

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

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**Transnational stakeholder workshop for the exchange and
identification of opportunities for mid-rise timber buildings
in South-West Europe**

Day: 09 07 2021

**ACTIVITY 1.1 - ORGANISATION OF TRANSNATIONAL STAKEHOLDER WORKING GROUPS FOR
THE EXCHANGE AND IDENTIFICATION OF OPPORTUNITIES**

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EGURALT PROYECT

ACTIVITY 1.1 - ORGANISATION OF TRANSNATIONAL STAKEHOLDER WORKING GROUPS FOR THE EXCHANGE AND IDENTIFICATION OF OPPORTUNITIES

1. INTRODUCTION

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

Due to the COVID situation, the workshop was developed in a virtual format (online) on 21/07/09 with specific dynamics designed to promote the exchange of ideas between the assistants.

Previously, it was decided to send a survey in order to prepare the contents of the workshop and ensure that expected results were achieved.

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 whole procedure is detailed next:

2. DESIGN OF SURVEYS

Two different surveys were designed for the main target groups.

The survey consisted of, about, 20 questions to assess the more interesting issues to be discussed.

In addition, three questions with free answer were proposed:

1. In your opinion, what are the three most important factors that currently limit a greater use of wood as a structural material, in public buildings? Please, briefly describe them.
2. In your opinion, what would be the three most appropriate actions to promote a greater use of wood as a structural material in public buildings? Please, briefly describe them.
3. Any other consideration that you want to comment on.

The surveys were sent in the three languages of the project's partners. Each partner sent the survey to more relevant agents in their own country and/or region. It was planned two or three agents per partner and topic.

The first survey, focus on G1 and G2 topics was sent to architects and engineers of public organisms and companies linked to Public promotion of residential buildings (G 1) as well as technicians and companies related to pre-industrialisation in wood processing (G 2):

<https://www.encuestafacil.com/respweb/cuestionarios.aspx?EID=2755439>

The second survey was aimed at timber researchers involved in the field of new products, technologies and efficient and competitive construction techniques (G 3):

<https://www.encuestafacil.com/respweb/cuestionarios.aspx?EID=2755487>

The results of the survey were used as a starting point of the virtual workshop.

3. ANALYSIS OF THE SURVEY RESULTS

Regarding the survey's results, 49 answers were received about G1 and G2 topics and 28 about G3 topic.

The main strengths and weaknesses detected in the surveys are shown below.

Strengths (from highest to lowest rating):

- In the medium term, it will be necessary to develop new products and timber construction systems.
- The use of wood brings advantages to users: improved energy efficiency, comfort, greater sustainability, etc.
- Using local timbers provides added value to a building project.
- Within 10 years, in my region, more timber will be used as a structural material in buildings.
- Wood solutions satisfy the requirements of the public buildings.
- In 10 years, there will be carbon footprint indicators in public procurement procedures.
- Wood is the only building material whose use helps reduce CO2 in the atmosphere, contributing to mitigate climate change.
- Wood provides flexibility and adaptability to building projects.

Weaknesses (from highest to lowest rating):

- Compared to other materials, there is still a lack of knowledge of construction solutions in timber.
- There is no green public purchasing policy / strategy that favours the use of structural solutions in wood.
- Compared to other materials, wood has more maintenance and durability problems
- There is a lack of adequate training offer on wood construction.
- A timber building project requires specialized personnel (structural engineers, assemblers ...), not always easy to find.
- The market and the number of suppliers is still limited / small, making competitive wood construction difficult.

Most mentioned proposals / actions:

- Develop new products or mixed structural systems combining timber with other materials (timber-metal, timber-concrete, etc.).
- Improve the durability of wooden buildings through constructive design.

