

APPLICATION AND DISSEMINATION OF INNOVATIVE SOLUTIONS FOR THE PROMOTION OF MID-RISE TIMBER CONSTRUCTION IN THE SUDOE AREA.

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

**Activity 1.1. Organization of the second transnational
stakeholder workshop for the exchange and identification of
opportunities for mid-rise timber buildings in South-West
Europe**

Lugo (Galicia, Spain), 3rd and 4th November 2021

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ACTIVITY 1.1 - ORGANIZATION OF THE SECOND TRANSNATIONAL STAKEHOLDER WORKING GROUP FOR THE EXCHANGE AND IDENTIFICATION OF OPPORTUNITIES

1. INTRODUCTION

The Working Group leaders, XERA and BASKEGUR organized the second transnational stakeholder workshop for the exchange and identification of opportunities for mid-rise timber buildings in South-West Europe.

The event was developed in an hybrid format (presential and online) on 3rd and 4th November 2021, with specific dynamics designed to exchange and identify good practices as well as to promote the exchange of ideas between the assistants.

The questions to discuss refer to three main topics:

- G1 - Public promotion of mid-rise wooden residential buildings. Green public procurement.
- G2 - Pre-industrialisation in wood processing. Adaptation of the forest and wood industry in the Sudoe area.
- G3 - New efficient and competitive products, technologies and techniques.

The workshop was held at the facilities of Maderas Besteiro in Lugo (Galicia, Spain), a company specialized in wood engineering.

Working visits to representative buildings (Impulso Verde and the Social Center Lamas de Prado) as well as to XILONOR, a company producing CLT panels with local radiata pine wood, were also organized.

The workshop was attended by 38 participants (24 presential and 14 online) from Spain, Portugal and France.

The whole procedure is detailed next:

2. WORKSHOP ORGANIZATION

The program of the workshop is detailed:

3rd November		
In Person	09:00 - 09:30	Reception at Maderas Besteiro
Hybrid event	09:30 -09:40	Welcome and introduction
	09:40 -11:00	Presentation of good practices (all partners / 10 minutes by partner)
	11:00 -11.20	Coffee break
	11:20 -11:35	Valoration on the presented initiatives
	11:35 -12:45	Working group discussion Promotion and public policies. Sectoral business strategy + Formation R+D+i
	12:45 -13.00	General conclusions
In Person	13:00 -14:00	Networking -Lunch
	14:00 -15:00	Visit to Maderas Besteiro facilities
	15:30 -18:00	Complementary visits to 2 representative buildings Impulso Verde and the Social Center Lamas de Prado
4th November		
In Person	10:00 -12:00	Visit to Xilonor

3. PRESENTATION OF GOOD PRACTICES

During the workshop each partner made a short presentation of 1 or 2 good practices identified in their region.

The selected practices were the following:

- Public housing development in Navarra. Towards efficient and sustainable construction. NASUVINSA.
- Construction of 65 timber public housing (VPO) by VISESA in Hondarribia. BASKEGUR.
- Promotion of Environmental Product Declaration (EPD) in the Basque timber industry. BASKEGUR.
- Research examples to promote the use of timber in construction. SerQ.
- New products for construction with local timbers: Laminated Strand Lumber. ADEMAN.
- Implementation of the structural classification of local timbers in the industry. CESEFOR.
- Training experiences with timber frame. CESEFOR.
- Online resources: The catalogue timber construction in France. XYLOFUTUR.
- The Woodrise Ecosystem. XYLOFUTUR.
- Timber training module for the Bordeaux Higher National School of Architecture and Landscape. ENSAP Bordeaux.
- Examples of the promotion of the use of wood in the field of health and wellbeing by the Galician Health Service (SERGAS). XERA-CIS Madeira.

After the presentation of the initiatives, all those attending (in person and online) were asked to answer two questions. The results obtained are as follows:

Which three initiatives do you consider to have the greatest impact on the sudoe area?

- Public housing development in Navarra. Towards efficient and sustainable construction. NASUVINSA.
- Implementation of the structural classification of local timbers in the industry. CESEFOR.
- Examples of the promotion of the use of wood in the field of health and wellbeing by the Galician Health Service (SERGAS). XERA-CIS Madeira.

