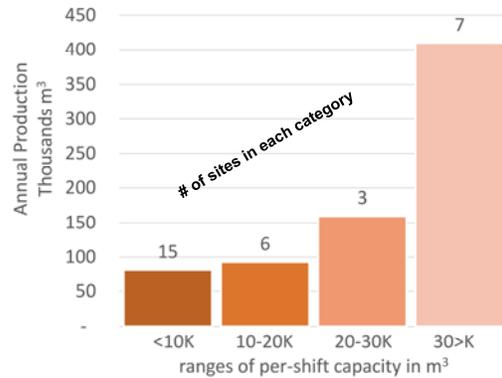


Figure 4: Size of Operations

Also based on multiple sources, Figure 5 indicates that just over half of the industry relies on PUR adhesives for mass timber production. The second most common was MUF. Surprisingly, a number of companies use nails/screws for production of panels.

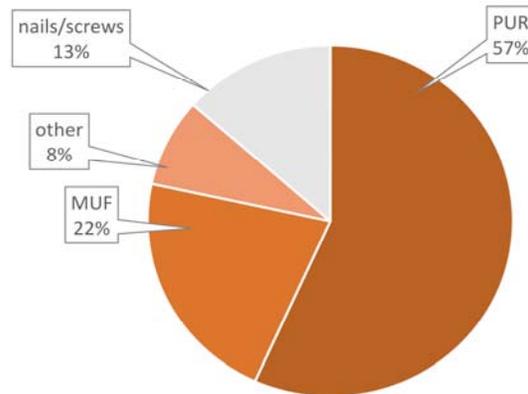


Figure 5: Adhesives/connections Utilized

What does the future look like with respect to capacity increases? Figure 6 depicts the intentions across 16 respondents willing to provide this information. Well over half expect to increase capacity over the next two years. Holzkurier suggests a production size of as much as 3 million m<sup>3</sup> in the medium-term.

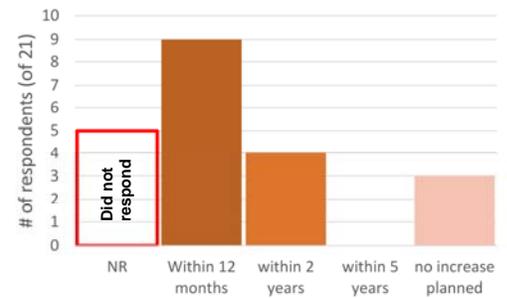


Figure 6: Intended Production Increases (n=21)

Similar to many forest industry companies<sup>2</sup>, respondents claimed quality as their primary competitive advantage (Figure 7). Somewhat surprising is that processing technology was fourth highest. It is noteworthy that two of the top three advantages are intangible in nature, a contrast to traditional forest industry companies.

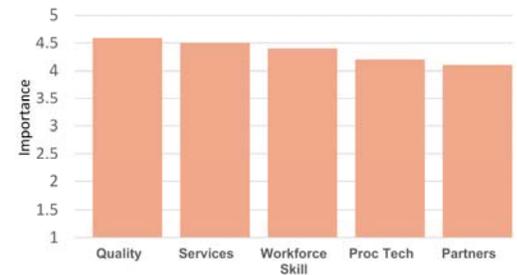


Figure 7: Identified Competitive Advantages (n=16)

Although there were no major differences in type of innovativeness respondents claimed about their firms, it is interesting to note that product innovativeness was rated as highest (Figure 8). This is in contrast to other sectors of the forest industry where process innovativeness tends to dominate<sup>3</sup>.

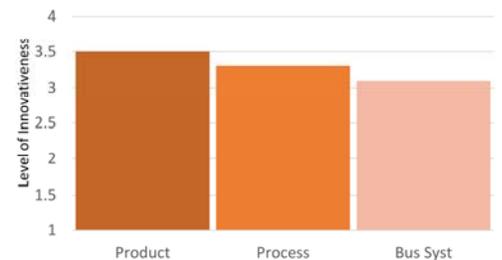


Figure 8: Levels of Innovativeness (n=14)

# Research Brief

Mission: Develop professionals in forest products marketing and business and facilitate forest industry competitiveness through education and research.

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