



SUOMI  
FINLAND

**FINLAND –  
LOCAL SOLUTIONS  
ARE BORN HERE**



SUOMI  
FINLAND

# FINLAND'S CIRCULAR ECONOMY STRATEGY



## **Finland's Circular Economy Strategy**

- **Government set targets to curb down the use of natural resources**
- **Circular Economy Green Deal**
- **Circular Economy Finland: a hub for circular economy know-how**
- **Circular Design Programme for companies**





SUOMI  
FINLAND

# CIRCULAR ECONOMY FINLAND (KiSu)

# CIRCULAR ECONOMY FINLAND (KISU)

## A HUB FOR CIRCULAR ECONOMY KNOW-HOW

### Kiertotaloussuomi.fi

- The website provides current information and information packages about e.g. tools that support circularity

### Webinars and events

- Webinars include circular economy morning coffees for quick updates and discussion

## SUPPORTS DIFFERENT ACTORS IN FINDING THEIR OWN CIRCULAR ECONOMY PATHS

### Thematic groups

- Municipalities and regions
- Know-how and education
- Digital solutions

### Support for financing

Support for the Circular economy green deal

Support for the Finnish Industrial Symbiosis System

- Target groups **municipalities and regions, the business community, research and education institutions, networks and ecosystems.**
- A project financed by the Finnish Strategic programme to promote a circular economy. Coordinated by Motiva Ltd and the Finnish Environment Institute (2022-).





## Circular Economy Finland Solution Rallies

- **Highlighting piloted and profitable circular economy measures and finding ways to scale them**
- **Best practices and criteria compiled based on workshops**
- **Four Solution Rallies conducted so far:**
  - **Circular construction – from experiments to practice**
  - **Circular textiles – producer responsibility**
  - **Increasing waste recycling rate**
  - **Circular economy tools for companies**





## **Support for the Finnish Industrial Symbiosis System**

- **Promoting more efficient use of resources - one's waste is another's raw material**
- **Regional industrial symbiosis projects**
- **Target groups: local companies, municipalities and ecosystems**
- **KiSu supports the regional operators**





SUOMI  
FINLAND

# FINNISH GREEN DEAL FOR CIRCULAR ECONOMY





## Finnish Green Deal for Circular Economy

- A voluntary commitment aiming to accelerate societal transition to a circular economy in 2035
- Supported by research-based scenarios including the most impactful circular economy actions
- Ministries develop policy tools and support to catalyze change