Which three initiatives do you consider most likely to be transferred to your region?

- Examples of the promotion of the use of wood in the field of health and wellbeing by the Galician Health Service (SERGAS). XERA-CIS Madeira.
- Public housing development in Navarra. Towards efficient and sustainable construction. NASUVINSA.
- Training experiences with timber frame. CESEFOR.

4. WORKING GROUPS DISCUSSION

The working groups were organized around 6 groups (3 presential and 3 online) discussing the main 4 challenges as follows:

- Group 1A (Presential). Challenge 1: Promotion and public policies. Moderator: Oskar Azkarate (Baskegur).
- Group 1B_Online. Challenge 1: Promotion and public policies. Moderator: Josu Azpitarte (Baskegur).
- Group 2A_Presential. Challenge 2: Formation + Challenge 3: Sectoral business strategy. Moderator: Montserrat Rodríguez (XERA).
- Group 2B_Online. Challenge 2: Formation + Challenge 3: Sectoral business strategy. Moderator: Azahara Soilán (XERA).
- Group 3A_Presential_Challenge 3: R+D+i Moderator: Manuel Touza (XERA).
- Group 3B_Online_Challenge 3: R+D+i Moderator: Aitor Saez de Zerain (BASKEGUR).

In each working group the following agenda was established:

- Brief presentation of the members of each group.
- Review of the conclusions drawn from the previous workshop (priorities) as well as related good practices.
- Identification of other initiatives/good practices linked to the priorities identified.
- When transferable, selection of the two initiatives that would have the greatest regional impact.
- What is considered necessary to implement these initiatives?

5. WORKING GROUPS RESULTS

Challenge 1: PROMOTION AND PUBLIC POLICIES

GROUP 1A - PRESENTIAL - CHALLENGE: PUBLIC POLICIES AND PROMOTION Moderator: Oskar Azkárte (BASKEGUR)		
Assistants	Entity	Country
Maitane Zazu	NASUVINSA	Spain
Alejandro Santamaría	VIRESA	Spain
Cristina Ouzande	Ezcurra e Ouzande Arquitectura	Spain
Iván Bermejo	ADEMAN	Spain
Gonzalo Anguita	FSC	Spain

GROUP 1B - ONLINE - CHALLENGE: PUBLIC POLICIES AND PROMOTION Moderator: Josu Azpitarte		
Assistants	Entity	Country
Alvaro Picardo	Junta de Castilla y León	Spain
David Grisaleña	VIRESA	Spain
Raquel Campillo	GAP Recursos	Spain

Priorities identified in the previous workshop:

1. Claim the Life Cycle Assessment (LCA) and ecological footprint of wood.
2. Improve the training, both in prescription and on site, of the administration's technicians.
3. Develop a proper regulatory framework.
4. To achieve a favourable tax policy for timber construction.
5. Elaboration of informative guides on requirements and compliance.
6. Demonstration building for public use that people can visit, with a didactic area explaining all aspects of timber construction in the building.

Good practices related to the priorities identified:

- (1) Promotion of Environmental Product Declaration (EPD) in the Basque timber industry. BASKEGUR.
- (5) Online resources: The catalogue timber construction in France. XYLOFUTUR.
- (5) The Woodrise Ecosystem (Woodrise Alliance, Woodrise Congress and Rencontres Woodrise). XYLOFUTUR.

(6) Public housing development in Navarra. Towards efficient and sustainable construction. NASUVINSA.

(6) Construction of 65 timber public housing (VPO) by VISESA in Hondarribia. BASKEGUR.

(6) Examples of the promotion of the use of wood in the field of health and wellbeing by the Galician Health Service (SERGAS). XERA-CIS Madeira

Which other initiatives/good practices do you know related to the priorities identified in workshop 1?

