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# COST CA20139

# Holistic design of taller timber buildings

Communication and Dissemination Plan


Version 1, 2022

# 1 Introduction

## 1.1 Scope of the communication and dissemination plan

This Communication and Dissemination Plan identifies, organizes, and promotes the communication and dissemination methods and activities within the Cost Action HELEN. The plan described in this document shall ensure the success of the activities in the action and structure the dissemination of its results. This document aims to present the project's progress on the planning of dissemination activities. The document is continuously updated throughout the duration of the action.

## 1.2 Acknowledgement

This document is inspired by input by the Communication and Dissemination Plan of COST Action CA16235 "Performance and Reliability of Photovoltaic Systems: Evaluations of Large-Scale Monitoring Data (Pearl PV)" and COST Action CA18110 "Underground Built Heritage as catalyser for Community Valorisation".

# 2 Action description

## 2.1 Summary

With the worldwide construction sector being responsible for one third of carbon dioxide emissions, as well as forty percent of the world's energy use and waste production, a shift to sustainable and renewable construction techniques is crucial. Engineered timber, champion of the sustainable construction materials, has evolved to a stage that enables the construction of not only family housing but also taller buildings commonly built from concrete or steel. Unfortunately, designing taller buildings made from timber is more demanding than their concrete and steel counterparts. Whereas different designers (architects, structural, fire, acoustic engineers etc.) of concrete buildings can work almost independently, the design of taller timber buildings should be performed with intensive collaboration among the design team members. I.e. the acoustic insulation principles currently used in timber buildings are completely contrary to the design demands originating from wind or earthquake loading. This is just one case, unfortunately the list of design collisions is very long. It is therefore crucial to address taller multi-storey timber buildings from a collaborative and interdisciplinary perspective, considering static, dynamic, fire, acoustic, human health and other aspects in parallel and not in isolation. Only through interdisciplinary analysis and interaction can a set of holistic design guidelines be developed that will enable safe construction of taller timber buildings, as well as respect human wellbeing demands. This Action aims to achieve that through intense interdisciplinary work and interaction between different design backgrounds, as well as between academic and design professionals.

# 3 Project Implementation

To achieve the main objective described in this MoU, the following specific objectives shall be accomplished:

**Research Coordination**

- Produce and update state-of-the-art in taller multi-storey timber building design fields: 1) Design for adoption, reuse and repair; 2) Deformations and vibrations; 3) Accidental load situations and 4) Sustainability and durability.
- Coordinate, compare and bring together results of related research with the aim of defining optimized holistic approaches to improve the performance of taller timber buildings and widen their use across the EU and rest of the world.
- Collect case studies that show flagship examples describing taller timber building design.
- Identify and address regulatory, governance, financial and legal drivers and barriers for a wider implementation and use of taller timber buildings.
- Suggest new design approaches, processes and technologies that can build and improve upon existing best practices and ensure optimal holistic design of taller timber buildings.
- Identify and contact the most relevant experimental groups, international partners and industrial partners whose participation would strengthen the network.
- Establish an open-access website that will allow the general public to browse through the Action's activities and access the articles and data produced by the research groups.
- Establish a dissemination plan (organization of thematic workshops, participation at international conferences, scientific publications and other publications in electronic and printed media) and a dissemination board that will coordinate outreach activities (combine different dissemination strategies such as scientific publications, presentation to stakeholders and policy-makers).
- Establish and reinforce a worldwide multidisciplinary network of skilled professionals able to face the complexity of taller timber building design, combine knowledge among different actors, and identify common issues and problems in order to find suitable applications in various multidisciplinary fields and develop new holistic taller timber building design guidelines.
- Promote the development of a joint research roadmap in order to increase the efficiency and efficacy of the innovation process and, therefore, have a direct impact on the development and implementation of new technologies, processes, methodologies and products for taller timber buildings.

**Capacity Building**

- Connect with international bodies and associations, such as the Wood Rise Alliance and WCTE (World Conference of timber Engineering) conference participants dealing with the topic of

taller timber buildings, hence ensuring the visibility of the HELEN COST Action at meetings and conferences.

