

# **THE CLUSTER PERSPECTIVE ON BIOECONOMY AND CIRCULAR ECONOMY WOOD**

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# Our Network



170 members



85% SMEs



16 R&D partners



> 20.550 employees



55% manufacturing companies

# WOOD AS A KEY RESOURCE IN THE BIOECONOMY

Renewable & biogenic resources – circular bioeconomy wood



- Wood as a sustainable building and construction material
- Digitalization and processes for a sustainable use of resources
- Innovative, value-adding products
- Services along the wood value chain





# Current situation regarding circular economy wood

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- 520.000t/a total waste wood from the construction sector
- Only one cascading stage
- Cascade factor = 1.6 => wood is used 1.6 times.

\*Calculated according to Prof. Dr. Udo Mantau

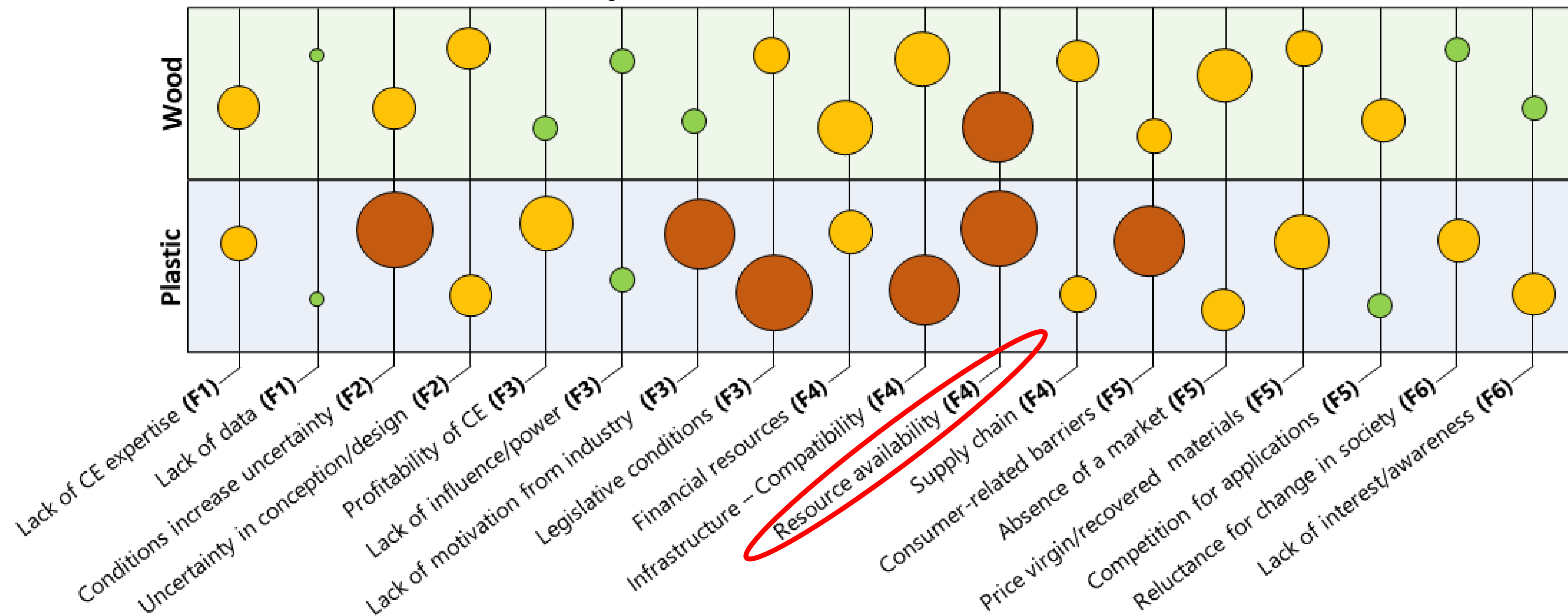


Focus on innovation within a circular bioeconomy:  
efficiency, sufficiency, consistency