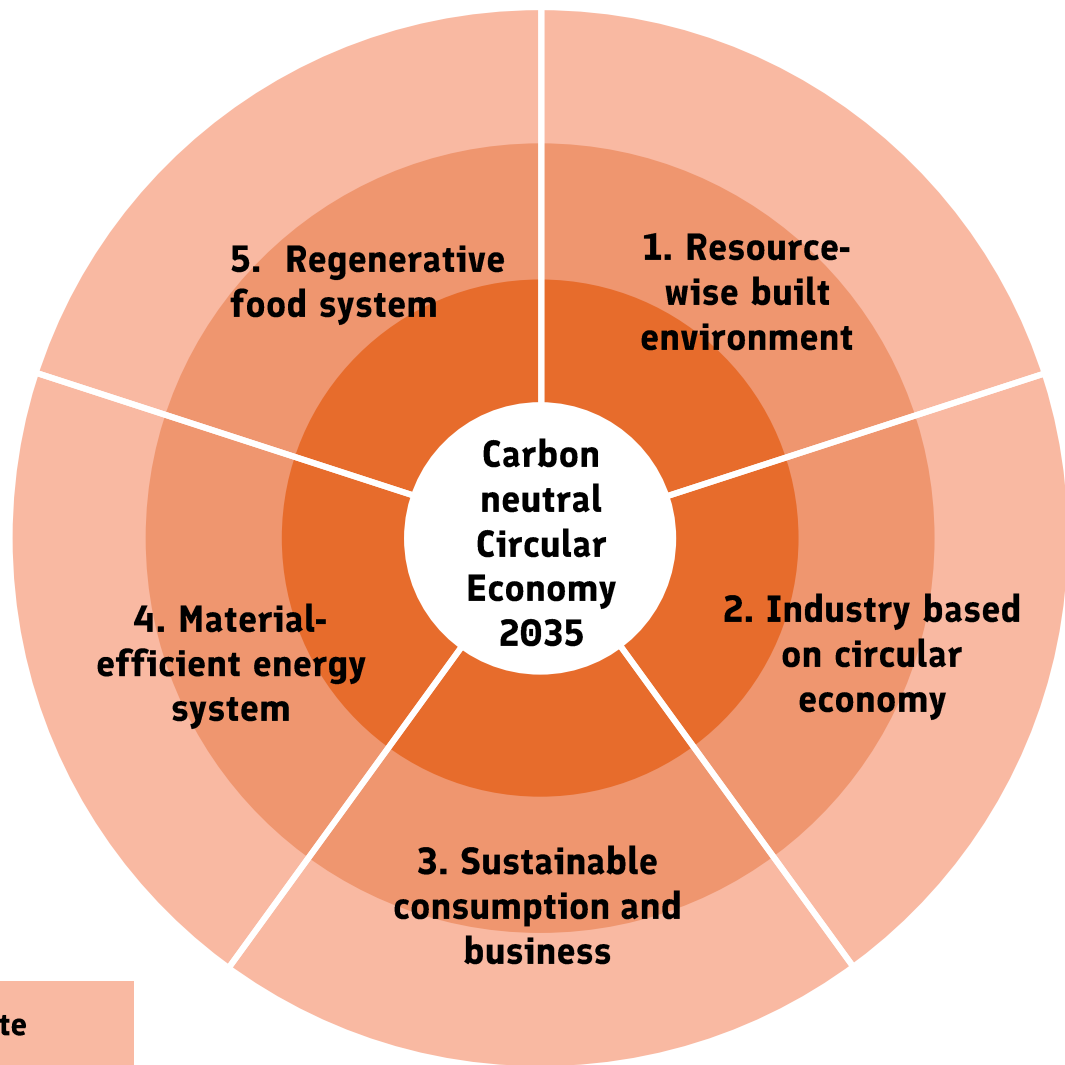


## **Finnish Green Deal scenarios envisage a new circular economy**

- **Goal is to identify key measures that will help reduce the use of non-renewable natural resources and promote a low-carbon circular economy**
- **Green Deal scenarios explore the opportunities provided by the circular economy in Finland from two perspectives: production and consumption**



# Finnish Green Deal for five sectors and key players



**Sectors and  
companies**

**Regions and  
cities**

**State**



SUOMI  
FINLAND

# FINNISH CIRCULAR DESIGN PROGRAMME



# Finnish Circular Design Programme

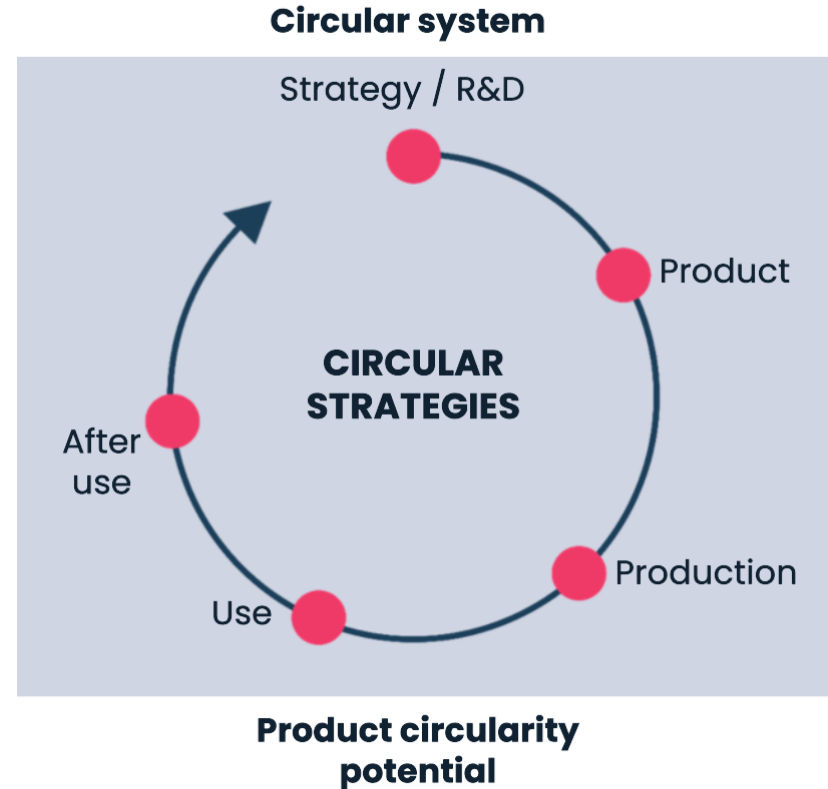
- The national circular design programme offers a deep dive into circular design principles and practice, targeted at both management and product/service development





