



# ROSEWOOD Hub Innovation Projects

Deliverable 2.4 Four innovative projects initiated





**Project No.: 776754**  
**Project acronym: ROSEWOOD**

**Project title:**  
 European Network of Regions On Sustainable WOOD mobilisation

**Programme: H2020-SC5-2017-OneStageB**  
**Topic: SC5-15-2016-2017 Raw materials policy support actions**  
**Start date of project: 01.02.2018**  
**Duration: 24 months**

## Deliverable D2.4

### Four innovative projects initiated

**Author: Tabea Link, ROSEWOOD Hub Managers**  
**Due date of deliverable: 31.01.2020**

**Actual submission date: 03.02.2020**

|                          |                                   |
|--------------------------|-----------------------------------|
| Deliverable Name         | 4 innovative projects initiated   |
| Deliverable Number       | D2.4                              |
| Work Package             | WP2                               |
| Associated Task          | T2.2                              |
| Covered Period           | M18-M24                           |
| Due Date                 | 31.01.2020                        |
| Completion Date          | 03.02.2020                        |
| Submission Date          | 04.02.2020                        |
| Deliverable Lead Partner | LUKE                              |
| Deliverable Author       | Tabea Link, ROSEWOOD Hub Managers |
| Version                  | 1.0                               |

| Dissemination Level |   |   |
|---------------------|---|---|
| <b>PU</b>           | Public  |   |
| <b>PP</b>           | Restricted to other programme participants (including the Commission Services)        |   |
| <b>RE</b>           | Restricted to a group specified by the consortium (including the Commission Services) |   |
| <b>CO</b>           | Confidential, only for members of the consortium (including the Commission Services)  | X |



## CHANGE CONTROL

### DOCUMENT HISTORY

| Version | Date       | Change History          | Author(s)                 | Organisation |
|---------|------------|-------------------------|---------------------------|--------------|
| 1.0     | 11.12.2019 | First draft of template | Tabea Link                | S2i          |
| 1.1     | 18.12.2019 | Input of Central Hub    | Larissa Rudolph           | PHBW         |
| 1.2     | 19.12.2019 | Input of Northern Hub   | Merja Laajanen            | LUAS         |
| 1.3     | 19.12.2019 | Input of Eastern Hub    | Danijela Saric-Bartolovic | Cekom        |
| 1.4     | 03.02.2020 | Input of Southern Hub   | Riccardo Castellini       | CESEFOR      |
|         |            |                         |                           |              |

### DISTRIBUTION LIST

| Date       | Issue | Group                 |
|------------|-------|-----------------------|
| 11.12.2019 | 1.0   | ROSEWOOD Hub Managers |
|            |       |                       |
|            |       |                       |

**The content of this deliverable is public.**



## Introduction

This deliverable summarizes the main outcome of the ROSEWOOD Hubs' Business Idea Creation Workshops, which took place during M12-M21 of the project. Each Hub conducted two workshops with the goal to encourage grass-root innovation and collaboration across the wood value chain. The workshops gathered stakeholders from forestry (mostly forest owners and foresters) and the wood processing industry (e.g. architects and representatives from the chemical industries) as well as scientists, students, start-up entrepreneurs developing solutions for the sector and political representatives.

The methodology followed in the workshops is founded on the principles of open innovation and described, along with the outcomes of the workshops' brainstorming session, in D2.3 Report on regional workshops for detection of innovative ideas.

The following business idea canvases outline for each of the four innovation projects key data about the core innovation, envisaged market sector, target groups, implementation steps and key shareholders and supporters of the project. The canvases bring together business modelling and idea presentation with the goal to provide a roadmap for bringing the innovation to the market.

## Index

|  |    |
|--|----|
| <b>North Europe Hub Innovation – Increasing soil bearing capacity with cross-laminated timber plates</b> ..... | 5  |
| <b>East Europe Hub Innovation – Waste wood collection and reuse</b> .....                                      | 7  |
| <b>Central Europe Hub Innovation - Xylene</b> .....  | 10 |
| <b>South Europe Hub Innovation – Forest Sharing</b> .....  | 11 |
| <b>Conclusion</b> .....  | 13 |