- Develop new products or structural systems that optimize the volume of wood required.
- Optimize design and construction processes (pre-industrialization).
- Develop new products / structural systems based on local timbers.
- Develop wood products or systems with improved acoustic properties.
- Develop construction systems more adapted to the requirements demanded by current building regulations.
- Incorporate life cycle analysis into construction processes.
- University training in architecture and engineering:
 - specific careers such as wood engineering
 - postgraduate courses in wood
 - compulsory core subjects in wood construction
- User and prescriber training.
- Training and qualification of operators.
- Investment in national industries linked to wood construction (investment, R + D + i) and a more organized fabric.
- Support for the creation of a business network that allows to improve supply, meet demand, lower prices, etc.
- Training of companies specialized in maintenance and replacement of wooden elements.
- To promote the industrial transformation of local timbers.
- Stabilization of markets and prices. Cost considered high.
- Development of the construction timber markets.
- Offer incentives.
- Research and development in aspects related to the improvement of durability.
- Research and development in the improvement of behaviour in fire situations.
- Development of mixed systems that allow combining wood with other materials.
- Valorisation of local timbers.
- Research on aspects related to joints and robust construction design solutions.
- Pre-industrialized construction solutions (acoustic insulation, fire resistance, etc.) and products adapted to project requirements.

Development of public policies, from the administrations, to promote wood construction

- Use, by public housing developments, of wood under construction.
- Promote the use of wood in actions to combat climate change (decarbonisation. incentives, CO2 taxes, renewable materials, etc.).
- Need to economically value the environmental properties of wood. Legislation to encourage the use of wood in construction based on environmental criteria.
- To achieve exemplary wood projects through public promoters.
- To incorporate the methodology of the Sustainable Building Guidelines of the Basque Country and the associated Public Procurement criteria.
- To promote a culture of wood (schools, social awareness).
- To make wood construction reference projects more visible.
- Improve consumer information.
- Raising social awareness of the advantages of using wood.
- To normalize the use of wood (it should not be something extraordinary).
- Disclosure of benefits, conditions of use, maintenance ...
- To promote wood within actions to combat climate change.
- Information and dissemination of results on life cycle analysis, real costs and quality of life of wooden buildings.

4. WORKSHOP ORGANIZATION

As previously noted, due to the COVID situation, the event was developed in a virtual format (online) on 21/07/09 with specific dynamics designed to promote the exchange of ideas between the assistants.

Workshop programme:

10:00 h Introduction to the EGURALT project.

10:20 h Pre-workshop surveys. Results.

10:40 h Presentation of meeting dynamics.

10:45 am Division into the 3 areas

- Public promotion
- Pre-industrialisation
- New products

11:50h Break

12:00h Sharing of results of each area.

12:30h End of the workshop.

The workshop was organized around 6 groups discussing the main 4 challenges as follows:

- Group 1A_Challenge 1: Promotion and public policies. Moderator: Oskar Azkarate (Baskegur)
- Group 1B_Challenge 1: Promotion and public policies Moderator: Azahara Soilán (XERA)
- Group 2A_Challenge 2: Formation + Challenge 3: Sectoral business strategy. Moderator: Montserrat Rodríguez (XERA)
- Group 2B_Challenge 2: Formation + Challenge 3: Sectoral business strategy. Moderator: Josu Azpitarte (Baskegur)
- Group 3A_CHALLENGE 2: Formation + Challenge 4: R+D+i Moderator: Manuel Touza (XERA)
- Group 3B_CHALLENGE 2: Formation + Challenge 4: R+D+i. Moderator: Vanesa Baño (CESEFOR)

GROUP 1A – Challenge 1: Promotion and public policies		
Moderator: Oskar Azkarate (Baskegur)		
Assistant	Entity	Country
Cristina Ezcurra y Cristina Ouzande	Ezcurra e Ouzande Arquitectura	Spain
Aitor Sáez	IHOBE	Spain
Álvaro Picardo	Junta de Castilla y León	Spain
María José Paniagua	IGVS – ASSOCIATED	Spain
Rodrigo Tomé	EGOIN	Spain
Gonzalo Anguita	FSC– ASSOCIATED	Spain
Alberto Ortiz	VIRESA – ASSOCIATED	Spain

