

# EUROPEAN CLUSTER CONFERENCE 2022

26-27 SEPTEMBER 2022, PRAGUE



# Value Chain Generator and Clusters

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**EUROPEAN CLUSTER  
CONFERENCE 2022**



#EUClusterConference

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# Topics

## Value Chain Green

### Transition

- Circular Bioeconomy
- Supply chains Resilience
- Value chains
- Business models

## Macro-regions and Clusters

### Alpen Space

- Alplinkbioeco

### Danube Region

- Danube Alliance

## Technology



# 01

Sudden and unpredictable events disrupt traditional supply and value chains

# 02

A system shock anywhere in globalized supply chains has a knock-on impact elsewhere

# 03

Any new shocks are not ruled out in the future (new COVID, new war, climate change..)



# Increased pressure on companies

## Climate change, COVID, Ukraine war

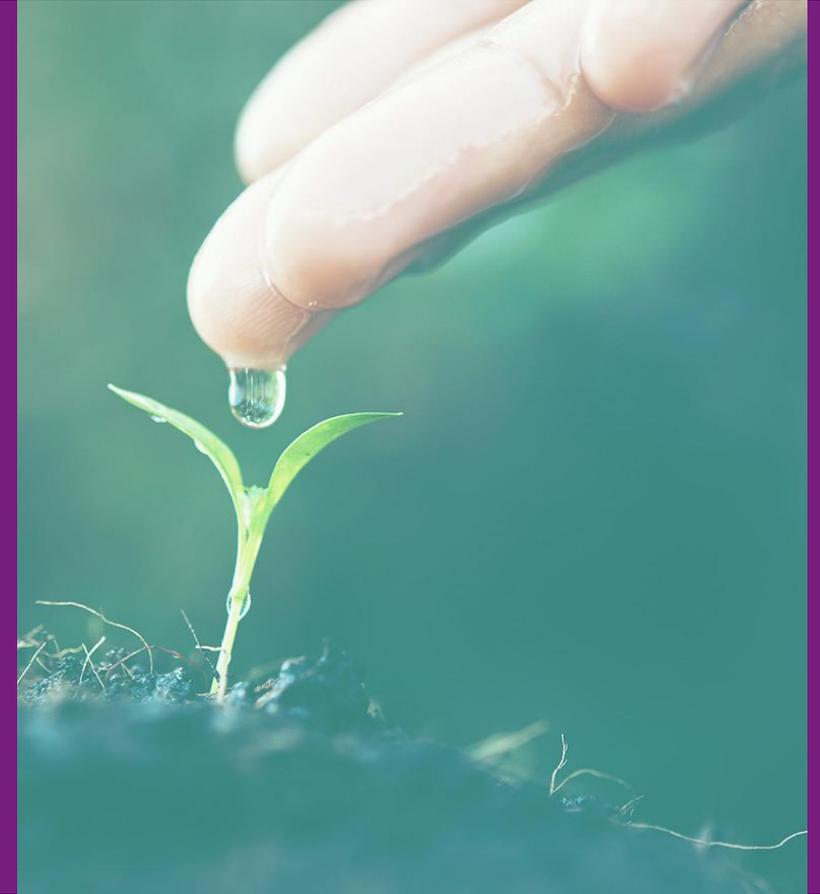
1. Input & market loss
2. Energy prices
3. Inflation

## Green Deal

1. 55% decrease GHGE by 2030
2. Climate neutrality by 2050

## Regulation

1. Supply chain due diligence
2. Corporate sustainability reporting directive (CSDR)



# Companies seek structure approach to growth

## SUPPLY CHAIN RESILIENCE AND EFFICIENCY

### Input / Market losses

Loss of input criticality	Loss of market criticality				Grand To..
	High	Medium	Low	Null	
High	97	38	10	3	148
Medium	3	57	16	2	78
Low	2	10	56	1	69
Null	0	0	0	0	0
<b>GRAND TOTAL</b>	<b>102</b>	<b>105</b>	<b>82</b>	<b>6</b>	<b>295</b>

European Cluster Collaboration platform study, March 2022

## GREEN GROWTH POTENTIAL



Resource utilization  
Cycle view on sustainability  
Reduce costs and create value.

