



Oregon State
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Establishing New Markets for CLT - Lessons Learned

OVERVIEW

AUTHORS

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DESCRIPTION

Lessons learned from the original CLT market in Europe

METHODS

Case study with personal interviews

DATA SOURCE

Mainly personal interviews (19), observation, secondary research

KEY FINDINGS

Much knowledge exists in the Original Market (OM), which is ignored in North America (NA)

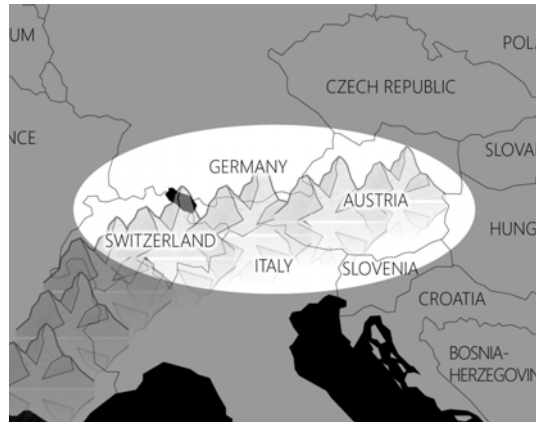
The biggest current challenges for CLT in NA are lack of education and antiquated, stiff planning processes

Potential for CLT in North America is large and growing. Standards (PRG320) and building code (IBC) acceptance are important for market development

TALLWOOD DESIGN INSTITUTE

Introduction

Cross Laminated Timber was developed more than 20 years ago in Europe. The cradle of this development was Austria, Germany, Switzerland and Northern Italy¹. The North American market is still rather young and tends to ignore this elaborate source of knowledge that is already existing in the original CLT market in the German-speaking alpine region of Europe. Therefore, this research was aimed at finding lessons that can be learned from the Original CLT market.



The Original Market of CLT

Methods

This research was designed as an exploratory case study of both the Original Market and the North American Market for CLT. As a main source of information, personal interviews were conducted. Informants were a variety of experts, knowledgeable about market dynamics and developments, as well as manufacturers. Secondary research was also conducted.

Results

The information provided by informants was analyzed for specific lessons that can be learned from the Original Market. Considering the differences in the individual markets, their implementation must be tailored to specific markets.

WOOD EDUCATION - The first lesson is that education is key for the growth of CLT. The more education is available, the more likely it will be for professionals to enter the industry. Key professions include architects, engineers and developers; all of whom must be familiar with the properties of CLT. In North America, education offered in wood construction is quite limited and therefore limits adoption and growth.



HOLISTIC DESIGN - CLT can be described as a massive wood panel with high degrees of prefabrication; therefore, a building must be planned in detail far in advance of construction. CLT construction requires more design work; however, it also allows for significantly shorter construction times on the build site. Common planning processes in North America are quite rigid, hindering the efficient use of CLT.



¹ Muszynski, L., Hansen, E., Fernando, S., Schwarzmann, G., & Rainer, J. (2017). Insights into the Global Cross-Laminated Timber Industry. Corvallis, OR, USA: Oregon State University.

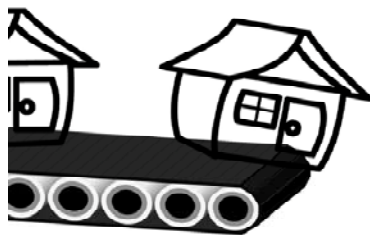
² Schickhofer, G. Flatscher G., Ganster, K., Sieder, R., & Zimmer, S. (2017). A Status Report from the CLT Hot Spot in Europe | Austria. (Presentation at CLT Seminar, Tokyo, sola city Conference Center)

BUILDING SERVICES - Because CLT is made of wood, all water-carrying services need careful planning. Leaks and other issues must be detectable and repairable very quickly, either limiting damage or stopping it before it can occur. Existing systems, modeled after concrete construction, do not provide this required flexibility and should not be replicated in CLT design.



TALL WOOD ILLUSION - Tall “lighthouse” projects in wood are good publicity for CLT, but are a small fraction of overall market demand. The real potential for CLT in North America lies in what is called the “mid-rise-gap”, buildings between 6 and 10 stories, where the highest potential CLT market demand can be found.

AUTOMIZATION - CLT is often highly prefabricated, with a growing use of automation. Computerized machines can prepare panels in the factory, and it is even possible to pre-assemble entire rooms, including finished interiors. When carefully planned, this allows CLT buildings to be highly efficient and cost-effective. This processes carry potential for bringing automation to the construction industry.



CARE & PRECISSION - Since the degree of prefabrication can be high in CLT, the degree of

precision must be high as well. This refers first of all to the design, but also the manufacturing and installation. Special care is needed, if the material is left exposed on the inside of a building. These panels need to be handled and installed carefully so that the high quality interior surface is not damaged.



FIND MARKET ENTRY POINTS - When a new market is being established, limited resources are available. Therefore, it is important to focus efforts on selected niches as entry points. In the Original Market, carpenters initially showed a lot of resistance because they saw CLT as competition, not as an opportunity. Architects were the only initial drivers. Today carpenters also use a lot of CLT. This example shows, that focus is key in the beginning.



FORECAST FOR NORTH AMERICA - Right now, about 65% of global production is still in Austria.² However, the global industry collectively acknowledges a huge potential for CLT market growth in North America. Both demand, and supply are growing. The last clouds are dissipating, and the North American market faces a sunny future.



Research
Brief

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

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