## Preparation for piloting and scaling

- **The Finnish National Circular Design Programme is globally first of its kind, year-long programme, where participating companies develop their own circular product/service concept or value chain solution**





SUOMI  
FINLAND

# **BUSINESS FINLAND'S MISSION: CIRCULAR TRANSITION FOR ZERO WASTE**

# **Business Finland Mission: Circular Transition for Zero Waste**

- **Business Finland supports the transition to a circular economy through innovation-driven economic growth**
  - We value international collaboration
  - We create fast track to sustainable growth
  - We have strong R&D and Business Ecosystems
  - We have renewing industries

**BUSINESS  
FINLAND**







SUOMI  
FINLAND

# FINNISH NETWORK OF ECO-INDUSTRIAL PARKS



# Finnish Network of Eco-Industrial Parks

- The network of eco-industrial parks is an important part of the national platform of expertise in the circular economy
- Material waste and side streams are used as a raw material, creating an industrial symbiosis between companies



# THE BEST IDEAS CIRCULATE

Finnish regions & municipalities  
boosting circular economy





## **Local solutions to global challenges**

- **Finnish regions are key actors in the national circular economy**
- **Regional councils, municipalities, development companies and research facilities are providing local solutions to global challenges**



# +

## Circular Economy in the Helsinki-Uusimaa Region

- Helsinki-Uusimaa Circular Valley offers a platform for co-developing circular economy solutions and supporting the company implementations of circular economy thinking, competence and piloting





# Helsinki Circular Economy Cluster Program

- Helsinki Circular Economy Cluster Program promotes circular economy innovations and business in construction by launching pilots, developing tools and providing trainings







## Kilpilahti business area in Helsinki-Uusimaa

- The Kilpilahti business area in Porvoo develops the circular economy and saves natural resources by turning industrial waste and secondary streams into valuable raw materials