- Contribute to human resources training in new technologies on taller timber buildings within the international framework to create an open network of knowledge and professionals with differentiated skills, with particular attention to Inclusiveness Target Countries (ITCs) and Early Career Investigators (ECIs) and with an emphasis on gender equality.
- Organise meetings for Early Career Investigators (ECIs) and PhD students to acquire transferable skills such as grant writing, communication, and time-management as well as encouragement of direct collaboration among ECIs.
- Foster frequent exchanges and short-term scientific stays of research group members from ECIs in top European research centres to help increase their visibility and capacity.
- Give visibility and responsibility to PhD students and postdocs, particularly women, by funding their attendance at conferences through which they promote their Action-related work.
- Accelerate knowledge transfer from fundamental research to industrial application and increase the success rate in future proposals by addressing taller timber building market barriers, identifying suitable pilots, and connecting with existing R&D projects dealing with the topic of multi-storey timber design at both national and international levels.
- Promote interdisciplinary work streams using the synergies between the participating groups for an efficient exchange of knowledge by taking advantage of different COST tools.
- Act as a stakeholder platform to identify the needs and requirements from different fields and points of view through a bottom-up approach (from society, through industry, businesses, clusters, researchers and academia, to policy makers).
- Develop novel approaches by combining different technologies through interdisciplinary and transdisciplinary collaboration of different fields and widen the field of knowledge within each working group by incorporating a joint research approach.
- Increase the soundness and visibility of the Action's outputs by publishing joint scientific and technical articles, inviting industry to the Action's workshops, updating the website and organizing a showroom at one of the major events in the sustainable environment field as a final activity of the Action.

# 4 Target audience

The HELEN COST Action has generated interest from a broad range of stakeholders and is recognized as having the potential of significant impact in generating and consolidating research and technological/economic terms by improving the confidence in and the competitiveness of timber structures. Whilst the emphasis within COST is increasing the European dimension, the success of this Action can be increased through the involvement of experts from over the world. The potential international significance is mirrored by the non-European experts that have expressed their interest during the

development of this Action. The Action will enable useful synergies and provide the most effective way of disseminating the results from a large number of projects in the fields covered by this Action to the following target groups and end users of the Action. A range of potential stakeholders have been involved in the development of this Action. From each target group, at least one stakeholder has already expressed interest in joining this Action:

- representatives of the timber construction industry
- architects, structural engineers, consultants, and builders
- product developers in the sector of timber structures
- authorities and policy makers at regional and European levels
- research community, relevant standardization bodies and code writers
- teachers, lecturers and students of structural design, engineering, and architectural schools.

The coordination, discussion, and harmonization of recent efforts in research and development will be realized through workshops, seminars and short term scientific missions (STSMs). The consolidation and dissemination will be realized by conferences, training schools and the joint elaboration of state-of-the-art papers, best practice examples and the final Design guidelines for a holistic design and construction of multi-storey timber buildings. The activities will focus on increasing and consolidating common knowledge and on understanding of the identified technical issues. Experts participating in this Action will come from different backgrounds and Domains. Therefore workshops, conferences, and training schools to be carried out within this Action will promote interdisciplinary research in the fields of wood science and technology, timber engineering and structural reliability. Increasing the involvement of women within the scientific community is a key policy within the European Community. This COST Action will respect an appropriate gender balance in all its activities and the Management Committee will place this as a standard item on all its MC agendas. The Action will also be committed to considerably involve Early Career Investigators (ECIs). This item will also be placed as a standard item on all MC agendas. The role of women and Early Career Investigators will be encouraged by recommending them to the COST National Coordinators as national MC delegates and attention will be paid to fill positions in the lead of WGs with women and early-stage researchers. During Workshops, it is envisaged to dedicate at least one session to presentations from Early-Career Investigators, providing them with valuable experience in participating and presenting to their scientific peers. The involvement of Early Carreer Investigators in STSMs, active participation in state-of-the-art reviews and in Training Schools will be promoted.

# 5 Communication Strategy

The aim of the communication strategy is to connect COST Action HELEN to the relevant stakeholders, research community, and society, amongst others by:

- Sharing research results
- Stimulating new research projects

- Raising awareness of the Action topics in general public and among scientific societies
- Engaging the stakeholders
- Influencing policy making
- Exchanging ideas on sustainable development of the built environment

The specific objectives to achieve this aim are:

- To participate in different conferences, symposia, and meetings
- To organize own workshops, meetings, conferences, and symposia
- To create and manage the actions website
- To publish reports and contributions in journals
- To facilitate the communication and exchange between the different stakeholders
- To contribute to the development of standardization and regulations
- To disseminate knowledge and results to the general public and wider audience through specific educational material

# 6 Communication Plan

The MC will set up effective dissemination mechanisms to publish the progress and results of the HELEN COST Action, both to the participants and to the extended group of stakeholders, i.e. timber industry, construction industry, architects, structural engineers and builders, authorities and policy makers, scientific community and educational institutions. The Action's means to disseminate knowledge will be:

## 6.1 Internal communication

The communication within the Action shall be open and transparent with regard to all members and stakeholders. For internal communication within the Action, the Actions website, email correspondence, e-COST notification, and the platform of www.build-in-wood.eu with a dedicated subgroup is used.

