Mass timber in Europe and in the US – similarities and differences

Rodrigo Tome, Project Engineer, New Energy Works

ABSTRACT
It is 2020 and we need to rethink the way we build based on three important criteria: Ecology, Economy and Engineering. Due to global warming and climate change, a new ecological sensitivity has been growing in the society in the last decades, transforming building codes and regulations all over the world and creating a new market and economic opportunities for buildings that focus on reducing energy consumption and CO2 emissions.

Timber has become a central piece in this process due to its ability to sequester carbon and the fact that it is a renewable natural resource that requires very little energy for its industrial transformation. However, it is key to understand the material and its mechanical properties in order to engineer a wide family of products that respond to different construction needs and price tags. The goal of this presentation is to explore and analyze some of the mass timber solutions through examples both in Europe and the US, focusing on other options beyond the successful CLT and to take a glance at some of the modern research programs in timber construction that might define the future of this field.

BIOGRAPHY
Born in Madrid (Spain) in 1982. After graduating from the Polytechnic University of Madrid (Spain) as a Forest Engineer in 2010 I went to Switzerland to work with Professor J. Natterer as a junior engineer in his company Bois Consult Natterer.

After a brief Research Assistantship at the Polytechnic University of Lausanne (EPFL) with the Timber Construction Department in 2011, I began working as an engineer and designer in the international studio CBS-CBT with Jean Luc Sandoz. I developed a career in design and structural analysis of mostly mass timber projects. Some of which received different national French awards.

In 2017 I expanded my competencies in the USA by completing a MPS in Construction Management at SUNY-ESF followed by my current position as project engineer at New Energy Works where I am in charge of the design, engineering, fabrication and installation of a variety of projects.