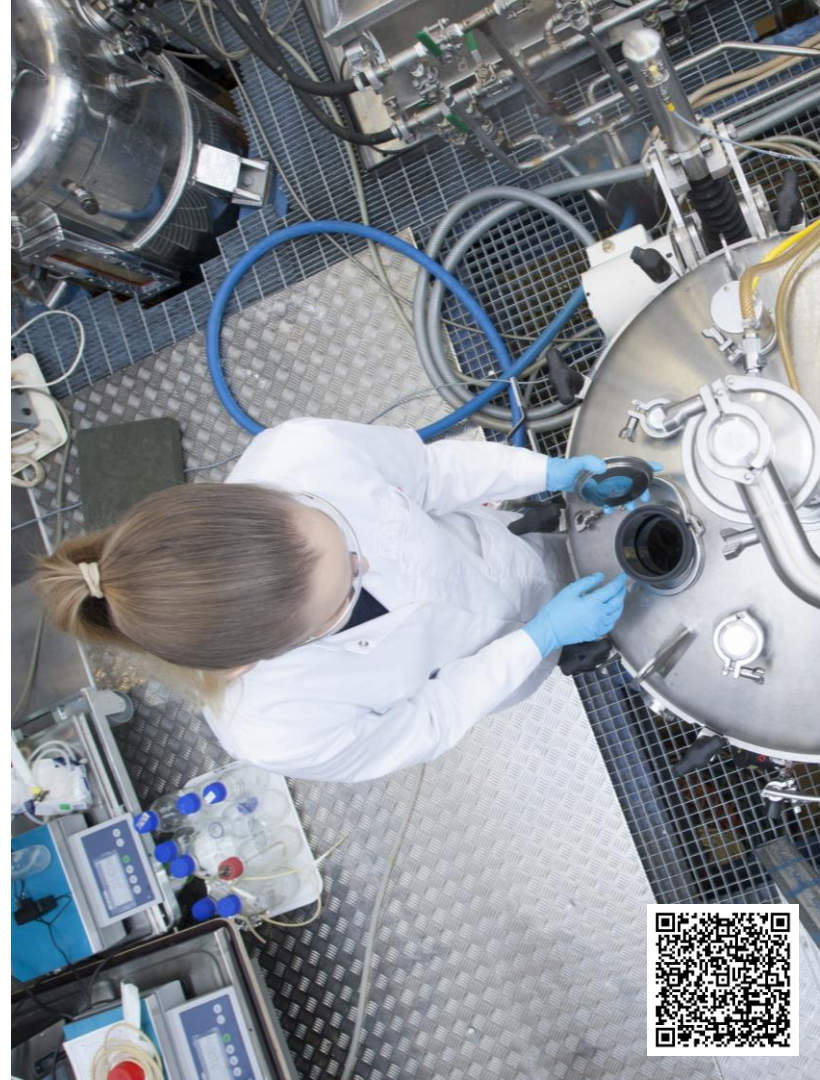
**Posintra**





## VTT Multi-material recycling platform

- VTT is developing a state-of-the-art pilot scale recycling infrastructure and know-how hub for difficult to recycle plastic containing multi-materials like plastics, textiles and composites
- VTT offers a portfolio of collaborative and ecosystemic projects to the stakeholders of the value chain based on the platform







## The treasure in resources

- **TREASoURcE project boosts the circularity of currently underutilized plastic waste, end-of-life electric vehicle batteries and biobased side and waste streams by executing replicable demonstrations in collaboration with relevant stakeholders**





## Circular Economy in Lahti region

- Dynamic Finnish hub for circular economy
- One of Finland's most significant clusters of environmental expertise, recycling, and business

**0 %**

**fossil fuels  
in the city's energy  
generation**

**Carbon-  
neutral**

**Lahti by 2025**





# Roadmap for circular economy in Kanta-Häme

- **Kanta-Häme has strong expertise in the sustainable use of natural resources in bio and circular economy**
- **Häme Circular Economy Roadmap sets a shared path for a sustainable, resource-efficient region, FRUSH event accelerates startups and Häme Climate Watch monitors the progress**



HÄMEEN LIITTO  
*Regional Council of Häme*





# Tampere Region Circular Economy Ecosystem

- **The Tampere Region strives for systemic development in circular economy in close cooperation of the Council of Tampere Region, Business Tampere, Circular Pirkanmaa and Verte Oy, among others**







# Regional Development for Circular Economy

- **Circular Pirkanmaa is fostering a circular economy-friendly operating environment for companies in the region, focusing on three key themes: housebuilding, infrastructure, and local industrial material flows**



