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# Circular Bio-Based Europe (CBE) Joint Undertaking (JU) Fabian Schipfer, September 2022

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[www.tuwien.at](http://www.tuwien.at)



# Council Regulation (EU) 2021/2085 → establishing the Joint Undertakings under Horizon Europe

- R&D cooperation between private or public sector partners at international level
- Improve scientific, technological, economic, societal and environmental impact through joint, coherent, strategic vision
- Union funding contribution  $\leq 50\%$
- 9 JUs financed under MFF2021-2027 until 31 December 2031

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R2085&from=EN>

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## 4 selected established JUs:

- the Circular Bio-based Europe Joint Undertaking
- the Clean Hydrogen Joint Undertaking
- the Key Digital Technologies Joint Undertaking
- the Smart Networks and Services Joint Undertaking

# Circular Bio-based Europe (CBE) JU 2021 - 2031



**€2 billion partnership that funds projects advancing competitive circular bio-based industries in Europe**

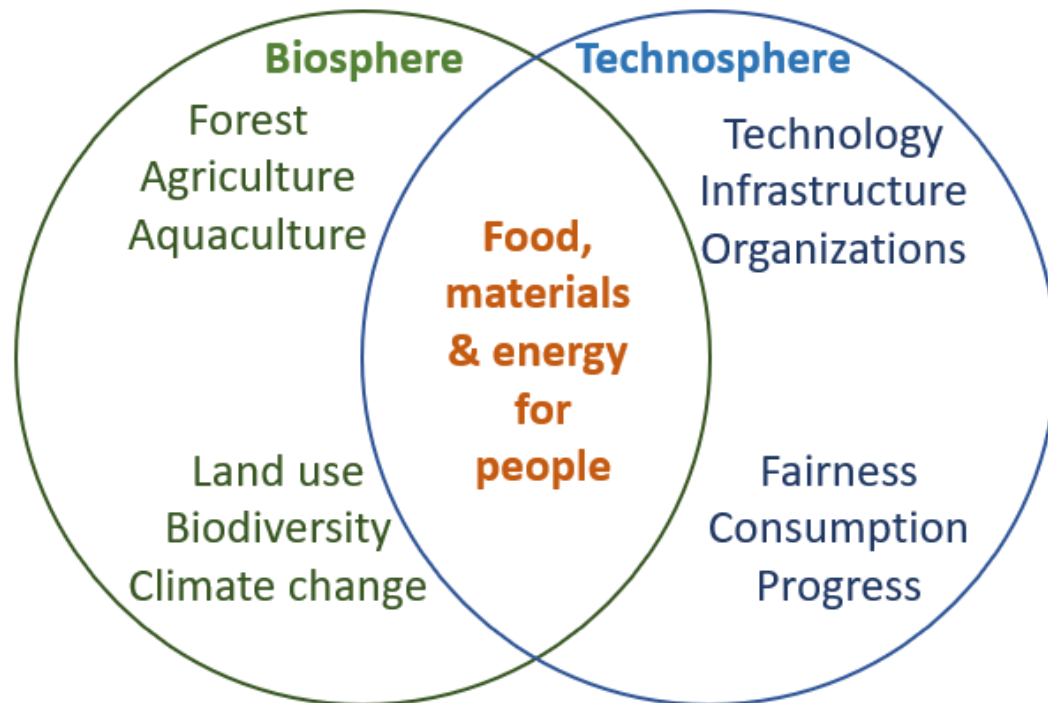
# Circular Bio-based Europe (CBE) JU 2021 - 2031



- **General Assembly**
  - **Industry Members**  
(Industries, SME Cluster, brands)
  - **Associate Members** (e.g. TU Wien)
- **Board of directors / Executive Committee**
- **BIC Working Group**  
(Annual Work Plan!)
- **Governing Board**  
(50% BIC, 50% EU)
- **Executive Director**  
(Nicoló Giacomuzzi-Moore)
- **Scientific Committee**  
(15 scientists, Dr. Helena Viera, Dr. Piergiuseppe Morone)
- **Deployment Group**
- **States' Representative Groups**