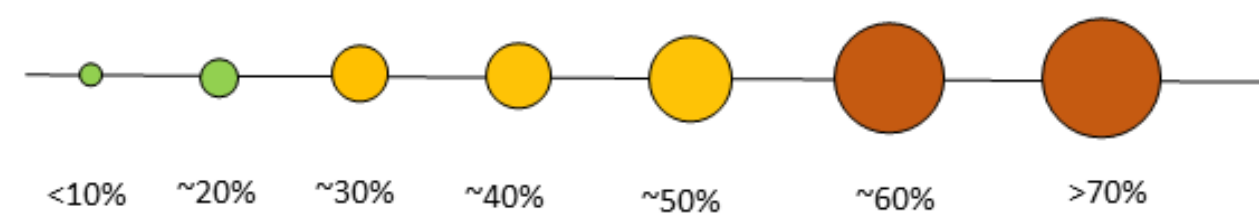
# Barriers to circular economy wood

A) Barriers to a Circular Economy



Share (%) of companies within the sample (wood: n = 17; plastic: n = 17)

Note: The amount of how many interviews mentioned a topic is plotted in relation to the radius of the circles.

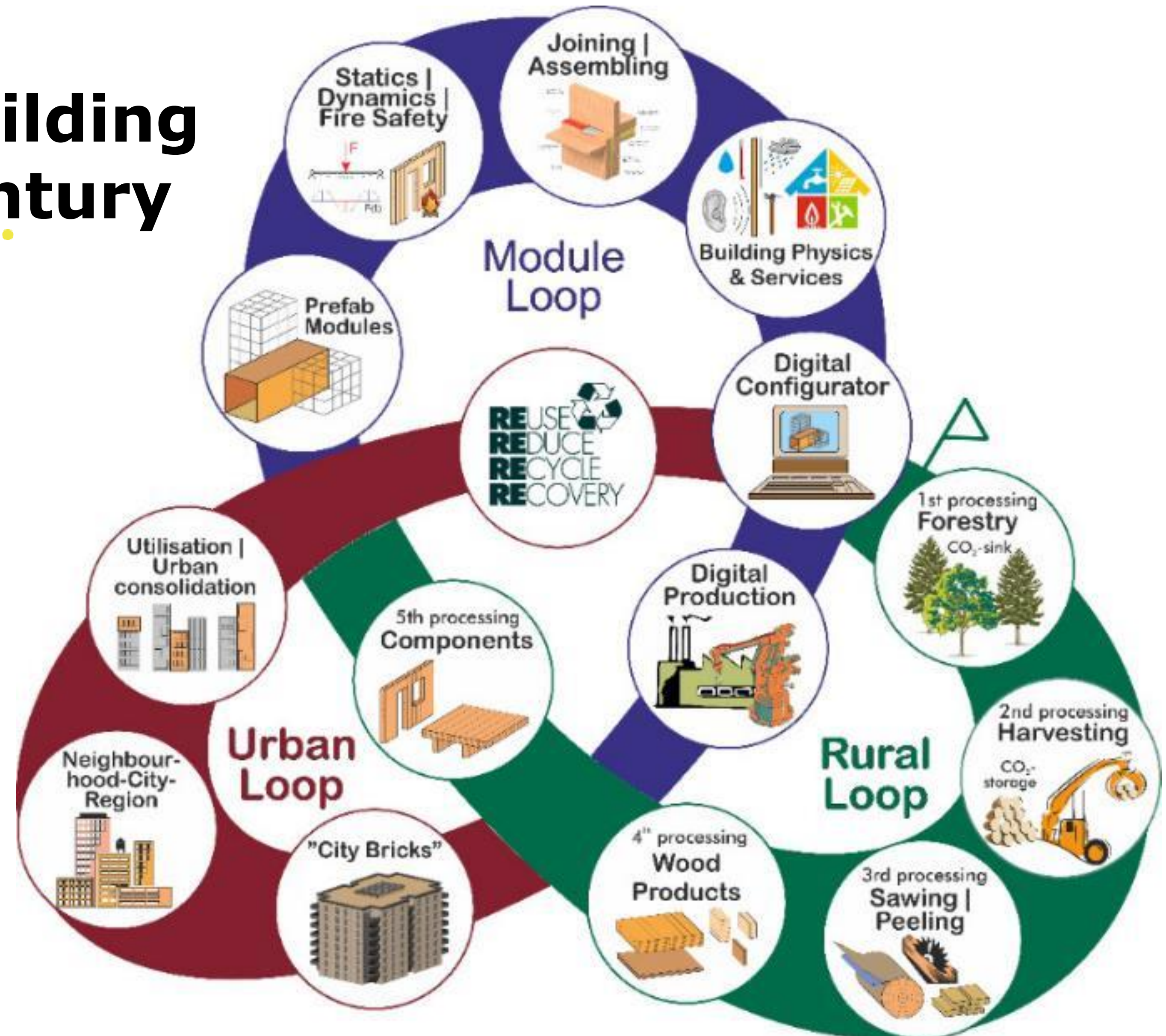




# Wood as the central building material in the 21st century

## FUTURE TRENDS AND RESEARCH ISSUES IN TIMBER CONSTRUCTION

- Standardisation → Development of system elements / modular system
- Optimisation of construction processes from planning and production to assembly with integration of all trades
- Digital solutions towards open building configurators for timber constructors and planners
- Holistic life cycle assessment of buildings in the future → Approach: cradle to cradle
- **Industry project submitted: SeRenowood (Q4 2024)**





# Our national Initiative: Bioeconomy Austria

Bundesministerium  
Klimaschutz, Umwelt,  
Energie, Mobilität,  
Innovation und Technologie

Bundesministerium  
Land- und Forstwirtschaft,  
Regionen und Wasserwirtschaft



- **Setting regional priorities with wood as a material**
- **Knowledge processing and transfer into practice**
- Wood in "new" or alternative applications
- Circular construction with wood
- Structural lightweight construction with wood



Be a part

[www.bioeconomy-austria.at](http://www.bioeconomy-austria.at)



pro:Holz Tirol



Die Wirtschaftsagentur  
des Landes Niederösterreich



150 JAHRE  
NACHHALTIG  
VORAUSSCHAUEN  
1872 - 2022

UNIVERSITÄT FÜR BODENKULTUR WIEN



umweltbundesamt  
PERSPEKTIVEN FÜR UMWELT & GESELLSCHAFT





# Renowave Impact Days 2023

## Workshop: Wood recycling management (in refurbishment)

- **Wood products in building finishing**
  - Need for a standardized representation of wood products
  - Transport & urban mining as a hotspot
  - Increasing calls for standards to be adapted in order to at least achieve greater flexibility in the direction of a circular economy.