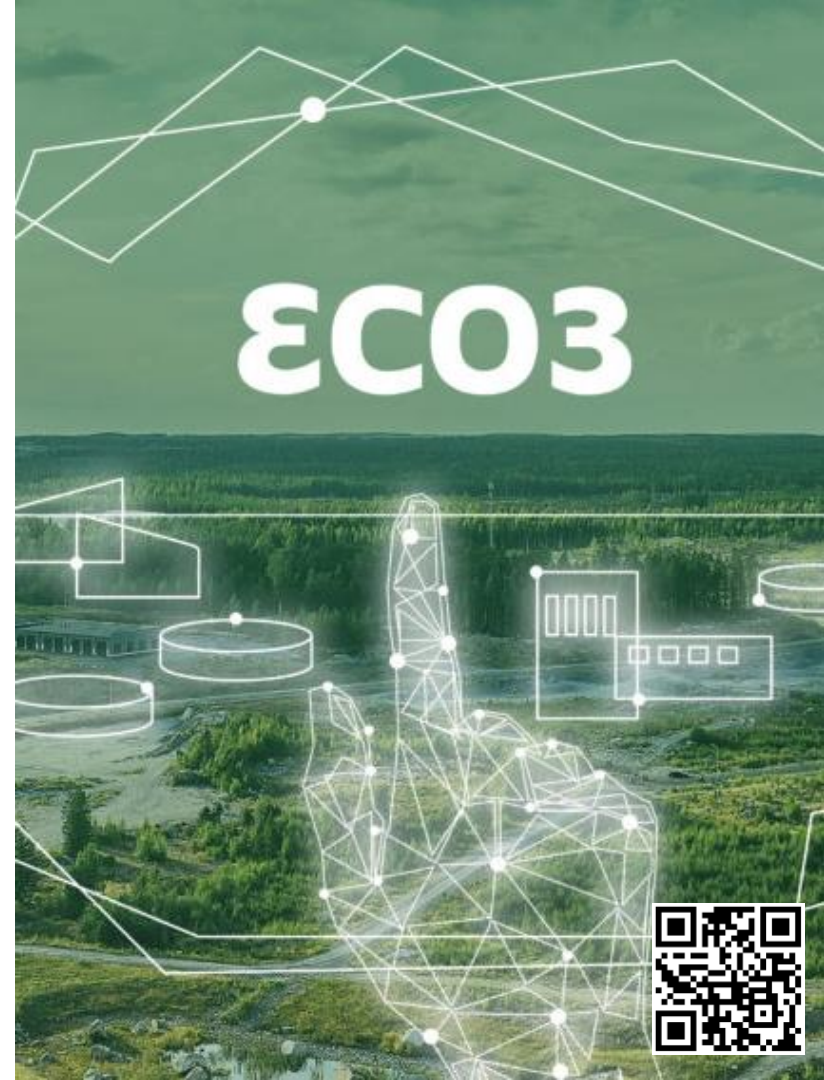
Funded by  
the European Union





## **EC03 bio and circular business area**

- **EC03 is a nationally significant bio and circular economy business area in Pirkanmaa, developing businesses and innovations on an industrial scale**
- **The EC03 centre also serves as a demonstration and pilot environment**





# Circular Economy in Southwest Finland

- The circular economy roadmap of Southwest Finland presents the steps towards a diverse and circular economy in Southwest Finland, with a focus on three categories: sustainable food system, technical loops and transport and logistics

TURKU  
CHAMBER OF COMMERCE

PAIMIO

TURKU AMK  
TURKU UNIVERSITY OF  
APPLIED SCIENCES







# **RE-THINKING FOOD**

**Circular Solutions in the Finnish Food Industry**





## **Circular solutions in the Finnish Food Industry**

- **Finland is a world leader in foodtech innovations, such as cellular agriculture, urban vertical farming and 3D food printing**
- **The Finnish foodtech sector aims for carbon neutrality and major greenhouse gas reduction by 2035**





# Aircohol: Making alcohol from air!

- Aircohol offers the most sustainable way to utilise fermentation CO<sub>2</sub> by helping distilleries and breweries to produce wonderful drinks from it:
  - 30-50% lower carbon footprint
  - Reduced raw material usage
  - Less land usage
  - Less water & nutrients



# TRANSFORMING THE TEXTILE INDUSTRY

Finnish textile and fashion industry  
at the forefront of circular economy





## **Leading the way in circular economy**

- **Finland is home to remarkable textile innovations and companies with potential to transform the fashion and textile industry globally**
- **We are one of the world's leading countries in bio-based raw materials and smart technologies**







## **Rester: helping the world recover. Fiber by fiber.**

- **Rester's recycling process and a circular approach to business allows them to offer the most efficient ways to lower emissions and optimize production, while recovering business textiles into new fiber and high-quality raw material**





## Emmy: Second hand brand apparels

- Emmy is a leading Nordic marketplace for pre-owned premium clothing
- Selection of thousands of hand-inspected, authenticity-checked items from hundreds of high-quality brands

*emmy*



# ✚ Lounais-Suomen Jätehuolto: textile recycling

- Lounais-Suomen Jätehuolto is a municipal waste management company in charge of collecting, sorting and processing Finnish household post-consumer textiles into quality raw-materials for different industries





# CONSTRUCTING A BETTER FUTURE

Circular Solutions in the Finnish Construction Industry



# **+** **Carbonaide: transforming CO2 into concrete**

- **Carbonaide provides award winning technology to utilize and store carbon dioxide in the precast concrete industry**
- **Their mission is to turn concrete from a large emission source into a carbon sink**