GROUP 1B – Challenge 1: Promotion and public policies		
Moderator: Azahara Soilán (XERA)		
Assistant	Entity	Country
Genoveva Canals	UNEMADERA– ASSOCIATED	Spain
Ana Belén Noriega	PEFC – ASSOCIATED	Spain
Ana Ariz	NASUVINSA - PARTNER	Spain
Nelson Pedrosa	Empresa Pedrosa e Irmaos	Portugal
Aline Barlet	ENSAP Bordeaux - PARTNER	France

GROUP 2A – Challenge 2: Formación + Challenge 3: Sectoral business strategy		
Moderator: Montserrat Rodríguez (XERA)		
Assistant	Entity	Country
Manuel Lobo	FINSA	Spain
José Luis Pardo	Arquitecto técnico obra pública	Spain
Regis Le Normand	ENSAP Bordeaux - PARTNER	France
Luis Jorge	TISEM– ASSOCIATED	Portugal
Apolline Oswald	XYLOFUTURE - PARTNER	France
Iván Bermejo	ADEMAN - PARTNER	Spain
Zaratiana	FCBA – ASSOCIATED	Spain

GROUP 2B – Challenge 2: Formación + Challenge 3: Sectoral business strategy		
Moderator: Josu Azpitarte (Baskegur)		
Assistant	Entity	Country
Pablo Sabín	CESEFOR- PARTNER	España
Pablo Rodríguez		
Javier Medina	MEDGON	España
Myriam Durana	AMERICAN LH	España
Nekane Amondarain	AROTZGI	España
Sergi Sebastia	UPM	España
Nerea Macias	CETEMAS	España

GROUP 3A – CHALLENGE 2: Formation + Challenge 4: R+D+i		
Moderator: Manuel Touza (XERA)		
Assistant	Entity	Country
Helena Cruz	LNEC	Portugal
Carlos Martins	SER-Q - PARTNER	Portugal
Ricardo Braz	Rothoblaas	Portugal
Antonio José Lara	UPM	Spain
David Grisaleña	VIESA – ASSOCIATED	Spain

GROUP 3B – CHALLENGE 2: Formation + Challenge 4: R+D+i		
Moderadora: Vanesa Baño (CESEFOR)		
Assistant	Entity	Country
Dolores Otero	Universidad de A Coruña	Spain
Francisco Arriaga	Universidad Politécnica de Madrid	Spain
Ana María Lacasta	Universidad Politécnica de Cataluña	Spain
Belén Feijoo	Universidad de Santiago de Compostela	Spain
Salomé Temiño	INCAFUST	Spain
Pierre Fernández	Escuela Arquitectura de Toulouse	Spain

5. WORKSHOP RESULTS

The results obtained during the surveys were grouped in 4 challenges and for each one, the groups identified the priorities as well as the difficulties.

The workshop was attended by 49 participants from Spain, France and Portugal.

The working dynamics were very productive and well appreciated by the participants.

CHALLENGE 1: PROMOTION AND PUBLIC POLICIES

PRIORITIES

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

DIFFICULTIES

- To achieve that the public purchase is assumed in an integral way (it is usually harmonized).
- To be aware of the limitations of current timber construction systems.
- Difficulty in transferring new technologies and social perception.
- Existing construction structures with inertias that are difficult to change (need for documentation and guidelines).
- Social perception of the use of wood as something old, unreliable, unproven.
- Adapting sustainability criteria to existing regulations.
- Real difficulty in finding appropriate materials, lack of supply, innovative materials and specialized labour.
- Difficulty in communicating within the sector, facing fears, setting an example.
- Lack of emblematic, "desirable" buildings
- Lack of training of architects and engineers (including the administration's technicians).
- Lack of public investment in wood research.

