

# Green Tech Innovators Club

Green Tech auf Basis nachwachsender  
Rohstoffe

Herfried Lammer,

Kompetenzzentrum Holz GmbH

**WOOD**  
KPLUS



# Wood K plus 2030

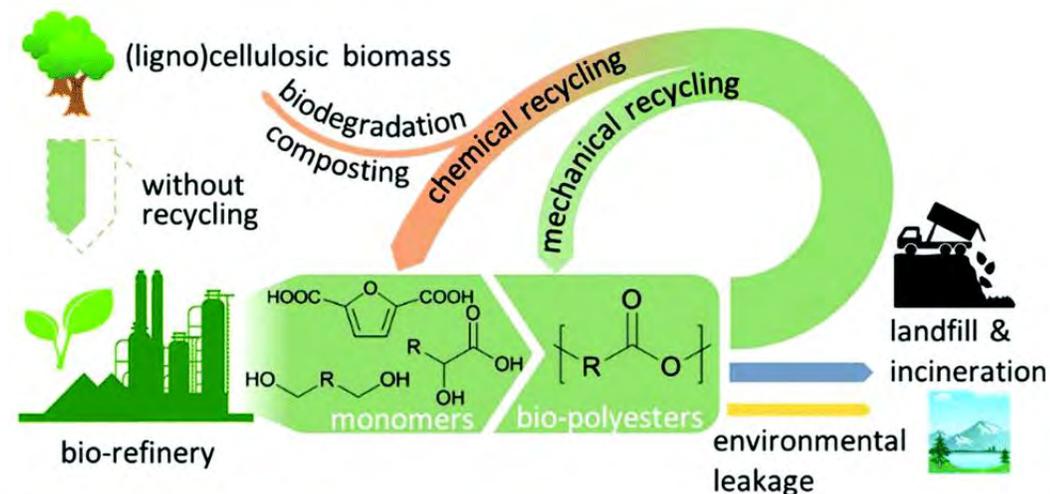
## innovative solutions for a circular bioeconomy

### Our 2030 vision is

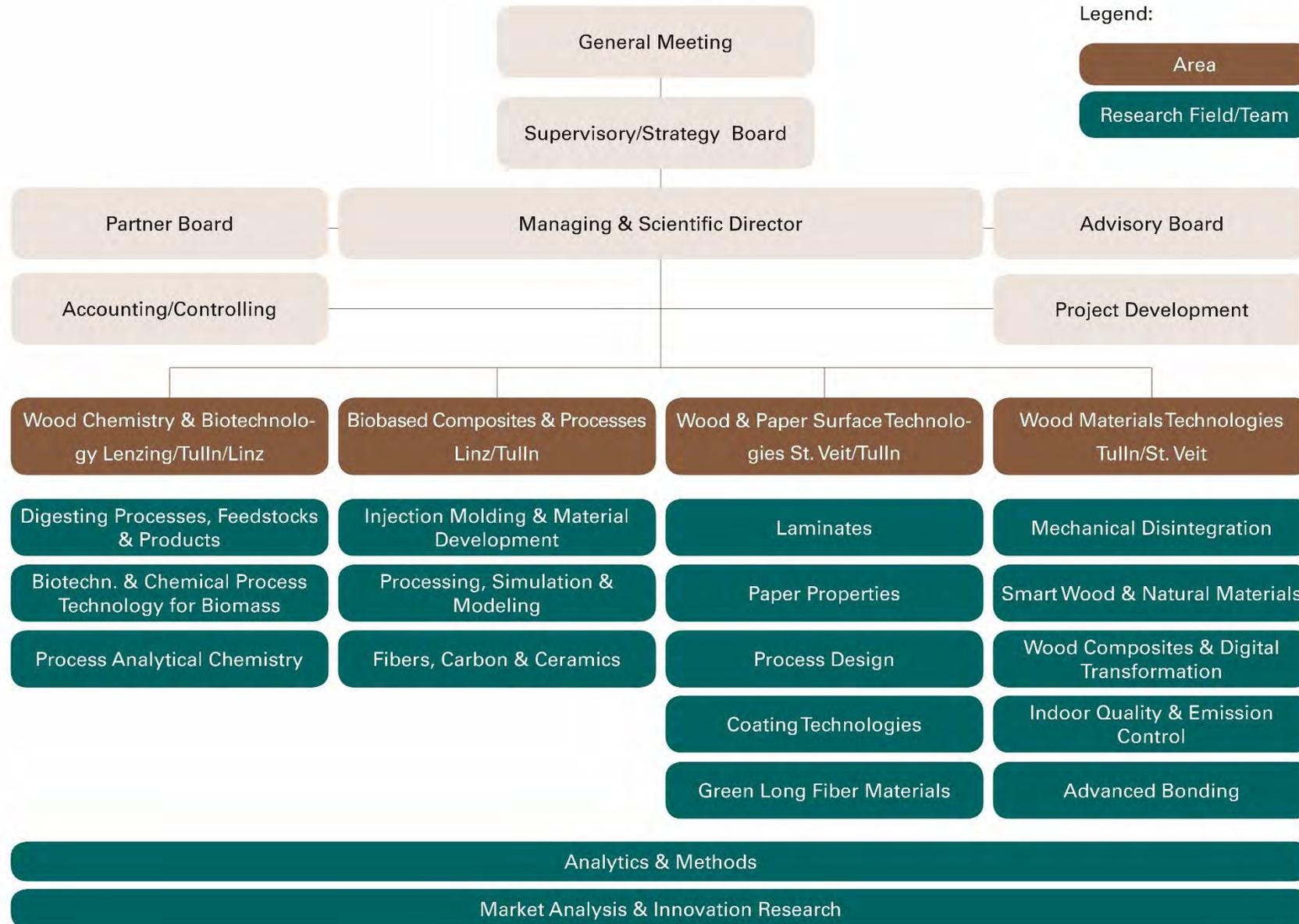
for Wood K plus to take on an internationally leading role by tackling important research questions in order to enable resource-efficient management in the circular bioeconomy.