# Companies seek solutions but have no overview of

01



CIRCULAR  
COLLABORTION MODELS

02



CROSS-SECTORAL  
OPPORTUNITES &  
TECHNOLOGIES

03



SUPPLIERS AND BUYERS  
ARE DISCONNECTED  
AND UNKNOWN TO  
EACH OTHER



# AlpLinkBioEco

Linking BioBased Industry Value Chains  
Across the Alpine Region

Recognized clusters as a driver of  
circular bioeconomy development

01

Joint Masterplan on  
circular bio-based  
economy

02

The Value Chain  
Generator

03

Pilot Experience  
from the Project –  
Network

2018–2021



# Danube

## Clusters

Operate within traditional value chains focus on innovation and research



## Data

Clusters usually do not have trade related data about members' products



## Network

Absence of cross-regional networks with relevant information at the firms' level



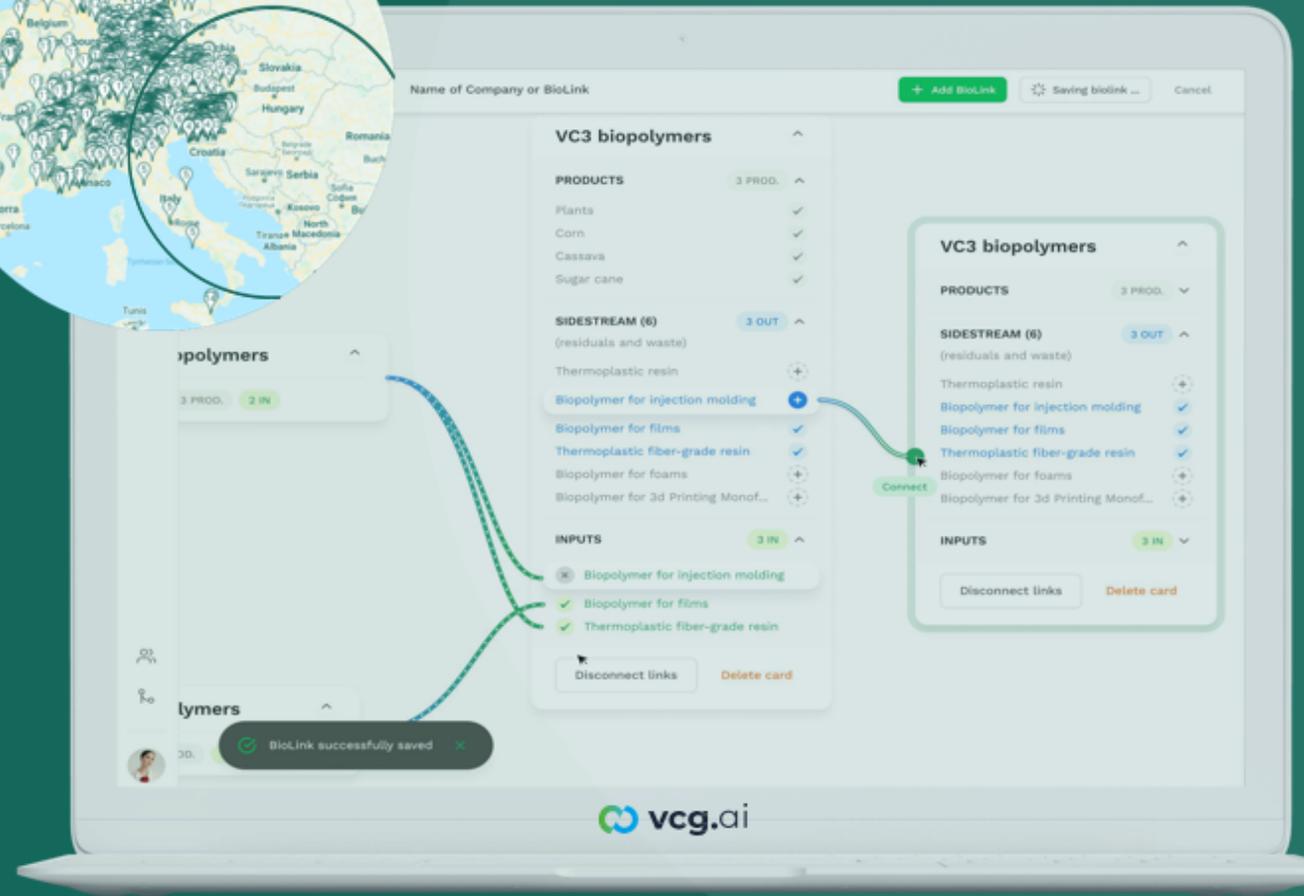
In Danube region +40 Clusters are active in bioeconomy value chains – Agroforestry, Agriculture, Food , Wood – all can play critical role in circular bioeconomy value chains