CHALLENGE 2: FORMATION

PRIORITIES

- Continuous recycling training. (4 votes)
- Train the trainers. (3 votes)
- Improve the image of the sector.
- Continuous training for specialization in wood construction.
- Incentivize and adapt vocational education training in wood. Specifically in wood construction.
- Introduce core subjects in university education (architecture, engineering). (4 votes)
- Specific training for public promoters. (3 votes)
- Training modules highly oriented to current needs (DTU). (3 votes)
- Need to improve vocational education training. (3 votes)
- Include wood as a structural material in existing careers (undergraduate), as specific subjects. (5 votes)
- Vocational training modules and site managers dedicated to structural assembly (INEM). (4 votes)
- General training of the population to eliminate fears regarding wood as a weak material. (2 votes)
- Introduce core subjects in university education (architecture, engineering). (4 votes)

DIFFICULTIES

- Trainers: ministry barrier and course authorization.
- Keys: people - ideal link.
- Ensuring access for all - platforms.
- Who develops the training? Who writes? Who validates?
- Centralize messages for greater impact and democratize access.
- The sector itself is not aware of its value.
- Lack of examples of public buildings in wood to check their performance.
- Difficulty to change training plans.
- Perception of scarce forest resources and of low quality in Spain.
- Lack of collaboration between companies.
- Problems of training homologation.
- Lack of updated image of wood construction.
- Lack of grouped initiatives of formation of the sector.
- Depopulation in rural areas.

- Modify existing curricula.
- Availability of teaching staff adapted to new training needs.
- Funding
- How to reach the general population.
- Adaptation of study plans to incorporate new subjects: time and bureaucratic difficulty.
- Bureaucracy and regulations: a lot of paperwork to organize a course.
- Lack of public leadership to promote the use of wood.
- Getting the media to cover this topic.
- Education for children and to build more in wood to normalize and get the population used to it.
- External incentive for worker training.
- Convey the need for training to site managers.
- To fit in the existing study plans at university level.
- The existence of different regulations in different countries makes it difficult to draw up a catalogue of joint solutions.

CHALLENGE 3: SECTORAL BUSINESS STRATEGY

PRIORITIES

- Massive systems: CLT, glulam, high-rise construction.
- Combining elements and solutions.
- Financing to diversify or gain capacity-machinery adapted to local wood.
- Communicate to companies the value and innovation in wood construction.
- Entity that promotes business organization in wood construction and its promotion.
- Support investment as a green and strategic sector.

DIFFICULTIES

- Financing.
- Training.
- Resource availability.
- Optimization of materials, their use and availability.
- Public policies to promote.
- No regulations to promote, better in equality highlighting the properties of the material.
- Lack of coordination on wood construction.
- Lack of innovation transfer.
- Competition is more perceived between companies in the sector than outside it.
- Lack of willingness to cooperate between companies.

CHALLENGE 4: R+D+i

PRIORITIES

- R+D+i Products from local species. (5 votes)
- Systems catalogue /complete building solutions. (4 votes)
- LCA, low carbon footprint. (3 votes)
- All the proposals analysed are considered important and it is decided not to highlight priorities.
- Need for research results on wood durability and EWP in an environmentally friendly way.
- Characterization and valorisation of new species of conifers and especially local hardwoods + derived products (EWP).
- Mixed wood-concrete or wood-metal systems.
- Acoustics.
- Lack of equipment/entrepreneurs in the industry for EWP production.
- Fire resistant construction systems.
- Initiatives to promote collaboration between different types of research (university, technology centres, research departments of companies ...).
- Seek funding for research in groups and networks.
- Dynamic behaviour of wooden structures (vibrations).
- Transfer of research results with guarantees (CE marking, quality seals,...) to avoid problems on site.
-

DIFFICULTIES

- The existence of different regulations in different countries makes it difficult to draw up a catalogue of joint solutions.
- Financing.
- Lack of external professionals to know their opinion.
- Lack of network between all agents (industry, university, research centres, developers, forest owners, etc.).
- There is no concept of mixed industry-university research unit outside Galicia, make them more flexible.
- Lower costs and time to obtain certification and quality seals.
- Transfer of laboratory results to real scale.