# What's the relevance for TU Wien?

## Engineering of innovations, and systems for a Circular Bioeconomy

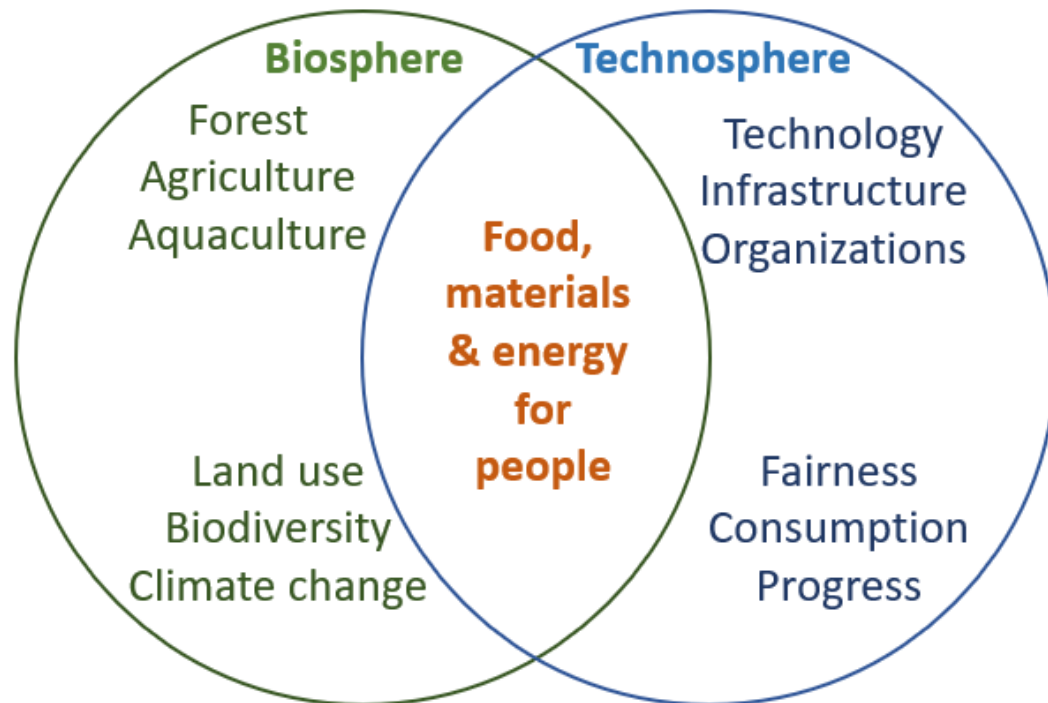


- Large intersection between technological solutions, and challenges, and the biosphere
  - Ecology and society can both benefit from science-based support for this intersection
- 

SOURCE: OWN ILLUSTRATION, SCHIPFER & KRANZL, IEA BIOENERGY TASK40 REPORT 2019-2021

# What's the relevance for TU Wien?

## Engineering of innovations, and systems for a Circular Bioeconomy



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CBE JU important driver for R&D of high-TRL tech (close to market entry) in the EU

→ TUs' success with CBE JU funding could be a primer for strategic orientation of parts of our research

# Current CBE JU Projects

<https://www.bbi.europa.eu/projects>

## Call

- Any - ▾

### ABACUS

Algae for a biomass applied to the production of added value compounds

## Type of project

- Any - ▾

### AFTERBIOCHEM

Anaerobic Fermentation & Esterification of Biomass for producing fine Chemicals

- Any -
- Coordination and Support Action
- Innovation Action - Demonstration
- Innovation Action – Flagship
- Research & Innovation Action

on Technologies for the Recovery and Later conversion of relevant Fractions from

Search

### AgriMax

Agri and food waste valorisation co-ops based on flexible multi-feedstocks biorefinery processing





### Web site

<https://tech4biowaste.eu/>

A dynamic database of relevant technologies of bio-waste utilisation

### Project details

**Type of action:** Coordination and Support Action

**Feedstock origin:** **Biowaste and CO2**

**Start date:** 01 April 2021

**End date:** 31 March 2023

**BBI JU contribution:** €989,781

### Consortium

BTG Biomass Technology Group (Netherlands)

Bio Base Europe Pilot Plant VZW (Belgium)

Nova-Institut für Politische und Ökologische Innovation GMBH (Germany)



## Web site

<http://clinnovation.fi/activity/smartli/>

Smart Technologies for the  
Conversion of Industrial Lignins into  
Sustainable Materials

## Project details

**Type of action:** Research & Innovation

Action

**Feedstock origin:** Forest-based

**Feedstock type:** Pulp & paper industry  
(black liquor & sidestreams)

**Start date:** 01 July 2015

**End date:** 30 June 2018

**BBI JU contribution:** € 1.481.258

CLIC Innovation (Finland)

