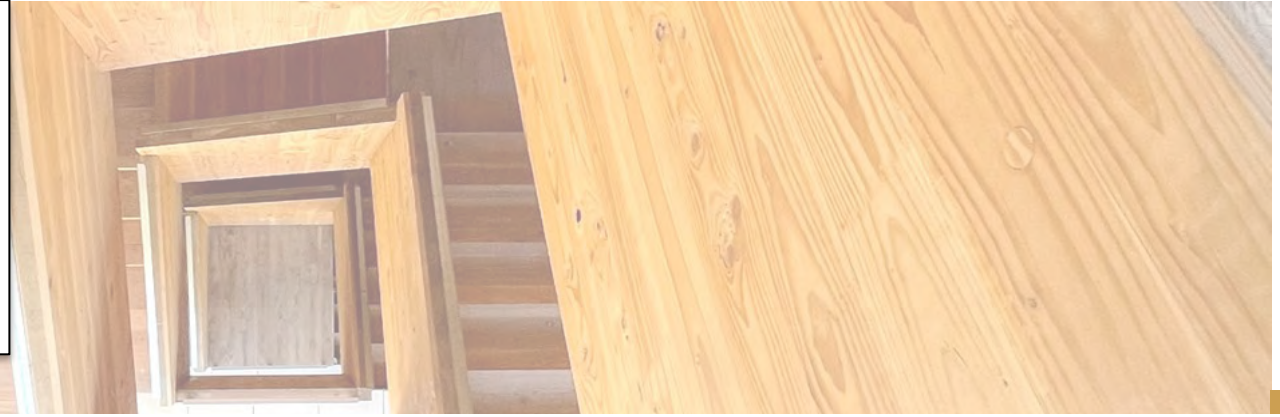
WOODRISE 2022
PORTOROŽ | SLOVENIA
6-9 SEPTEMBER, 2022



Interreg Sudoe
EUROPEAN UNION
EGURALT
European Regional Development Fund

Application and dissemination of innovative solutions for the promotion of mid-rise timber construction in the SUDOE area.

The EGURALT project is co-financed by ERDF funds within the framework of the Interreg SUDOE program.

WOODRISE 2022 - R&D WORKSHOPS SEPTEMBER 6th, 2022

Régis Le Normand
Lecturer - ENSAP Bordeaux
regis.lenormand@bordeaux.archi.fr

@eguralt
@Eguralt-EU
@Eguralt

www.eguralt.eu

Nasuvinsa Navarra de Suelo y Vivienda, S.A.
seroq centro de inovação e competências da floresta
Xylofutur
ENSAP Bordeaux
cesefor
ADEMAN Asociación de Empresarios de la Madera de Navarra
BaskEgur
XUNTA DE GALICIA

MAIN OBJECTIVE

The main objective of this project is to make the wood material and its qualities in medium and high rise buildings known to the greatest number of people through the pedagogical exploitation of the results of the scientific studies carried out in GT1, GT2 and GT3.

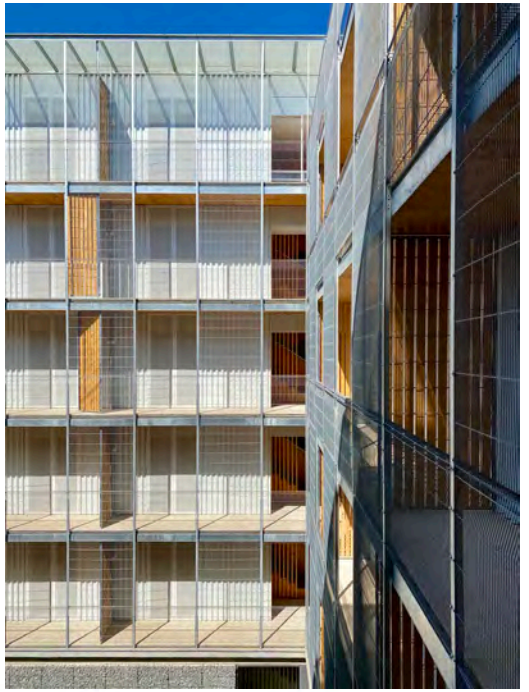
The module aims to provide a better knowledge of mid and high rise timber construction and an evolution of project "prescriptions" with a good starting level of knowledge.

CAPITALISATION OF KNOWLEDGE through a awareness - information - trainings dedicated to "prescribers" of wood in construction by means of educational engineering adapted to various targets.