- **Wood products in building structure**
  - Definition of waste wood from construction as a major obstacle
  - Performance requirements (standard, EAD) do not allow reuse in the construction sector
  - Depending on the requirements, it is now technically possible to reprocess wood, which in turn argues in favour of renewing the relevant standards.







# Priority areas and projects



## **Forstliche Innovationsräume ([Link](#))**

Digital tools for simulating the effects of climate change on forestry and the timber value chain

## **Future Wood Trans**

Autonomous driving in forestry

## **FOREE-Digital Forest Education ([Link](#))**

Promoting digital skills in forest education

## **WoodLogistics ([Link](#))**

Software-Lösungen

## **Forest EcoValue ([Link](#))**

Developing & promoting new forest ecosystem services

## **WoodWork ([Link](#))**

Digital tools for sawmills

## **SysWood ([Link](#))**

System optimisation and planning methods in timber construction

## **Spitzen!Leistung Holz ([Link](#))**

Innovation management for companies in the field of digitalisation and sustainability

## **Holz & Design ([Link](#))**

Bringing designers and companies together

## **CARpenTiER ([Link](#))**

Use of wood in highly stressed components for the mobility sector

## **UniStrand ([Link](#))**

Rethinking cross laminated timber

## **TraceWood ([Link](#))**

Traceability of wood within the value chain

## **Bioeconomy Austria Network ([Link](#))**

Use of wood for new applications (e.g. mobility and mechanical and plant engineering)

## **BIG-Bio ([Link](#))**

Transfer of knowledge and tools for the application of the bioeconomy in companies

## **Start Up and Restart Up ([Link](#))**

Support for start-up companies in the wood value chain



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**Hier wächst Wirtschaft**

# SERENOWOOD KONSORTIUM

## Projektleitung



## Forschungsteam



## Unterstützer



## Sanierungsauftraggeber



SG Elin

ENW



## Auftragnehmer aus der Branche

HANDLER



RUBNER holzbau

KMT PREFAB