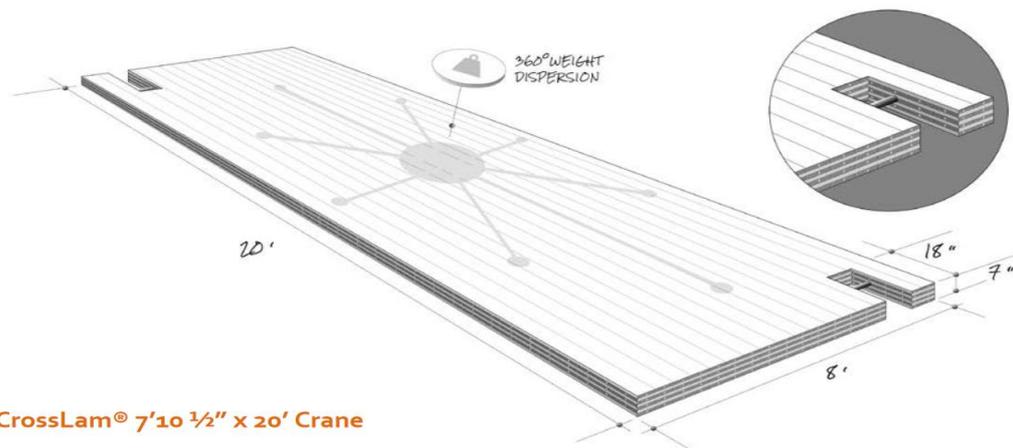


## ROSEWOOD North Europe Hub Innovation

# Increasing soil bearing capacity with cross-laminated timber (CLT) plates

### #slogan

Transforming timber transport through sustainable infrastructure. Improving the bearing capacity on soft soils with CLT.



CrossLam® 7'10 1/2" x 20' Crane

CrossLam® crane mats allow for 360° weight dispersion.

### #problems

### #challenges-targeted

CLT plates produced of wood material can be used for increasing bearing capacity on wet mineral soils and peatlands to enhance timber logging and transportation.

CLT-plates fits also to be used as temporary bridge solutions that are easy to setup and dependable. With a variety of spans, bridges are engineered for easy assembly. CLT bridges are engineered to withstand high weights and constant traffic.

### #unique-value-proposition

The load-bearing capacity of CLT is at the steel level and the weight of CLT is five times less than that of concrete. After logging/transportation the plates can be re-used several times. All kinds of sawn timber can be used. The quality class of sawn timber does not affect the breaking resistance of CLT.

With each plate being an average 50% lighter than a traditional bolted mat, shipping costs are significantly reduced.

Construction crews often need to work in challenging terrain and ecologically sensitive areas. In many such situations, mats and temporary roadways constructed of heavy timbers are the answer.



However, not every job site calls for such robust solutions.

In these instances, contractors can accomplish just as much and save a lot of money with cross-laminated timber (CLT) mats.

This new technology is twice as strong and five times stiffer but is not ideal for all needs.

**#sustainability-potential**

In production of CLT-plates the recycling of wood can be enhanced and the product itself plates is reusable. Also, the plates that are used in construction structures can be used as an access matting when the building is demolish in the end of its lifespan. The length of forest transportation can be cut down significantly by using the plates for crossing the sensitive soils. Fuel consumption decreases likewise.

**#target-groups**

Forest companies, logging and transporting entrepreneurs. Also, wind mill installers, rescue service, military and energy transmitting services.

**#key-activities**

Designing the cost effective structure for the plate-testing-informing

**#partners-and-distribution-channels**

Forest owners – Forest companies – Sawmills/recycling centres – CLT factories – Logging / transportation entrepreneurs / RDI projects needed before implementation

**#costs**

Funding is needed to develop and pilot the idea. Public funding for this project will be applied in the 2020.

**#revenues**

The revenue streams come from the reduction of logging cost, which improves the profit of the logging.

**#next-steps  
#participate**

Contacting foresters, forest companies, logging / transportation entrepreneurs, CLT producers, recycling centres, research institutes – Building a consortium - Applying funding for development of the idea – Piloting the idea



## ROSEWOOD East Europe Hub Innovation

# Waste wood collection and reuse

### #slogan

**Building a more sustainable society by reusing waste wood**



### #problems #challenges- targeted

- **Reduction of the pressure on forests as primary sources for wood** – introduction of a new (secondary) wood source, contribution to the sustainable management of forests, development of a sustainable source for industry.
- **Contribution to cascading use of wood, circular economy** - maximisation of resource efficiency as a key objective for implementation of a circular economy and to face the challenge of an increased demand for wood resources forecasted in the coming years.
- **Community wood source** - providing a wide range of sustainable, locally sourced wood and wooden products (municipal, commercial and industrial, construction and demolition), encouragement of communities in making the best use of wood, finding a niche for reusable wood for widening the waste wood end market, creation of value-added market and increase of cost effectiveness, expansion of job opportunities and workforce development skills.
- **Reduction of the landfill emissions** - reducing wood sent to landfills, reducing incineration, sustainability of communities and the environment through resource preservation.