WORKING BASIS

Led by ENSAP Bordeaux and CESEFOR, the training module will be developed on the basis of the knowledge gathered and the experiments carried out in the project tasks:

- *State of the art*
- *Study of perceptions*
- *Good practice guide*
- *Experiences and innovations*
- *videos and dissemination workshops …*



FOR WHO ?

The Eguralt project proposes to target three main typical audiences:

1- Users (general population and secondary education)

2- Project owners (public and private)

3- Project managers (trained or in training = School of architecture / higher education)

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WOODRISE 2022 – R&D WORKSHOPS - A3.2 – DEVELOPMENT OF A TRAINING MODULE ON MID-RISE TIMBER CONSTRUCTION TO INTRODUCE THE KNOWLEDGE IN ARCHITECTURE

WHY ?

1- Current users (general population + secondary education)

- Reassure: by explaining the sensitive points around the material wood
- Testify: by reading the testimonies of inhabitants living in wooden mid-rise buildings (based on the feedback from the survey 2 or the presence of inhabitants during the workshops)
- Experiment: by virtually visiting different buildings. (through the Guide's cards).

WHY ?

2- Project owners (private and public)

- Explain, highlighting the strengths and limitations of wood materials and their use. (Cesefor construction guide)
- Promote: by reading the feedback from clients who have used wood as a material.
- Experimenting: by virtually visiting different buildings using the data sheets in the Cesefor Guide.

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WHY ?

The training module (level 1) will be aimed mainly at specifiers (architects and engineers) who already have an awareness of wood materials because it is a module based on the knowledge of medium and high rise wood buildings

3 - Project managers (trained or in training = School of Architecture / higher education)

- Knowledge of the material through the acquisition of specific knowledge about medium and high rise buildings (Cesefor Guide)
- Encourage innovation and research through the examples of the work of Cesefor, Serq, Ensap Bordeaux, …
- Experiment based on case studies of the technical sheets of the Cesefor Guide.

HOW ?

3 - Project managers (trained or in training)

The training module (level 1) will be dedicated to the master students who will have had the module of sensitization to the wood material in license (level 0) (Lectures - Wood: a bio-sourced material).

Example of courses given in the level 0 module

Course Wood - Ch. 1 - Historical background
Course Wood - Ch. 2 - Wood material - Forest - anatomy
Course Wood - Ch. 3 - Wood material - Physical properties
Course Wood - Ch. 4 - Wood – derivatives - Introduction
Course Wood - Ch. 5 - Structural typologies - Introduction
Course Wood - Ch. 6 - Wooden Envelopes

HOW ?

3 - Project managers (trained or in training)

This module Level 1 will be divided into two parts:

> Course of the training modules of 2 days

- By learning about the wood material used in buildings - **theoretical contents and case studies** based on the Cesefor Guide

> Specific module of specialization (minimum knowledge required from the previous 2 days) + 1 day

- By accessing the **analytical sheets** of the buildings studied by Cesefor and/or **visiting** different buildings.

ORGANISATION OF THE TRAINING MODULE

Example of a possible summary which could evolve according to the joint work with the educational engineer

DAY 1: CHAPTER 1

I- BACKGROUND

1. EVOLUTION OF BUILDING TECHNIQUES

- 1.1. WOODEN STRUCTURE
- 1.2. LIGHT FRAME
- 1.3. ROOF FENCES

2. HIGH-RISE TIMBER BUILDINGS

- 2.1. ORIENT
- 2.2. WEST

3. NEW MATERIALS

- 3.1. THE WEAKNESSES OF WOOD
- 3.2. NEW MATERIALS
- 3.3. THE FIRST SKYSCRAPERS

ORGANISATION OF THE TRAINING MODULE

DAY 2: CHAPTER 2

II- STRUCTURAL TIMBER

1. THE TIMBER INDUSTRY

- 1.1. GLUED LAMINATED TIMBER
- 1.2. GLUES AND JOINTS

2. STRUCTURAL TYPOLOGIES IN HIGH-RISE BUILDINGS

- 2.1. TIMBER FRAME (POST AND BEAM)
- 2.2. LIGHT FRAME
- 2.3. MASS TIMBER (CLT)
- 2.4. COMBINED SYSTEMS
- 2.5. MIXED SYSTEMS

ORGANISATION OF THE TRAINING MODULE

DAY 2: CHAPTER 2 (continued)