Tecnaro Gesellschaft zur Industriellen  
Anwendung Nachwachsender  
Rohstoffe Mbh (Germany)

Aep Polymers Srl (Italy)

Fraunhofer Gesellschaft zur Forderung  
der Angewandten Forschung  
EV (Germany)

De Vlaamse Instelling Voor  
Technologisch Onderzoek N.V.  
(Belgium)

Metsa Fibre Oy (Finland)

Teknologian Tutkimuskeskus VTT  
OY (Finland)

Sappi Netherlands Services B.V. (The  
Netherlands)

Foresa Industrias Quimicas Del  
Noroeste Sa (Spain)

Kompetenzzentrum Holz  
GmbH (Austria)

Prefere Resins Finland Oy (Finland)

Kotkamills Oy (Finland)

Andritz Oy (Finland)



SYLFEED

Web site

<http://www.sylfeed.eu>

From forest to feed: enable the wood industry to bridge the protein gap

## Project details

Type of action: Innovation Action -

Demonstration

Feedstock origin:

Forest-based

Feedstock type:

Lignin & wood residues

Start date:

01 September 2017

End date:

31 August 2021

BBI JU

€ 10,892,598.89

contribution:

## Consortium

Biométhodes SA (France)

Norske Skog Golbey (France)

Prayon S.A (Belgium)

Rise Processum AB (Sweden)

MATIS OHF (Iceland)

Fóðurverksmiðjan Laxá hf. (Iceland)

Skretting Aquaculture Research Centre (Norway)

Østfoldforskning AS (Norway)

BioProcess Pilot Facility B.V. (the Netherlands)

Bio Base Europe Pilot Plant (Belgium)



### Web site

<http://peference.eu/>

From bio-based feedstocks via diacids to multiple advanced bio-based materials with a preference for polyethylene furanoate

## Project details

Type of action: Innovation Action –

Flagship

Feedstock origin: Agri-based

Feedstock type: Crop residues

Start date: 01 September 2017

End date: 28 February 2025

BBI JU contribution: € 24,999,610.00

Synvina CV (Avantium Renewable Polymers) (the Netherlands)

Spinverse Innovation Management Oy (Finland)

Tereos Participations SAS (France)

nova-Institut für politische und ökologische Innovation GmbH (Germany)

Avantium Chemicals BV (the Netherlands)

OMV Machinery Srl (Italy)

LEGO System AS (Denmark)

ALPLA Werke Alwin Lehner GmbH & Co. KG (Austria)

Nestec SA (Switzerland)

Kebony AS (Norway)

Henkel KGaA (Germany)

Intecsea B.V. (Worley) (The Netherlands)

LVMH Recherche (France)

Carlsberg Breweries AS (Denmark)

Worley België BV (Belgium)



# CBE JU opportunities as BIC member

1. Call topics discussion; involvement in design, preliminary information
2. Strategic orientation of CBE JU, and thus of EU regarding Circ.Bioeconomy
3. Matchmaking events / platform
4. (Proposal reviewer contracts)
5. (TU Wien strategic orientation)

# CBE JU opportunities as BIC member

## 1. Call topics discussion;

Consultation for the CBE JU Work Program (Summer 2022)

Five 'trajectories' after the Strategic Innovation & Research Action (SRIA) thematic areas

<https://www.cbe.europa.eu/strategic-research-and-innovation-agenda-sria>

- Sustainable biomass availability, supply, logistics and processability
- Circular and climate neutral bio-based process technologies
- Transition to safe and sustainable –by design bio-based chemicals and materials
- Circular-by-design and eco-designed bio-based products and their market uptake
- Cross-cutting issues



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# CBE JU opportunities as BIC member

## 3. Matchmaking events / platform

**MEMBER AREA ACCESS**

elisca > Bio-based Industries Consortium

News Messages Network Agenda

CBE JU Topics 2022 Webinars Request membership certificate

- About
- Working Groups
- Webinars
- Annual Work Programme 2022
- Strategic Research and Innovation Agenda (SRIA)
- CBE JU Topics 2022

Search for...