Source: [Anteja](#), Impacts and Potentials of the Ukraine Crisis on Supply Chains Development for the Danube Region, The Danube region at the turn of the times, Ulm July 1, 2022

# Value Chain Generator

Define circular bioeconomy collaboration opportunities across networks & regions

- ✓ Finds waste, by product valorisation opportunities
- ✓ Finds the nearest potential partners (suppliers, buyers)
- ✓ Find the right technologies for closing the gaps



# Big Data & smart technologies

VCG.AI uses AI & Deep Learning to provide circular solutions at scale

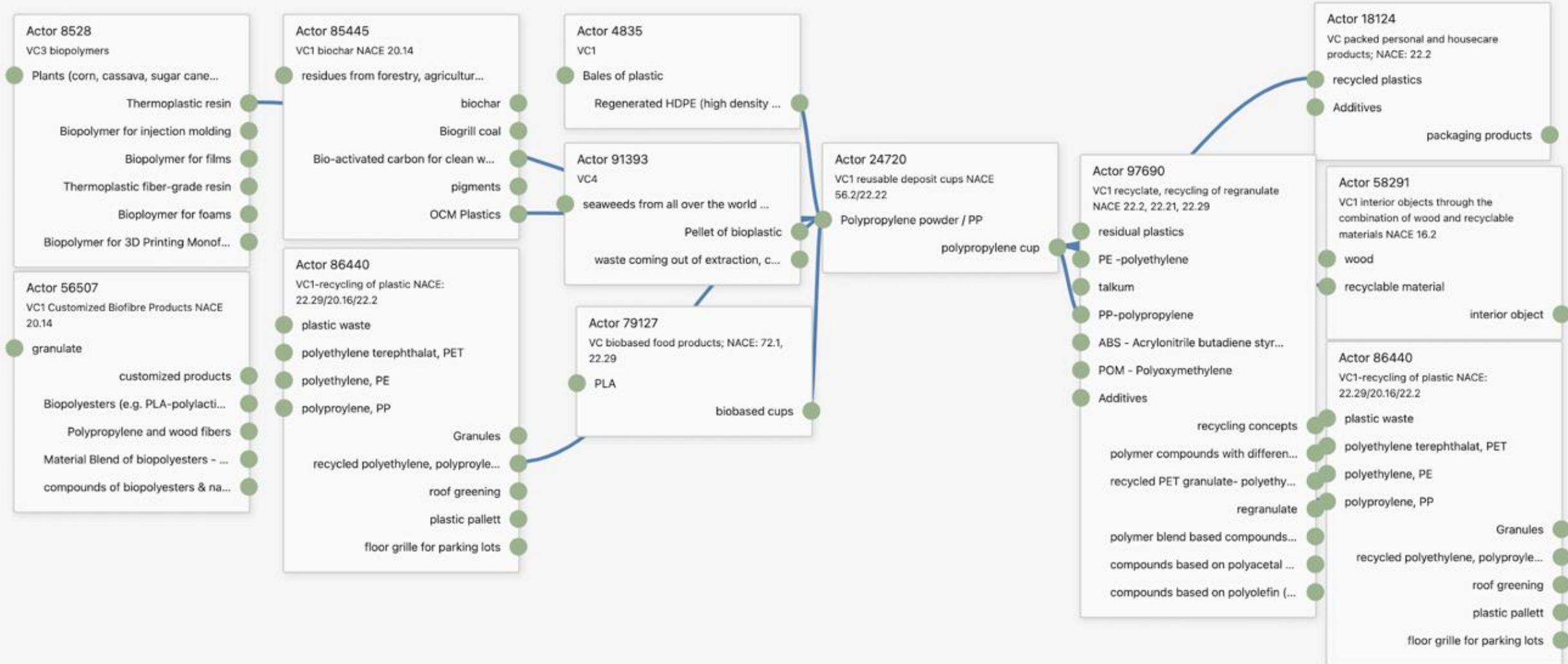
- ✓ Residuals
- ✓ By products
- ✓ Across company networks & regions