II- STRUCTURAL TIMBER

3. STRUCTURAL WOOD PRODUCTS

- 3.1. GLUED LAMINATED WOOD (GLT or glulam)
- 3.2. CROSS LAMINATED TIMBER (CLT)
- 3.3. LAMINATED VENEER LUMBER (LVL)
- 3.4. PLYWOOD PANELS (PLY)
- 3.5. LAMINATED WOOD (LSL) AND LAMINATED WOOD

III- PARALLEL STRAND LUMBER (PSL)

- 3.6. OTHER PLYWOOD
- 3.7. NEW DEVELOPMENTS

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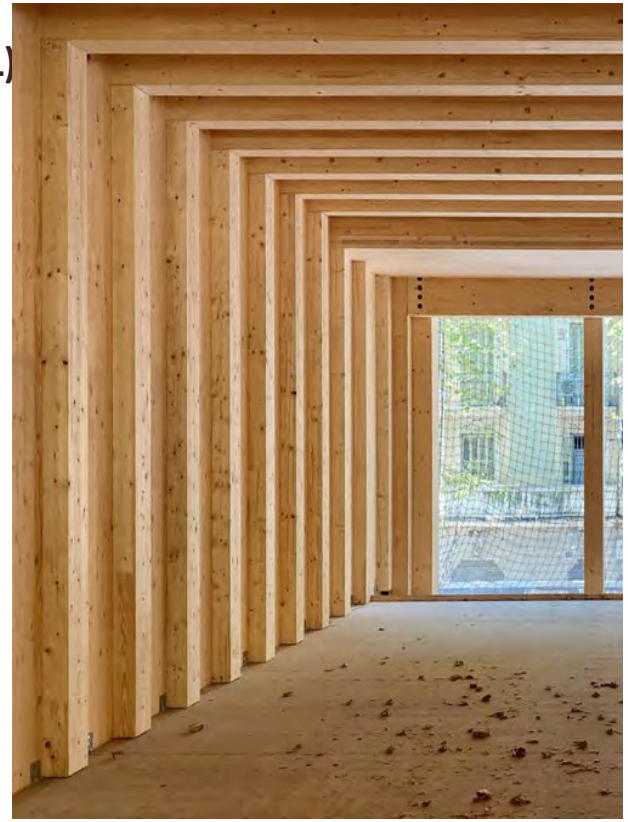

ORGANISATION OF THE TRAINING MODULE

DAY 3: CHAPTER 3

>Specific module of specialization (minimum knowledge required)

IV- LIMITATIONS

1. STRUCTURAL DESIGN

- 1.1. DESIGN OF TIMBER STRUCTURES
- 1.2 Design of timber structures in accidental situations

2. ACOUSTIC DESIGN

+ STUDY CASE

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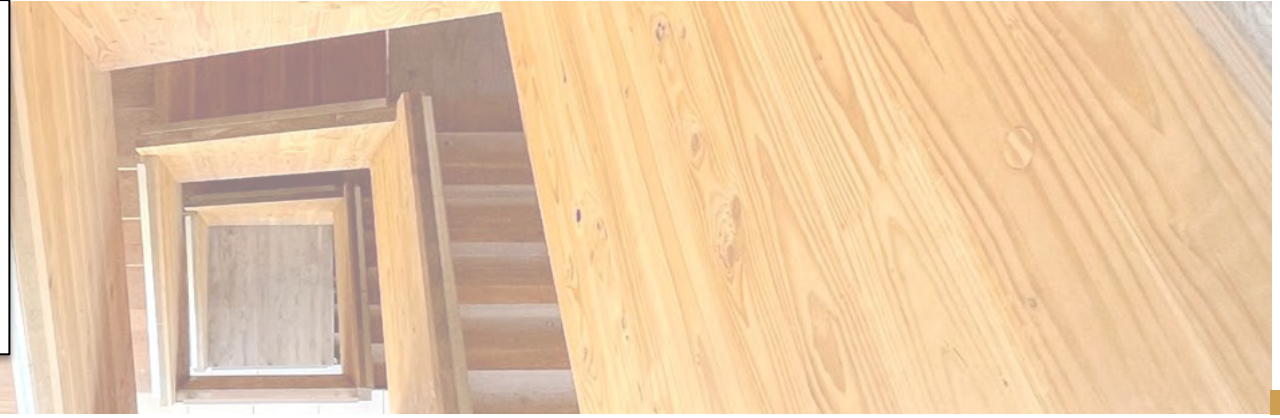

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THANK YOU FOR YOUR ATTENTION

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