- New country commitment, as in the Netherlands.
- Strategy and Action Plan on housing and timber construction in France.
- Strategy and implementation of green public procurement and model for architecture and construction in Vorarlberg (Austria).
- National Centre for Industrialisation and Robotisation of Construction. ERAIKI.
- European New Bauhaus.
- Faculty of Health Sciences. Public University of Navarra.
- UFIL. European Innovative Action.
- Co-housing. Entreplantas Madrid.
- Industrialised Housing Construction Guides (OREKA).
- La Pinnada Lab. Valencia.
- LIFE LUGO + Biodynamic. Green Impulse.
- XERA's initiative of an online course for public administration for prescribers.
- Preparation of national Sustainable Building strategies.
- Initiative of British Columbia and other governments approving building regulations with a minimum percentage of wood in different buildings.
- Training meetings for wood construction with VISESA technicians (in the Basque Country).
- Promotion of the Habitat Sector (Castilla y León Habitat Sector Plan 2022-27).

If transferable, which initiatives (two by group) do you think would have the greatest impact in your region?

- New applications to facilitate the simultaneous development of design/system r industrialisation and tendering.
- Development of greening of public procurement tender documents.
- Demonstration buildings for public use in wood.
- Regulatory framework to bring stability and security to timber prescriptions.

What you consider necessary for them to be implemented

- Heavy inertia of the administrations. Change of operation.
- Political will. Country strategy.
- Training, awareness-raising.
- Lobbying of the wood industry compared to lobbying of other materials.

Challenge 2: FORMATION AND SECTORIAL STRATEGY

GROUP 2A - PRESENTIAL - CHALLENGE : FORMATION AND SECTORIAL STRATEGY Moderator: Montserrat Rodríguez (XERA)		
Assistants	Entity	Country
Cristina Ezcurra	Ezcurra y Ouzande Arquitectura	Spain
Gonzalo Moltini	CESEFOR	Spain
Genoveva Canals	ANFTA	Spain
Carlos Albino	SerQ	Portugal
Jose Ignacio Lema	XERA	Spain

GROUP 2B - ONLINE - CHALLENGE : FORMATION AND SECTORIAL STRATEGY Moderator: Azahara Soilán (XERA CIS-Madeira)		
Assistants	Entity	Country
Manuel Lobo	FINSA	Spain
Paula Barroso	AIMMP	Portugal
Nekane Amondarain	ARTOTZGI Acevi	Spain
Diego Nuñez	Madergia	Spain

Challenge FORMATION

Priorities identified in the previous workshop:

1. Introduce core subjects on wood as a structural material in architecture and engineering careers.
2. Specific training for public promoters.
3. Vocational training (a set of measures aimed at improving content, specialisation and technological adaptation).
4. Continuous training for specialisation in timber construction.
5. Need to train trainers.

6. Need for a constant updating of the contents.

Good practices related to the priorities identified:

- (1) Timber training module for the Bordeaux Higher National School of Architecture and Landscape. ENSAP_Bordeaux.
- (4) Training experiences with timber frame. CESEFOR.
- (6) Online resources: The catalogue timber construction in France. XYLOFUTUR.

Which other initiatives/good practices do you know related to the priorities identified in workshop 1?

- Training for administration technicians. Developed by Galician Institute for Housing and Land (IGVS) Housing in collaboration with Galician Agency for Forest-based industry (XERA) and Galician School of Public Administration.
- CLT installers Training Course. Developed in Galicia by the Galician Wood Cluster, with the collaboration of XERA.
- Master's Degree in the Basque Country: "Structures, Construction and Wood Design". Possibility of being studied by modules by carpenters, engineers, architects.
- Woodiswood, a web platform created by FINSA to make known wood specialists and their works. <https://woodiswood.net/>
- Lignum.ch - Updated web platform with technical information on construction systems and solutions applicable to wood construction according to Swiss regulations. <https://www.lignum.ch>
- Dual Training FINSA.
- Self-construction in France, areas less than 150 m² don't need architects, there are well-trained carpenters.
- Associate professors at University.
- Cross-cutting subjects in architecture and engineering.

If transferable, which initiatives (two by group) do you think would have the greatest impact in your region?

- Xylofutur Catalogue.
- Lignum.ch. Technical solutions, adaptations to the national regulations.