### #unique-value- proposition

The potential of waste wood at the market is still unexploited. However, there is a growing market demand by informed consumers for sustainable products made from recycled and / or sustainable raw materials. Examples for waste wood are discharged furniture, timber from demolished old buildings and wooden packaging.



The proposed project aims to add an additional step in the use of waste wood before its final conversion to heat and power energy and to decrease the amount of waste wood at the landfills. The objectives are to increase production of products from waste wood, to boost added value products, to develop a certification system for products from reused wood and to promote recycling and environmental protection by raising awareness on the ecologic aspects of the project.

The project highlights the importance of smart use of waste wood and wood residues.

### #sustainability-potential

Reuse of waste wood will contribute to promotion of cascading use of wood and sustainable bioeconomy through the establishment of new renewable resources and their conversion into value added products.

Contribution to the circular economy would be realised through the prolongation of the product, material and resource value, and minimization of the waste generation.

Implementation of a cost-effective, environmentally and socially superior way of dealing with wood waste.

### #target-groups

City / Municipality cleansing departments, private consumers, waste collection companies, construction / demolition companies, wood processing companies.

### key-activities

Development of CBA; Knowledge transfer - Best practice examples analysis, cooperation with University / technology departments in preparation of business model; development of waste collection model in cooperation with local government and waste collection companies; introduction of certification model in cooperation with Certification Institutions; awareness raising on potential of waste wood.

### #partners-and-distribution-channels

Key partners in the development and implementation of the proposed idea would be RDIs in the field of wood technology, municipality cleansing departments, organisations, companies and private persons that generate waste wood, certification departments and companies interested in new production methodology.

Distribution channels which are planned to be used for the awareness raising: web site, social network, conferences, publicity campaigns, local TV/radio/newspaper interviews.

### #costs

Intention is to submit the pilot project, applying for public funding. Costs are not defined yet.

### #revenues

There are two main income streams.

- Collection charges. Waste wood Collection charge needs to be less than it costs to put the same amount of wood into a landfill, so the customer has the financial incentive to use the service.
- Sales of waste wood and products. Proportion of the collected waste wood is expected to be suitable for reuse for construction etc. and



would be directly sold to final consumer. The rest of the collected wood would be used for production of wide range of wood products for sale.

**#next-steps**

**#participate**

1. Initial research
  - i. Analysis of current waste wood situation and community wood recycling
  - ii. Analysis of existing best practice examples
  - iii. Visit to existing wood recycling entrepreneurs
2. Feasibility study and budget
  - i. Preparation of feasibility study
  - ii. Preparation of project budget
- iii. Preparation of community wood recycling business model
- iv. Preparation of certification model
- v. Preparation of project proposal for funding application
3. Set-up phase
  - i. Implementation of Cooperation agreements with SMEs
  - ii. Implementation of Cooperation agreements with University
  - iii. Implementation of Cooperation with certification organisation
4. Launch
  - i. Application for license and permits procurement
  - ii. Purchase of equipment
  - iii. Engagement of staff and organisation of employee trainings
  - iv. Implementation of promotion activities
  - v. Organisation of waste wood collection
  - vi. Organisation of waste wood separation system
  - vii. Organisation of added value products production
  - viii. Implementation of sales system

The next steps will consider contacts to the RDIs for technology development, local governments and potential wood waste sources, certification departments and companies interested in new production methodology. The presentation of the idea was presented to potential stakeholders, with a goal to create a consortium for development and implementation of the pilot project.

East Europe Hub will actively support the applying process and the partners will participate in the consortium if needed.



# ROSEWOOD Central Europe Hub Innovation

## Xylene

### #slogan

Boosting Trust in Timber



### #problems #challenges- targeted

The EUTR makes operators responsible for placing legal timber onto the market and issues penalties if illegal timber is discovered. Since certifications do not ensure legality, operators must constantly self-audit suppliers through expensive field visits. Despite this, illegal timber is threatening the operators' reputation on the market.

### #unique-value- proposition

Xylene, with its system for supply chain control and traceability of timber, changes the way companies interact with their supply chain. The approach is a combination of supply chain visualization, due diligence and product traceability, which uses blockchain, to maintain the data confidentiality of the individual supply chain partners, and remote sensing to validate the authenticity of data exchanged.

### #sustainability- potential

Transparency and trustworthiness of supply chain enable and enhance sustainable wood mobilisation, reducing deforestation and all connected illegal and non-sustainable activities.