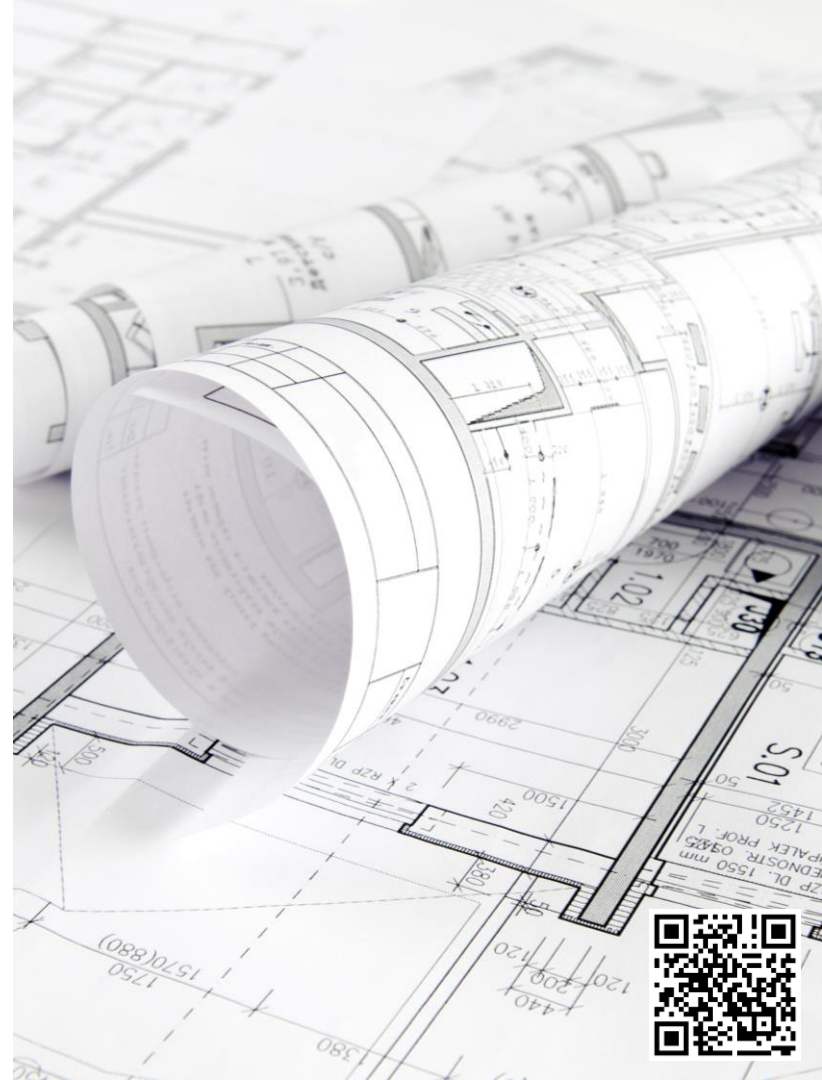




## Make a BIM: AI powered building information models

- Make a BIM uses AI to create building information models from architectural drawings
- The solution can be used to model and quantify reusable building parts and materials before demolition

Make a BIM



A large, crumpled piece of white plastic waste is floating on the surface of the ocean. The scene is set at sunset or sunrise, with a warm, orange and yellow sky. The water is dark blue with gentle ripples. The plastic waste is the central focus, appearing as a large, white, angular mass. The overall mood is somber and environmental.

# **FOR A PLASTIC- FREE FUTURE**

**Finnish Circular Solutions for the Plastic Industry**



## **WasteWise: Innovative solution for plastic waste**

- **WasteWise uses an innovative technology in their pyrolysis plants, enabling them to recycle mixed plastic waste back into new raw materials for the plastic industry**