What you consider necessary for them to be implemented

- Change of focus in the training offer to focus on construction systems that meet the requirements and focus on available technologies.
- Understand that each construction system requires a specific process. For example, in CLT construction, the time spent on design is a high percentage of the total process.
- Know and understand industrialized construction systems.
- Know the BIM methodology.
- Persons are the key.
- Public politics.
- Training for trainers.
- Contact between professionals.
- Workshop schools “Touching”.
- Joint Forestry Engineering and Civil Engineering.

Challenge SECTORIAL STRATEGY

Priorities identified in the previous workshop

1. Orientation towards massive systems: CLT, glulam, high-rise construction.
2. Combining elements and solutions.
3. Availability of funding to diversify, improve capacity and/or adapt machinery to local species.
4. Communicate to companies the existing value and innovation in timber construction.
5. Entity to promote business organisation in timber construction and its promotion.
6. To support investment as a green and strategic sector.

Good practices related to the priorities identified

- (6) Promotion of Environmental Product Declaration (EPD) in the Basque timber industry. BASKEGUR.
- (4) The Woodrise Ecosystem (Woodrise Alliance, Woodrise Congress and Rencontres Woodrise). XYLOFUTUR.
- (2) New products for construction with local timbers: Laminated Strand Lumber. ADEMAN.
- (4) Implementation of the structural classification of local timbers in the industry. CESEFOR.

Which other initiatives/good practices do you know related to the priorities identified in workshop 1?

- Public grants for digitalization of the wood sector. For example, Galicia and País Vasco Government.
- Use of local raw materials for the production of structural products. For example:
<https://xilonor.es/#home>
<https://egoin.com/>
<https://tabsal.com/>
<https://www.sebastia.eu/>
- UFIL, Urban Forest Innovation Lab. Programme for ventures in forest bio-economy.
<https://www.uiacuenca.es/>
- UNEMADERA - Instituto Eduardo Torroja proposal for the development of a “Guide for acoustic in timber high rise construction”.
- 011H, Catalanian company: new type of construction company based on the latest advances in technology and industrialisation, integrating industrialized 2D and 3D components. Working between producers and constructors.
<https://www.011h.com/es/>
- Lignum-Tech, industrialized construction systems, timber facades.
<https://lignumtech.es/>
- MEDGON, connection between company and University to develop new products.
<https://www.medgon.com/sobre-nosotros/>
- Magazine with companies innovation.

If transferable, which initiatives (two by group) do you think would have the greatest impact in your region?

- UFIL, Urban Forest Innovation Lab. Programme for ventures in forest bio-economy in Cuenca.
- Implementation of the structural classification of local timbers in the industry. CESEFOR.

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What do you consider necessary for them to be implemented?

- Commitment of public administrations at the forestry level.
- To attract investors.
- Share initiatives: Observatory.
- National organization for wood construction sector focus on a common objective.
- Forest culture, training from the school stage.
- Forestry sector has evolved more than sawn mills.
- To guide companies.
- To integrate training and business.
- Small size of the companies is an inconvenient.
- To promote companies with projects.
- It is difficult for companies to change.
- To facilitate industry-market connexion.

Challenge 3: R+D+i

GROUP 3A - PRESENTIAL - CHALLENGE : R+D+i Moderator: Manuel Touza (XERA)		
Assistants	Entity	Country
Vanesa Baño	CESEFOR	Spain
Carlos Martins	SER-Q	Portugal
Claudio Ferreira	SER-Q	Portugal
Ana Ariz	NASUVINSA	Spain

GROUP 3B – ONLINE - CHALLENGE : R+D+i Moderator: Aitor Saez de Zerain (BASKEGUR)		
Assistants	Entity	Country
Sofia Knapic	SER-Q	Portugal
Sandra Monteiro	University of Coimbra	Portugal
Apolline Oswald	XYLOFUTUR	France
Helena Cruz	LNEC	Portugal

Priorities identified in the previous workshop:

1. R+D+ i on the use of local species.
2. Catalogue of construction systems / solutions.
3. Life cycle analysis (LCA), low carbon footprint.
4. Need for R+D+ i results linked to aspects such as improved durability, fire performance or acoustics.
5. Development of mixed solutions (wood-concrete, wood-metal, etc).
6. Many other topics linked to R+D+i have been considered important (engineered wood products, joints, transfer of results, financing, collaboration, proposal of global systems and solutions, vibrational analysis methods...).