For communication within the Working-groups email correspondence and virtual meetings are mainly used. Data exchange and communication is stimulated by share folders, apps such as miro, and web-meeting providers such as Zoom.

## 6.2 Website and Social media

The most important dissemination tool is the internet, since it offers the highest flexibility and by far the largest reach of all dissemination tools. The website and social media accounts will be geared towards all stakeholders. The Action's website is www.cahelen.eu and has information about the agenda of all planned activities, e.g. meetings, past and upcoming events.

The central role of the website in the dissemination process requires particular care of its up-to-date status and correctness, which will be assured during the Action's lifetime by a designated Web Manager.

## 6.3 Workshops, Training Schools (TS) and Seminars

Workshops, Training Schools Seminars are a very good scheme to reach the audience working in research, education, and practice. A particular attention will be given to Inclusiveness Target Countries (ITCs) and Early Career Investigators (ECIs), with an emphasis on gender equality. Synergies between institutions and between HELEN and other COST Actions will be used to reach a larger audience. Online and in-person workshops will be arranged in parallel to visiting sites with recognised expertise. Sites of recognised expertise will also be selected as venues for Training Schools for which students, lecturers, and practitioners from woodworking and construction industry will be invited. To support the setup and participation in Training Schools, they will be given a distinct and visible area on the Actions Website, including course material of past Training Schools. Many Action members have teaching obligations that will be used to pass on knowledge to current and future stakeholders secured through courses and seminars at home institutions with the emphasis on holistic design of multi-storey timber structures and representing timber a renewable structural material for a sustainable built environment.

## 6.4 Conferences, Association events

International conferences and associations are an important tool to bring together researchers, academia and industry in one forum to discuss the progress achieved to date. It is planned to hold at least one midterm and one final conference.

Examples of conferences where we intend to present outcomes of the action are:

- WCTE (World Conference on Timber Engineering)
- INTER (International Network on Timber Engineering Research)
- Conferences of the Wood Rise Alliance
- Forum Holzbau International
- Forum Wood Building Nordic

## 6.5 Journals

Peer-reviewed articles are a good method to prove the importance and accuracy of results and to make these broadly available, also for future generations. Relevant scientific journals will be contacted to publish special issues dealing with the topic of the Action. Peer-reviewed State of the Art papers shall serve as background documents for standardization committees. Joint publications and papers co-authored by various research groups will be encouraged and fostered by Short term Scientific Missions.

Examples of journals where we intend to present outcomes of the action are:

- Engineering Structures
- Wood Material Science and Engineering
- Construction and Building Materials
- Journal of Structural Engineering
- and others

### 6.6 State-of-the-art reports, Design guidelines

All new or adapted methods and technologies, developed within this Action, will be compiled in state-of-the-art reports (STARs) and Design guidelines. The STARs and final Design guidelines will contain recommendations to support the design engineering community with proper holistic design methods. All publications carried out during the time period of HELEN COST Action will acknowledge the support of COST and Open access publications will be strongly encouraged.

### 6.7 Link to standardisation and other European bodies

Many experts who will participate in the HELEN COST Action are also members of standardisation committees, assuring the dissemination and explanation of the results of this Action to the relevant standardisation bodies such as CEN TC250/SC5 "Eurocode 5 – Design of Timber Structures" and CEN TC250/SC8/WG3 "Eurocode 8 – Earthquake resistance design of structures – Timber structures" which are mandated to revise the Eurocode standard for the design of timber structures. Several experts that will be invited to participate in the Action are also member of CEN TC124 "Timber Structures" which is mandated to further develop the relevant testing and product standards. Since several of these participants are also member of ISO TC165 "Timber Structures", the dissemination and explanation of the results of this Action to the relevant standardisation bodies, not only in Europe but also worldwide, is assured. European Platforms like FTP or ECTP will be supported with information to promote the use of timber in structures.

## 7 Monitoring

The following impact indicators are used:

- Number of participants in Action meeting and workshops
- Number of scientific publications
- Number of conferences participations and ITC conference participations
- Number of STSMs, summer schools, other events
- Circulation of information on other websites and networks
- Number of visits and downloads from website

- Number of members and followers of social media accounts
- Feedback received over any communication or dissemination activities
- Number of press releases published and circulated
- Number of newsletters and subscribers
- Number of coverages in specialized and general media

# 8 Contacts


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