### Our 2030 mission is

to conduct research into sustainable materials, , processes and technologies for industrial applications and products from renewable resources.



# Organigramme



# Consortium Wood

## Scientific Partners

**Comet - Funding** 

**Boku Vienna**  
Material Sciences and Process Eng.  
Chemistry  
Agrobiotechnology  
Economics and Social Sciences

**Johannes Kepler University Linz**  
Chemical Technology of Organic Materials  
Polymer Chemistry  
Injection Molding & Process Automation

**Technical University, Vienna**

**Technical University, Graz**

**Budapest University**

**Hamburg University**

**Reutlingen University**

**Inst. ind. Ökologie**

**University Graz**

**ETH Zürich**

**ENSTIB**

**Additional Scientific Partners**

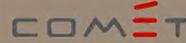
**Projects & Services (Non K)**



**Knowledge Transfer**



## Company Partners

**Comet - Funding** 

**Adfis**

**Borealis**

**CES**

**CPH**

**Dynea AS**

**Engel**

**Fasal**

**F. List**

**Frey Amon**

**Fritz Egger**

**FunderMax**

**Haratech**

**H.B. Fuller**

**Henkel**

**Heraeus**

**Impress**

**Isovolta**

**Leitz**

**Lenzing**

**Lieco**

**LXP**

**Metadynea**

**Mondi**

**Salzer Formtech**

**Scheucher**

**Staedtler**

**Schunk**

**Team 7**

**Weitzer**

**Woschitz**

**Additional Companies**

**Projects & Services (Non K)**

**Fundamental Research** → **Industrial Research** → **Experimental Development**

# Economic Benefit - Lenzing

## Research Field: Potential Secondary Raw Materials

- Development of a simple and industrial scale pulping process for converting cotton based textile waste into cellulosic fibers
- Patent application has been filed
- Implementation of a new generation of TENCEL® fibers using cotton fabric waste as a key raw material by the Lenzing Group
- The new fiber offers an exciting ecological footprint
- The amount of chemicals being used could be drastically reduced



Raw material samples dissolved (left) and undissolved (right), necessary for pulp analytics before processing

# Economic Benefit - Borealis

## Application of 5 new patents together with Borealis Polyolefine GmbH:

- **Fibre Reinforced Polypropylene Composites (granted)**
- Outstanding Stiffness-Impact Balance with long PET fibres and short GF and short CF
- Outstanding Stiffness-Impact Balance with long PET fibres and long GF and long CF
- Improved Toughness of hybrid NFC with long polymer fibres
- Improved Elongation of hybrid NFC with PVA fibres



**Material solutions for lightweight interior applications**  
e.g. instrumental panel carriers

# Economic Benefit - Impress

Research Field: resin modifications

- New business model and applications for new product-segment
- Doubling of production capacity
- Investment of three million Euros