**WASTEWISE GROUP**

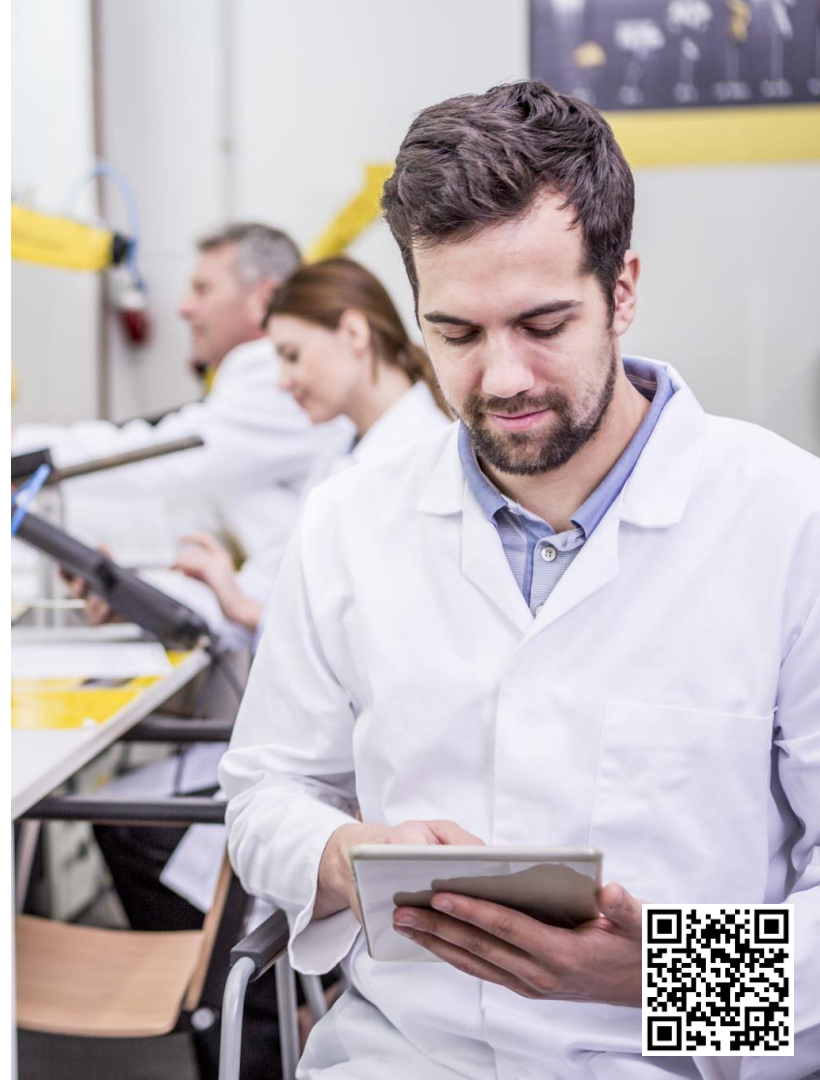






## **Borealis: Global leader in polyolefin solutions**

- **Borealis is a global leader in providing ground-breaking chemical and polyolefin solutions**
- **In Europe, Borealis is also an innovative leader in polyolefins recycling and a major producer of base chemicals**





# **NEW CIRCULAR BUSINESS MODELS**

**Finnish Circular Design & Business Solutions**



## Niimaar: Changing throwaway culture with Forever designs

- Niimaar Forever Products reduce waste through thoughtful design that inspires responsible behavior
- Niimaar's circular economy services also include tailored sustainability services for organisations and businesses

