Green Tech Innovators Club

Green Tech auf Basis nachwachsender Rohstoffe

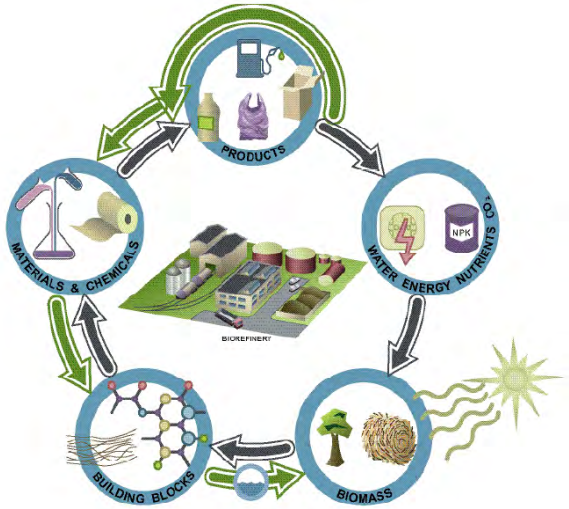
Herfried Lammer,

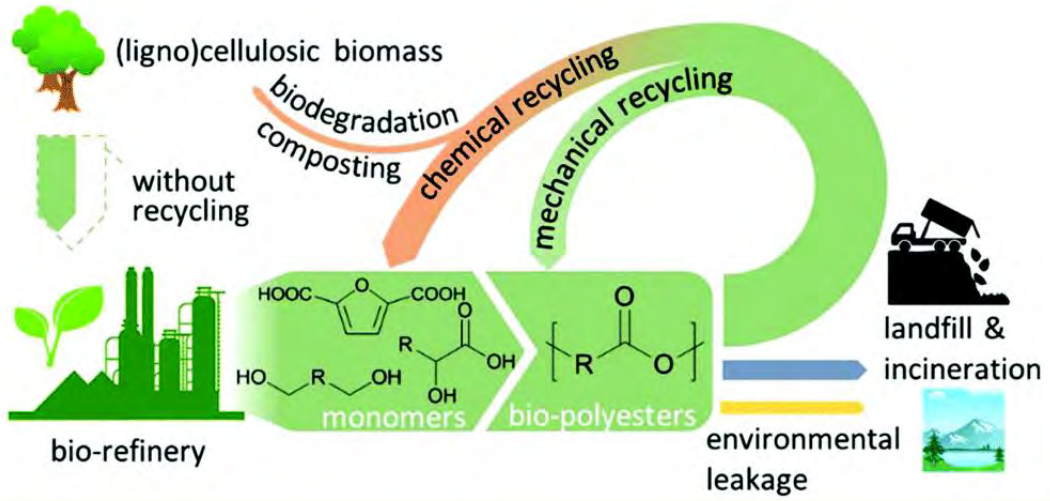
Kompetenzzentrum Holz GmbH

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.

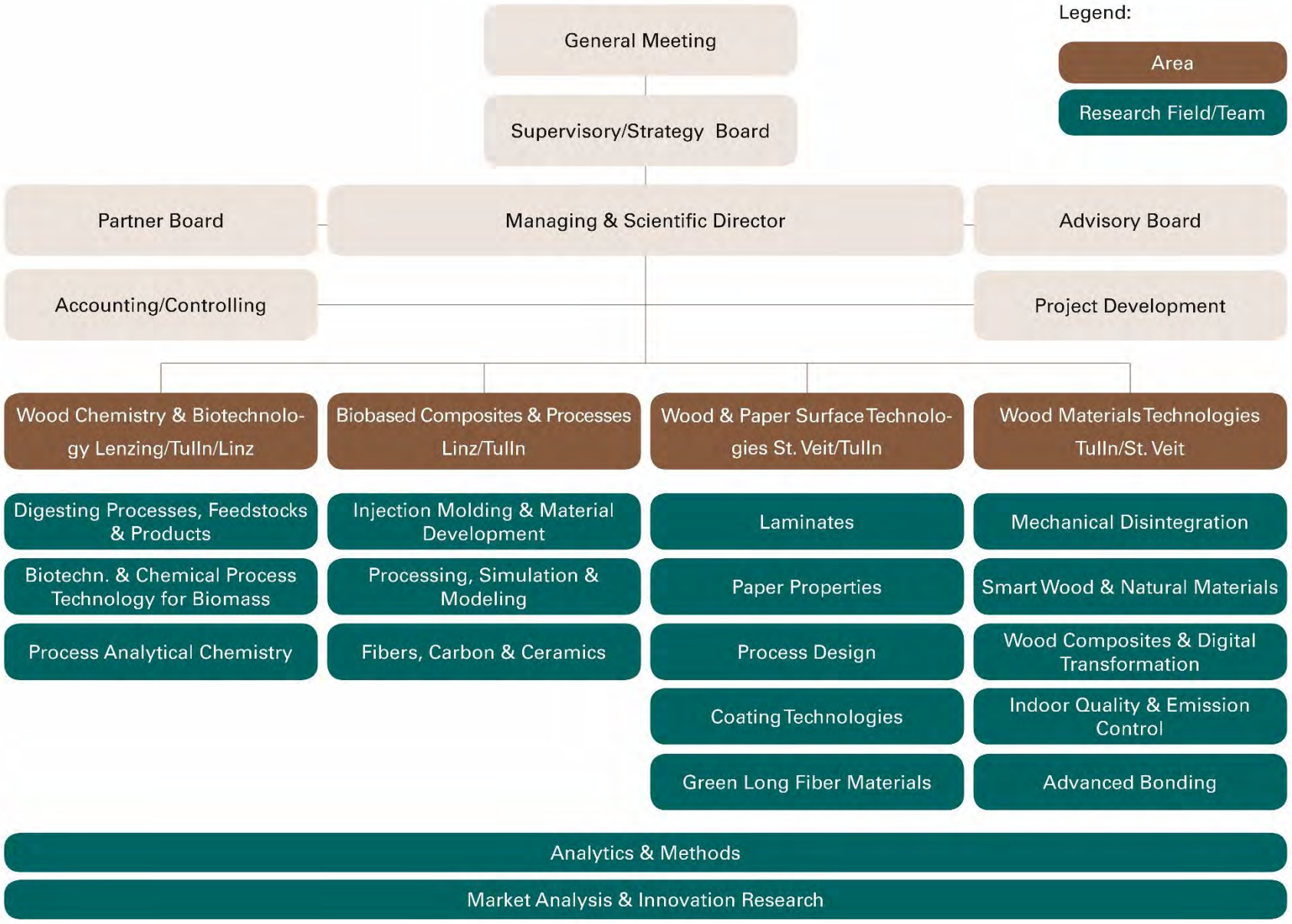
Our 2030 mission is
to conduct research into sustainable materials, , processes and technologies for industrial applications and products from renewable resources.