Good practices related to the priorities identified:

- (1) Research examples to promote the use of timber in construction. SerQ.
- (1) New products for construction with local timbers: Laminated Strand Lumber. ADEMAN.
- (1), (6) Implementation of the structural classification of local timbers in the industry. CESEFOR.
- (2) Online resources: The catalogue timber construction in France. XYLOFUTUR.
- (3) Promotion of Environmental Product Declaration (EPD) in the Basque timber industry. BASKEGUR.
- (6) The Woodrise Ecosystem. XYLOFUTUR.

Which other initiatives/good practices do you know related to the priorities identified in workshop 1?

- New processes and products developed with local timbers. For example, in 2021 the manufacture of Cross Laminated Timber (CLT) from local radiata pine started in Galicia (xilonor.es).
- R+D+i on the use of local species. Portuguese research developed in SerQ and the University of Coimbra to produce glue laminated beams from local poplar and eucalyptus.
- Recent developments in France on the use of hardwoods, such as beech and poplar, in construction. The “Manubois” project is an example for beech: <https://www.groupe-lefebvre.fr/>
- Recent experimentation on the use of mix softwood species like maritime pine and spruce (Epinlam): https://www.linkedin.com/posts/david-roland-bordes-94938a181_lamaezcol-epinlam-bois-activity-6725148955681820672-EgRR

- Simple energy certification systems for other products (household appliances) that could be transferable to the construction sector.
- French online tool for calculating the environmental impact of products (<https://de-bois.fr>)
- Research initiatives in Portugal for the development of mixed solutions (CLT-steel floors, CLT-concrete composite floors, etc.).
- In France, development on mixing biobased products such as Structural Insulated Panel (SIP) with cork and wood, or use of straw insulation in wood frame structure.
- INTERREG SUDOE Project as WoodMarkets which aims to improve the digital environment of timber processing companies in the SUDOE area in order to promote their competitiveness.
- The catalogue timber construction in France, includes a collection of studies around timber solutions:
<https://catalogue-bois-construction.fr/referentiels-techniques/etudes-codifab/>

If transferable, which initiatives (two by group) do you think would have the greatest impact in your region?

- Catalogue of construction systems / solutions.
- Jointly R+D+i initiatives on the use of local species.
- Examples of European partnership and cooperation programs (as WoodMarkets).

What do you consider necessary for them to be implemented?

- Possibility of adapting the existing solutions in one country to existing regulations in other countries.
- Improvement of collaboration, communication and coordination of existing information.
- Need to promote joint R+D+i formulas.
- Need of a strong European partnership to promote research on wood and joint work with local species, mainly in the SUDOE area. For example, a strong European association for the maritime pine which also could carry out lobbying work in Brussels.
- Need of political engagement on this type of campaigns (“We are all Forest”).
- Need for R+D+i in specific aspects (acoustics, durability through bio-protection, etc.).
- Improve the industrial transfer of R+D+i as well as the support to the commercialization of the results. In France, the government is helping companies to improve their capacity but also to open new factories to produce new products.

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- Importance of diversifying the number of local species on the market.
- Keep the focus on impacting the entire value chain and not just focusing on the industry. It is also needed to invest in the forest, supporting the forest producer with managing in order to achieve a better wood quality and therefore product quality.

6. WORKING VISITS

A total of four working visits were organized:

Maderas Besteiro

The first visit was made to the company Maderas Besteiro, where the workshop was held. The company was founded in 1930 as a timber warehouse and nowadays also includes a complete department of engineering and calculation of wooden structures.

During the visit, the operation of a Hundegger structural timber machining center was explained, which allows the machining of beams with a section up to 65x30 cm and without length limits.

<http://mbesteiro.com/es/>

Impulso Verde

The building it is an example of high-tech construction of structural wood in height (four floors) and it has been conceived with the purpose of becoming a benchmark of the new construction model based on local natural resources, since it uses local wood for its entire structure, creating an alternative construction model to conventional buildings with low energy efficiency.

