



Circular economy for biodiversity Unlocking the green potential

*Skills for sustainable,
resilient, and socially
fair communities*

**EUROPEAN
YEAR OF
SKILLS**



Date

June

5

3-11 June 2023

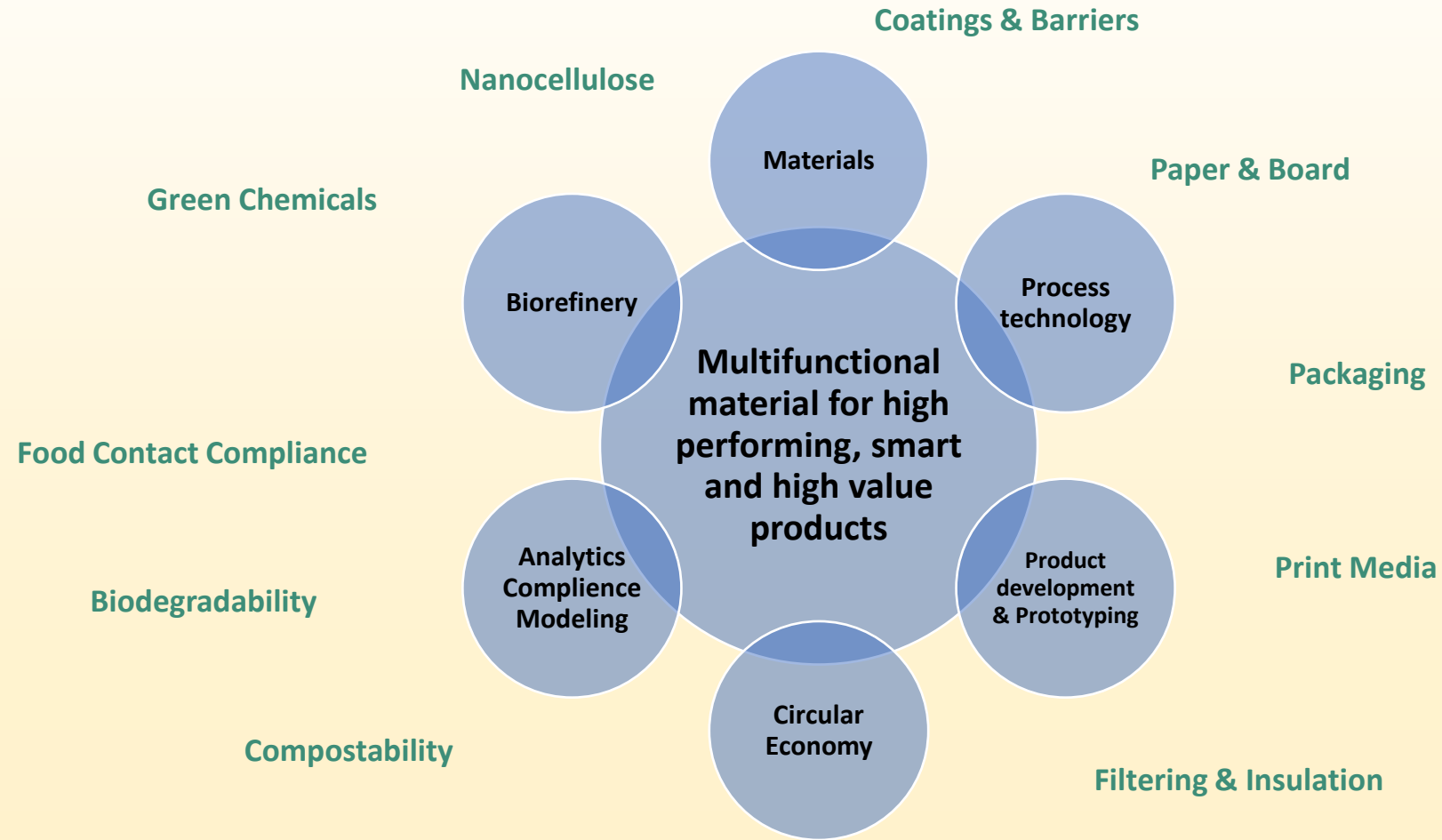
**#EUGreenWeek
PARTNER EVENT**



**PULP AND PAPER
INSTITUTE, LJUBLJANA**
Innovative Cellulose Products

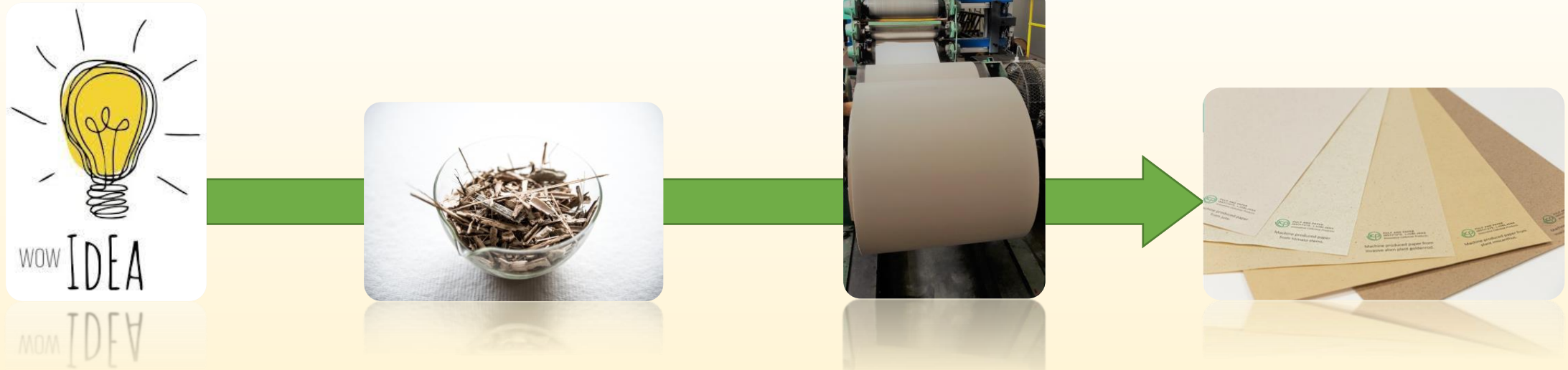
Pulp and Paper Institute Ljubljana (SI)

Research and development of materials and products from lignocellulosic biomass



Pulp and Paper Institute Ljubljana (SI)

One stop shop for R&D



- Preparation of a solution concept
- Material research and design
- Product design
- Testing and verification
- Scale-up and application

- Evaluation of product environmental impact (biodegradability, compostability)
- Evaluation of product legal conformity (international, national legislation)

Our expertise - Research focus

Valorisation of unused / discarded lignocellulosic biomass:

- invasive alien plant species
- agricultural residues (tomato stems, crop residues, pruning residues...)
- food processing industry residues (hops, wheat bran, coconut husks, onion peelings...)
- wood processing industry residues
- other (textiles, insulation)

The use of lignocellulosic biomass across different sectors and value chains (packaging, construction, textiles)

Ongoing R & D projects

Effects of lignin degradation on paper-based materials in extreme conditions:

- Understanding the impact of lignin on long-term degradation of lignin-rich paper and a better design of parameters affecting biodegradability of lignin-rich materials.

LEAP Project

- Development of the next generation of advanced functional packaging based on biomass from invasive alien plants as substitute for EPS in packaging of heavy industrial products.

Ongoing R & D projects

Use of lignin in coating and packaging applications:

- Development of various applications and prototypes for lignin based additives and coatings.

Use of waste biomass as raw material for cellulose based products:

- Development and prototyping of cellulose based products from agriculture and food processing industry waste streams.

Preparation of database on alternative (non-wood) sources of raw materials for cellulose and paper production

- In cooperation with CEPI.

Topics and projects

Main topics of interest:

- Circular economy and bioeconomy
- Clean environment and zero pollution

HORIZON-CL6-2024-CircBio-01-5: Programmed biodegradation capability of biobased materials and products, validated in specific environments

HORIZON-CL6-2024-CircBio-02-5-two-stage: Circular design of bio-based processes

HORIZON-CL6-2024-CircBio-02-1-two-stage: Circular solutions for textile value chains through innovative sorting, recycling, and design for recycling and products

HORIZON-CL6-2024-CircBio-02-6-two-stage: From silos to diversity – small-scale biobased demonstration pilots

Contact details

Pulp and paper institute

Bogišičeva 8

SI-1000 Ljubljana

Slovenia

www.icp-lj.si

david.ravnjak@icp-lj.si