NIIMAAR

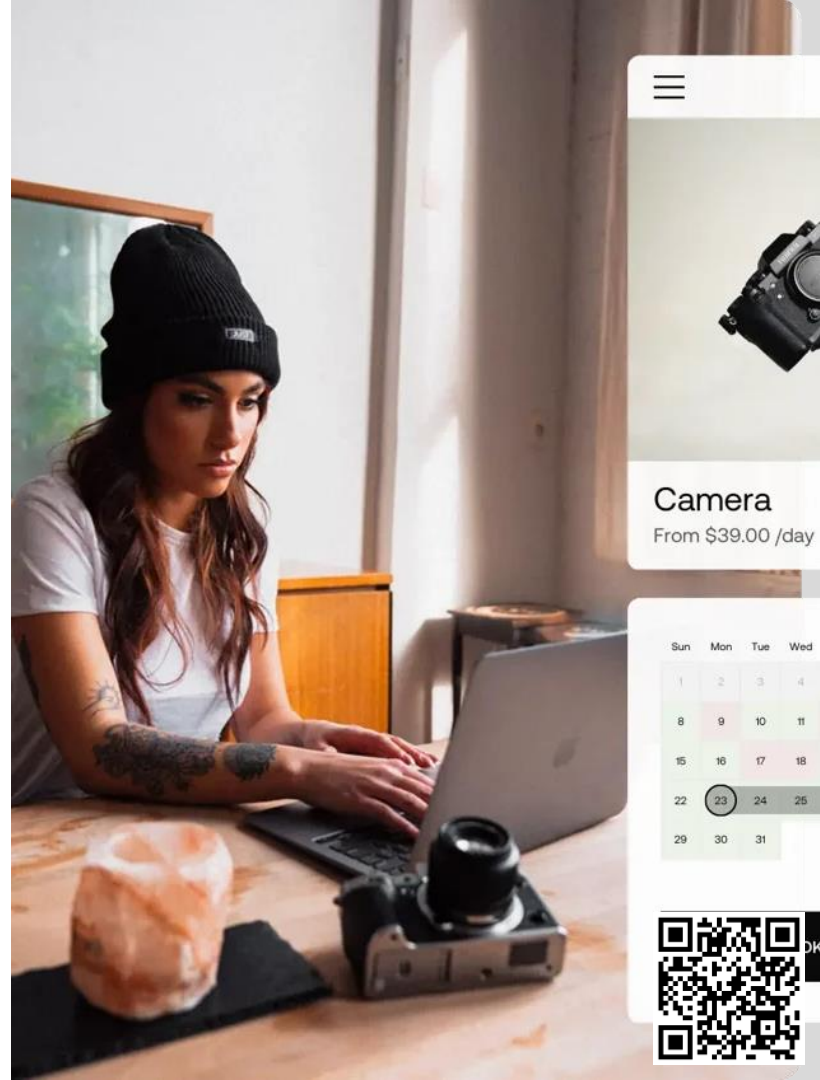




## **TWICE®: Commerce infrastructure of the circular economy**

- **TWICE® is the go-to commerce platform for prosumers and businesses wanting to keep their durable goods in circulation longer**
- **Sell, rent, and resell with confidence, knowing you're contributing to a sustainable future without sacrificing economic growth**

**TWICE**







# REMOVING CARBON WITH BIOCHAR

**Finnish Circular Solutions in Biochar**



## **Carbofex: World Leading Biochar**

- **Carbofex has world leading technology for biochar and bio-energy production, turning biowaste into valuable biochar, CO2 storage, green energy - and profit**
- **Carbofex delivers premium biochar and CO2 credits from their own reference factory, and turnkey biochar plants to their technology customers**

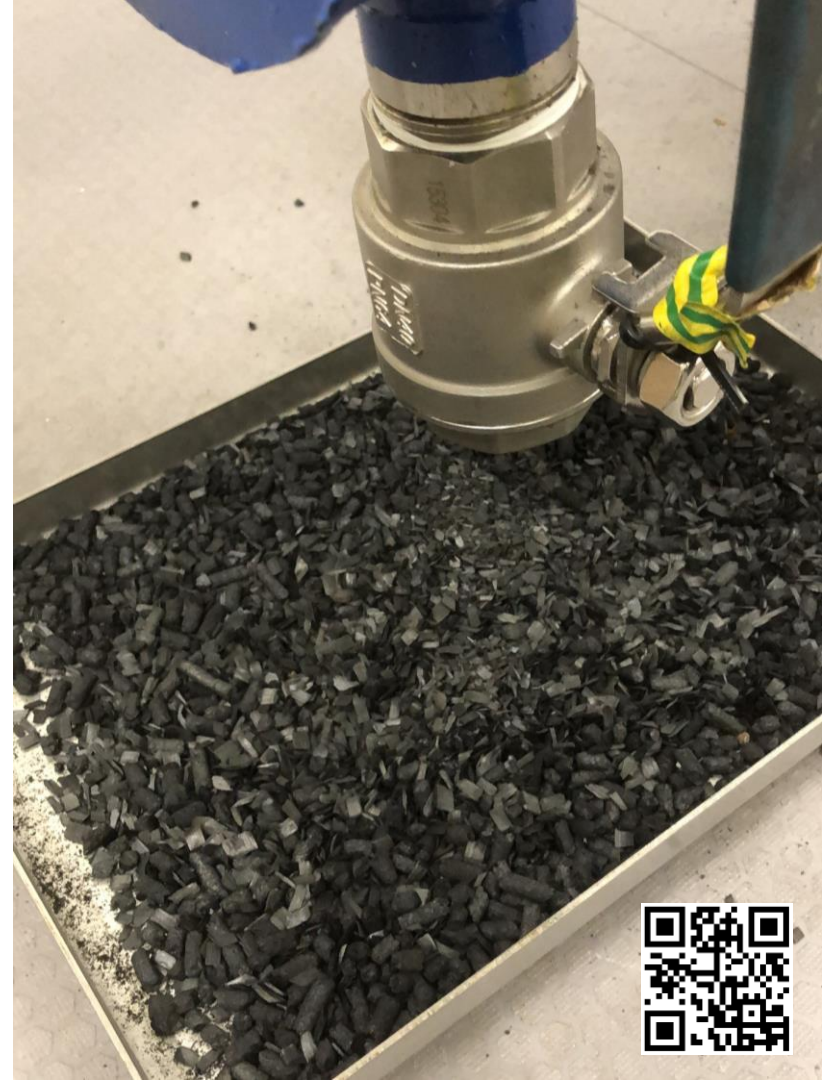






## **PUHI: Down to Earth Climate Tech**

- **PUHI integrates pyrolysis where side streams are generated to produce biochar, carbon removal, and energy**
- **PUHI's first biochar production plant is built the Industrial Park MORE, located in Hämeenlinna, Finland**





SUOMI  
FINLAND

**Let's act together –  
Finland is ready to share  
knowledge & join forces  
to change the future.**