*Resin station Impress*

# Economic Benefit – FunderMax

Research Field : surface structure

→ Basic for new product development

→ Investment of ~ 13 Mio. Euros

→ Implementation



*Individual decor*



*Project Barnstable High School; Country USA*

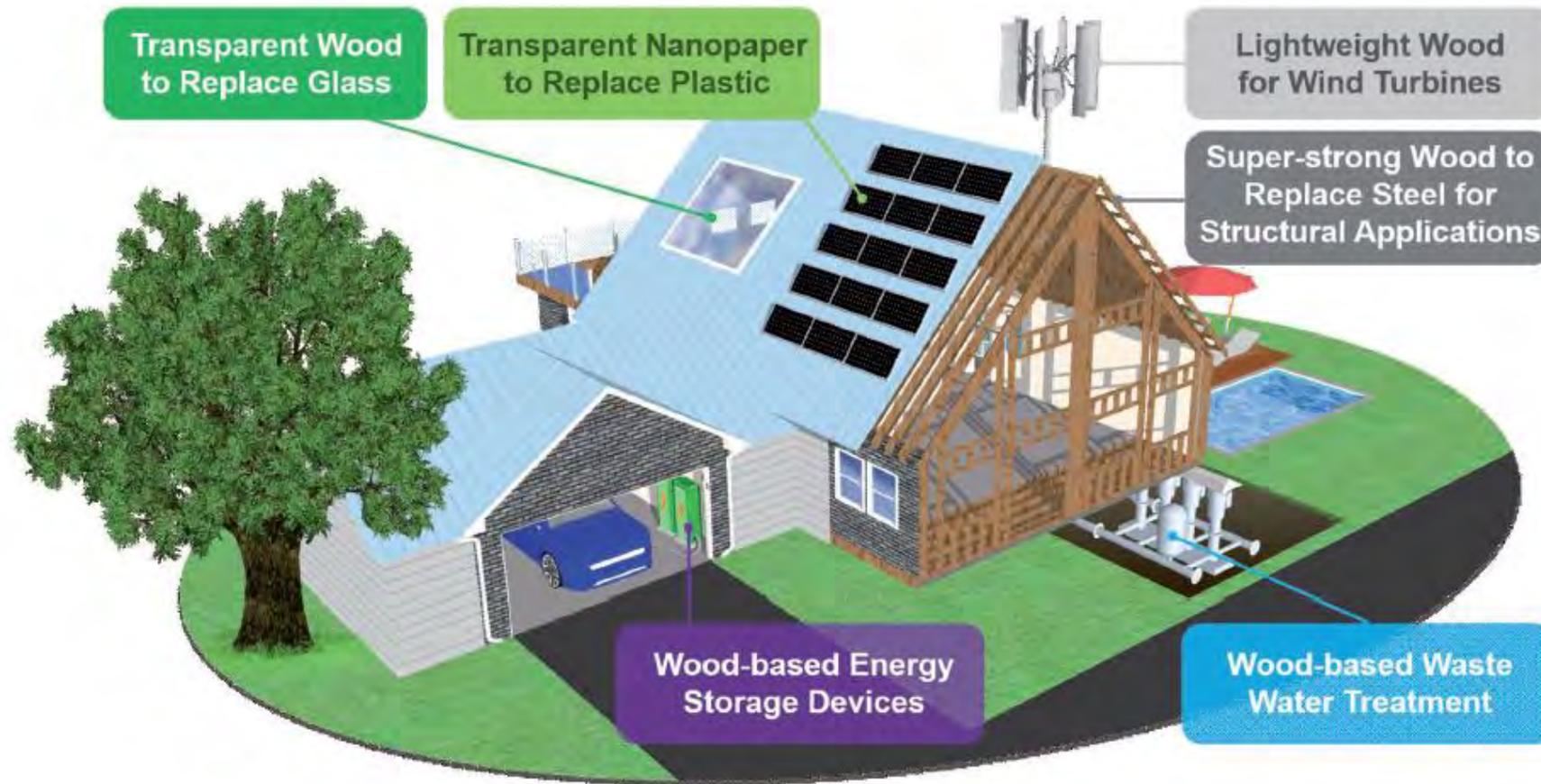


*'Salt Store'; Country France*



*The Oakland Ice Box Challenge*

# Holz Innovationen für die Zukunft



F. Jiang et al, Wood based nanotechnology toward sustainability, 2017