### #target-groups

Target groups are all stakeholders in the timber supply chain from the forest to the consumer. In particular, sawmills and importing companies in global timber supply chains are targeted as initial customers.

### #key-activities

Realisation of pilot projects with industrial partners are key activities to bring an innovative standardised solution to the market

Xylene is a German start-up, located in Reutlingen.

For more information about us visit the website [www.xylene.io](http://www.xylene.io)

### #partners-and- distribution- channels

Key partnerships are planned to be established with certifying institutions which can benefit from traceability for due diligence and site audits.

Distribution will be through direct sales. Further, multipliers such as associations shall be acquired to support Xylene entering and growing in the market.

### #revenues

Xylene will receive a subscription fee for the solution and basic traceability. With enhanced piece-by-piece traceability a setup fee and cost per unit will be added.

### #next-steps #participate

Xylene is currently looking for pilot project partnerships for the implementation and benefit assessment. This gives a great advantage to partners due to the customized approach which can currently be provided. The Central Hub will consult Xylene on potential funding opportunities, e.g. in the framework of the EIC pilot.



## ROSEWOOD South Europe Hub Innovation

### Forest Sharing

**#slogan**

**Shared Value from Forests, a resource to look at with NEW EYES**



**#problems  
#challenges-  
targeted**

- 1) Management of fragmented, unmanaged or underutilized forest assets
- 2) Set up a network where the meeting between the owners and the economic operators that make up the chain is facilitated and organized
- 3) Bringing Innovation in forest management through Remote Sensing/Precision Forestry

**#unique-value-  
proposition**

Forest Sharing adopts a circular value chain, based no longer on the possession of resources but on their shared use, on an on-line network: Forest owners will join the community, and our staff will oversee activities and provide services. Value will be created with a bottom up approach, linking sharing economy with an active and aware management by the forest owner, who chooses which kind of management methods can be used. This model is replicable wherever there is the same market scenario

**#sustainability-  
potential**

The length of forest transport can be significantly reduced by activating the creation of local supply chains that use forests that are largely unused to date in a sustainable and scientifically advanced way: this can bring benefits to the owners and companies involved, which will thus be incentivized for a more careful and active management of the forest heritage and its biodiversity

**#target-groups**

Forest Owners/Companies and Technicians

**#key-activities**

Create a marketplace through which take management of unmanaged or underutilized forest assets; set up a network where the meeting between the owners and the economic operators that make up the chain is facilitated and organized; create the economies of scale necessary for the "forest product" to become economically viable to be managed through activities such as the sale of wood and / or other forest products, the creation of recreational areas / adventure parks / thematic itineraries, the management of Rural



Development Plans, the management and enhancement of ecosystem credit / Provide Precision Forestry Services

### #partners-and-distribution-channels

The key partners in the development and implementation of the proposed idea will be the forest owners themselves and companies in the sector interested in new production methods, public administrations and research centers connected to the study of sustainable wood mobilization.

The distribution channels that will be used for awareness raising are website, social networks, conferences, advertising campaigns, radio and newspaper interviews.

### #costs

Most important costs inherent to our business model will come from Forest Sharing platform development, and from a proper marketing campaign: approximate costs for these key activities have been indicatively estimated at around 100.000 Euros over a two-year period. So as to cover them, we are going to apply for public funding, either ask for investor money

### #revenues

Main revenue streams will come from two different paths

- a) Forest Owners: a success fee based on the value created, different according to the chosen management method. Otherwise through the purchase of innovative forestry services
- b) Forest Companies/Technicians: an entry fee due for network access and in an overall perspective a share of the greater value obtained from the production of forest assets in a more optimized way: business continuity due to the merging of the surfaces

### #next-steps #participate

- a) development and market launch of the platform
- b) development and finalization of contractual methods, management of obligations related to the GDPR
- c) marketing campaign for forest owners
- d) operational engagement of already interested forest owners and companies

The Rosewood Southern Hub has given us (and is still giving us), a fundamental support as regards visibility and networking opportunities: thanks to the Rosewood events, we were able to get in touch with potential partners in other European regions, with whom we are considering exporting our forest management model.

As a support we are looking for funding and for new networking opportunities



## Conclusion

The business canvases/posters of the four innovative Hub projects included in this deliverable were also exhibited during the ROSEWOOD Final Conference and Forestry Innovation Workshop 2020 in Florence. Overall, the business canvases shall serve as innovation profile or 'pitch deck' to promote each of the projects to potential stakeholders. As described, Hubs will continue actively supporting the innovation owners and explore different opportunities of implementation, including application for funding and finding suitable business partners.