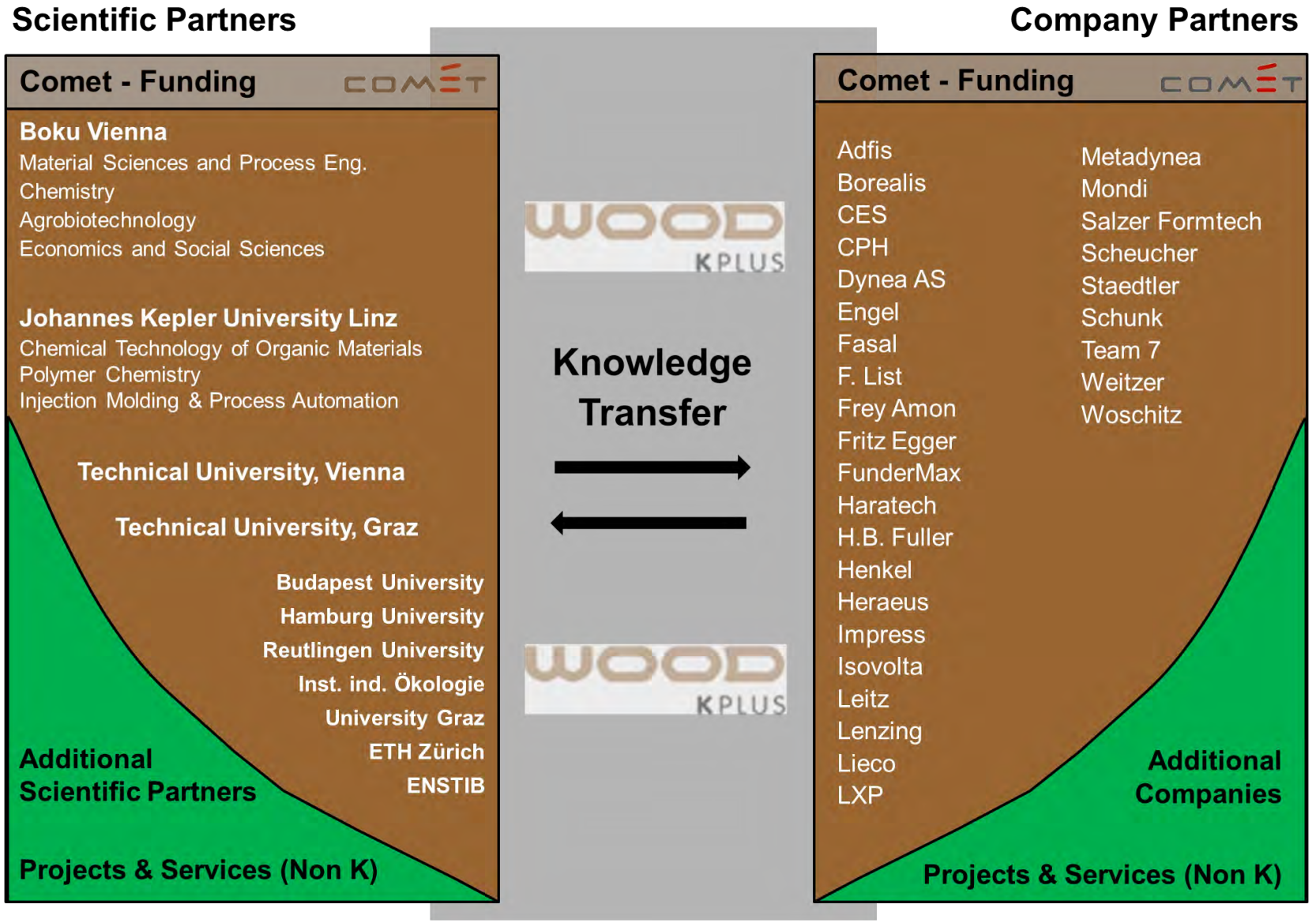


2

Organigramme



Consortium Wood



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 <u>5 new patents</u> 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

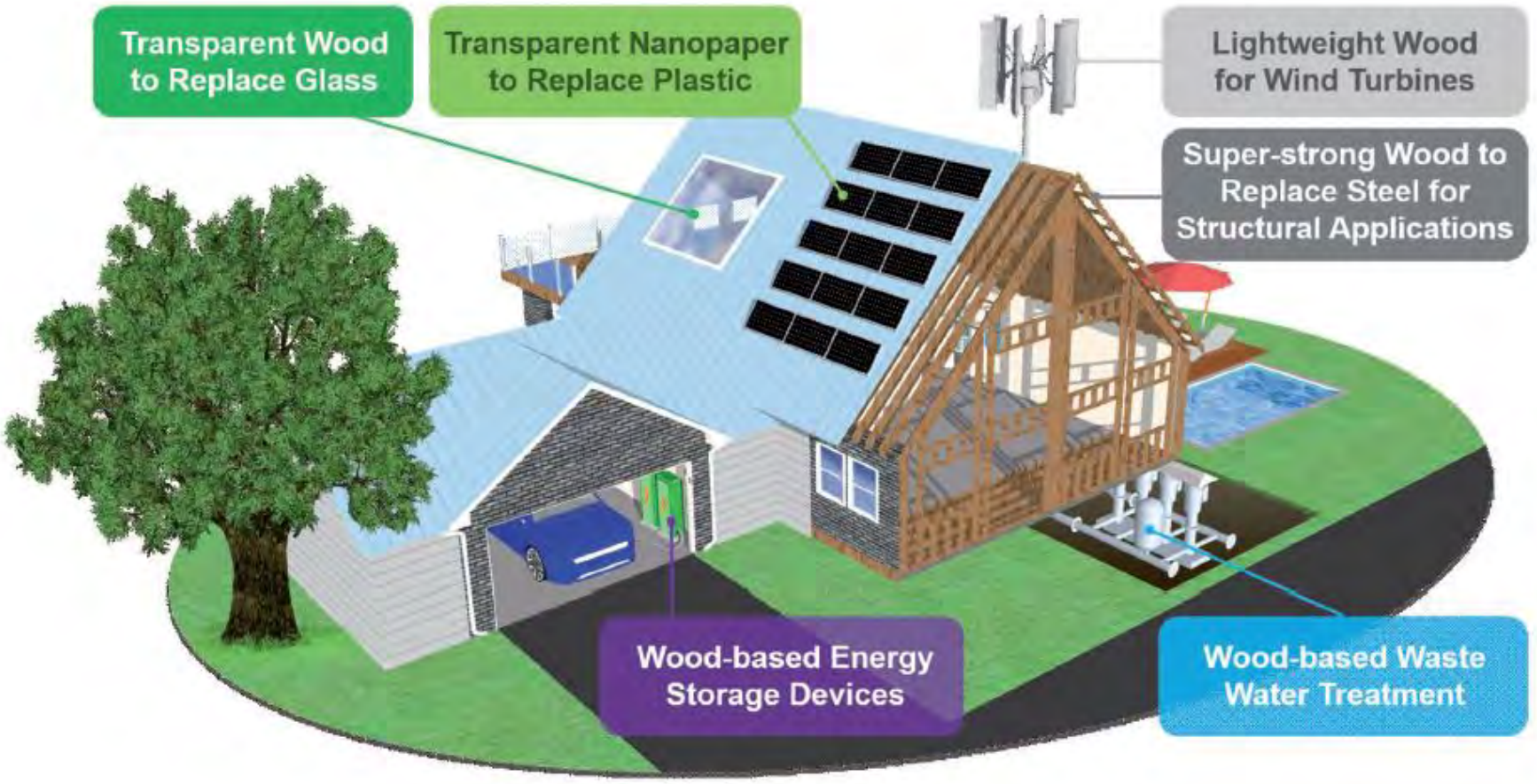
Project Barnstable High School; Country USA

‘Salt Store’; Country France

The Oakland Ice Box Challenge

Source FunderMax

Holz Innovationen für die Zukunft



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