- Members
- Full membership
  - Associate membership

**Gudrun Weinwurm**  
TU Wien BIC Coordinator // Research Coo...  
**TU Wien**  
=

Send invitation to connect

**Anton Friedl**  
TU Wien BIC Coordinator Chemical Engin...  
**TU Wien – Technical Chemistry**  
= Vienna

Send invitation to connect

# CBE JU opportunities as BIC member

5. (TU Wien strategic orientation)

## **Circular Biobased Engineering – Interfaculty Excellence Community**

TU Wien is a global player of inter- and transdisciplinary excellence for Sustainable Circular Bio-based Engineering (CBE), co-breaking grounds for Responsible Research and Innovation on Grand Societal Challenges



# CBE JU opportunities as BIC member

## 5. (TU Wien strategic orientation)

### Circular Biobased Engineering – Interfaculty Excellence Community

TU Wien is a global player of inter- and transdisciplinary excellence for Sustainable Circular Bio-based Engineering (CBE), co-breaking grounds for Responsible Research and Innovation on Grand Societal Challenges

Top Faculties and Institutes with Circular Economy or Bioeconomy projects:

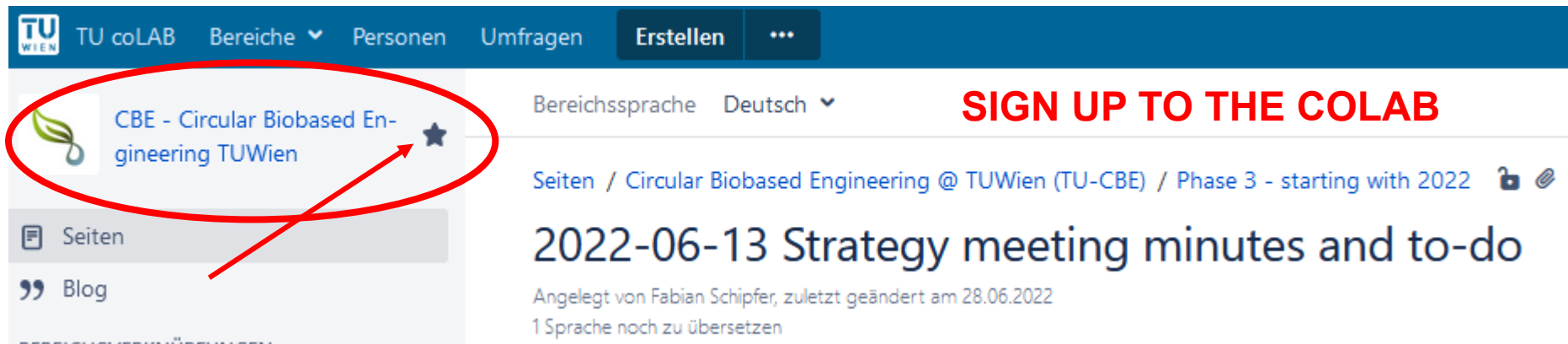
Number of Projects:

Technical Chemistry	(E166, E164, E164 ...)	145
Civil Engineering	(E226, E207, ...)	77
Mechanical and Industrial Engineering	(E302, E307, E308, ...)	41
Electrical Engineering and Information Technology	(E370, ....)	29
Architecture and Planning	(E259, E280, ...)	22
Mathematics and Geoinformation	(E120, ...)	10
Informatics	(E193, E191, ...)	9

# CBE JU opportunities as BIC member

5. (TU Wien strategic orientation)

## Circular Biobased Engineering – Interfaculty Excellence Community



- Contains vision, mission, scope, opportunities, next steps and all materials since 2017
- More infos on BIC / CBE JU ....
- Insights into the project database
- Draft list of expertise, assets & networks
- Self-curated mailing list for the next interfaculty meetings ....



# Thank you for your attention

## your TU Wien CBE JU coordination:

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or 0680 328 3654



## Web site

<https://ifermenter.eu/>

## Project details

Type of action: Research & Innovation  
Action

Feedstock origin: Forest-based

Feedstock type: Pulp & paper industry  
(black liquor & sidestreams)

Start date: 01 May 2018

End date: 30 April 2022

BBI JU contribution: € 3,997,825

contribution:

Norges Teknisknaturvitenskapelige  
Universitet (Norway)

Universität ULM (Germany)

Universität des Saarlandes (Germany)

Technische Universität Wien (Austria)

Bio Base Europe Pilot Plant VZW  
(Belgium)

Universidad de Santiago de  
Compostela (Spain)

Norges Miljø-Og Biovitenskaplige  
Universitet (Norway)

Borregaard AS (Norway)

Galactic SA (Belgium)

Mybiotech GMBH (Germany)

Infors AG (Switzerland)

Danmarks Tekniske Universitet  
(Denmark)