+50 Clusters  
Reach - 3M  
companies



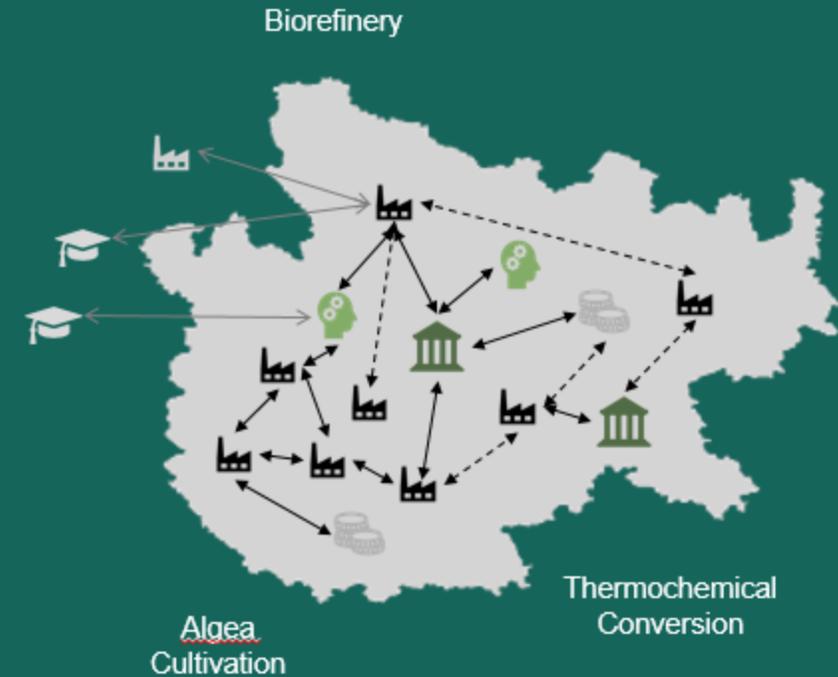
# BioLink example: Use of biobased polymers for reusable cups



# Regional strategies and investments

Find the gaps & close the loop:

- ✓ Analysis of the industry and production waste in the region
- ✓ What is missing in the ecosystem to transform the residuals into useful materials & products



# Experience: Clusters and Companies

## Case study

### Brewery

Cost savings  
**€294k / year**

Waste valorization opportunity  
**€138k / year**

Overall financial impact  
**€432k / year**



### Industrial companies

#### VCG.AI for companies

- 1. Lower costs
- 2. Sustainability compliance
- 3. Value chain resilience



### Clusters & Regional developers

#### VCG.AI for clusters

- 1. Know members' value chains & challenges
- 2. Find solutions
- 3. Expand network