With a budget of one million euros, Impulso Verde is “an example of the struggle to reduce the impacts of CO2 emissions by emitting 90% less than concrete and steel buildings (50 tons versus 470), also absorbing 280 tons of emissions.

<https://www.lugobiodinamico.eu/results/impulso-verde-building/>

Social Center Lamas de Prado

Lamas de Prado municipal social center in the town of Lugo will provide social services of primary care as well as sociocultural animation. With a mixed construction (wood and concrete), and a roof with photovoltaic panels it will be a building with almost zero energy consumption.

The timber structure is made of cross-laminated timber (CLT) made with local radiata pine. The building is under construction and during the visit some construction details could be explained.

XILONOR

Xilonor is the first Galician company that produces CLT and starts its production in 2021.

The company includes a qualified technical office with extensive knowledge acquired after years of experience in the wood transformation sector.

The manufacture of CLT will be made with local pine (*Pinus pinaster* and *Pinus radiata*), contributing to generate value in our environment through the use of our resources and thereby boosting the progress of the timber sector in Galicia and the development of the circular economy.

<https://xilonor.es>

ANNEX



Image 1. The workshop was held at the facilities of Maderas Besteiro in Lugo (Galicia, Spain).

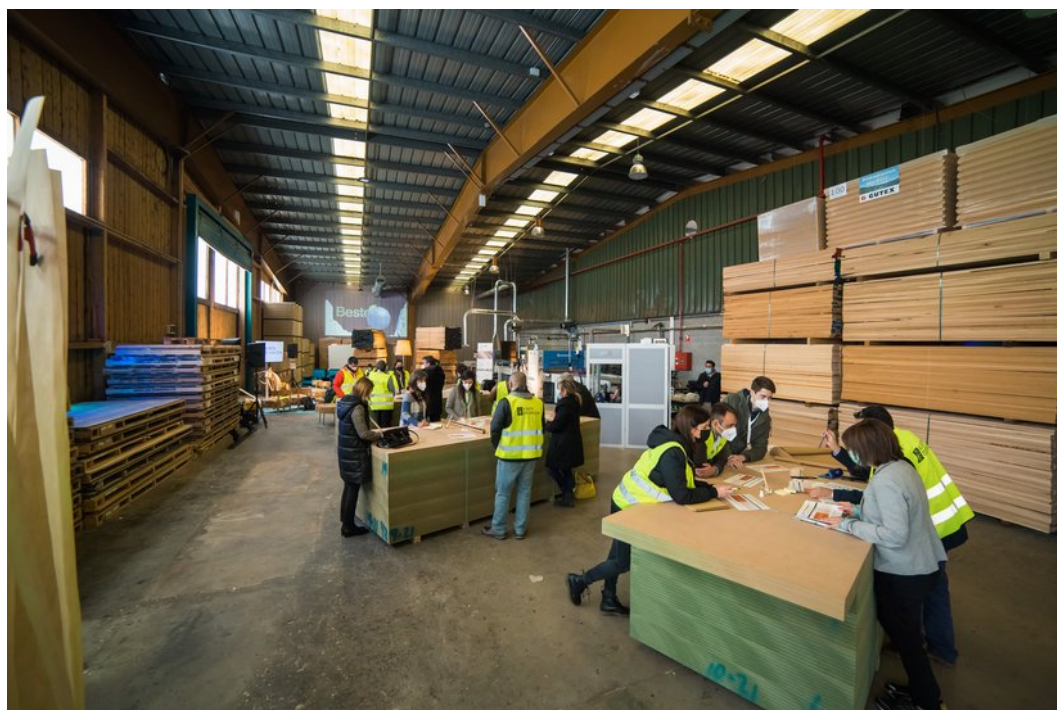


Image 2. Organization of the presentational working groups.



Image 3. The event was developed in an hybrid format (presential and online).



Image 4. Presentation of the results from the online working groups.



Image 5. Visit to Maderas Besteiro facilities.



Image 6. Visit to Lamas de Prado municipal social center.



Images 7 and 8. Visit to Impulso Verde building.