**“VCG.AI speeds up the search for value chain partners for our members by 80-90%”**

- Chemie Cluster Bayern

# VCG in practice – Clusters

## **BESTROCAL, Germany**

Support the development of bioeconomy

## **Danube Alliance, Danube**

30+ networks across Danube region

## **CEE2ACT / Horizon Europe**

Knowledge transfer network for development of circular bioeconomy in East Europe

# VCG in practice – Companies

## **Brewing / Mind4Machine**

Optimization of waste streams & internal processes

## **Dairy**

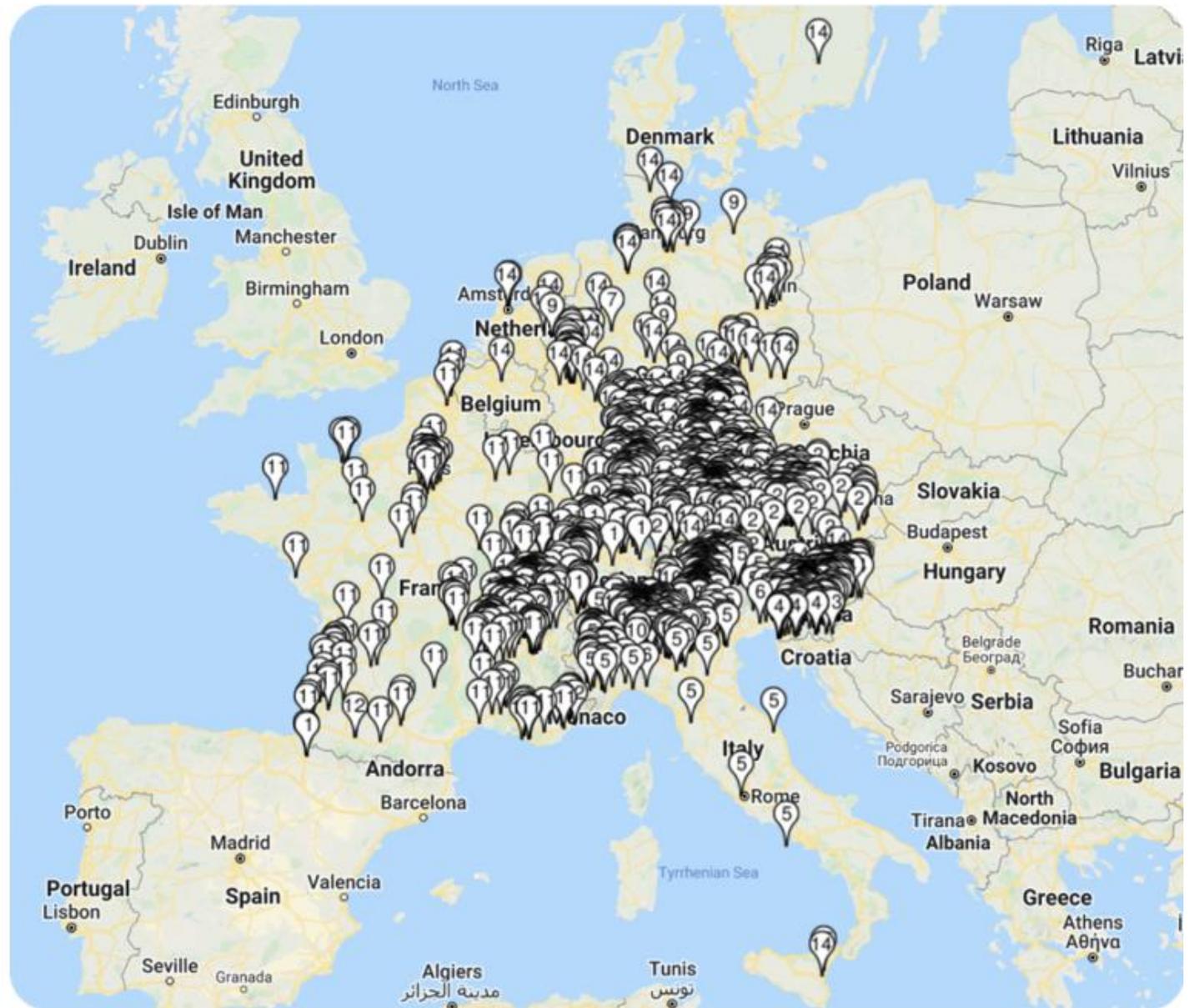
Optimization of waste streams & internal processes

## **Cellulose from sustainable biomass**

Development of the value chain & scaling of the technology

## **Biorefinery for platform chemicals**

Market development



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Thank you