CC x Bio-CO2 Summit

Permanent CO2 storage in Biochar (construction and agriculture)

6.5.2025

Hanna Ojanen, Head of Carbon Markets and Policy

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We are a project developer with our own proprietary biochar carbon removal technology

- Est. 2016
- 38 Full Time Employees
- 26M€ equity + 6M€ grants raised to date
- Industrial pilot reactor (‘R3’) in operation near Helsinki, funded by the EU’s European Innovation Council (EIC)
- Working on First-of-a-kind and NOAK facilities
- Developing projects across Northern Europe & Benelux

Drop-in replacements for fossil fuels

Demand for direct replacements for natural gas, peat, coal – compatible with existing infrastructure and asset base

Energy security, resilience and balancing renewables

Replacement of unstable natural gas, deploying diversified energy sources, balancing intermittency of other renewables

Material circularity and high value use of waste

Resolve raw material supply by creating models where waste is feedstock for most valuable uses

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Permanent Biochar Carbon Removal with co-benefits

(CDR / Technological sink)

Localised, resilient supply chains

Post-pandemic trend towards near-shoring, reducing transport emissions & geopolitical risk

Rising **carbon costs** for producers

Carbon taxes and regulatory costs drive producers seek low-carbon alternatives

Regulation driving **phase-out of natural gas**

Natural gas as transitional fuel, with targeted national policies and rising taxes to reduce consumption

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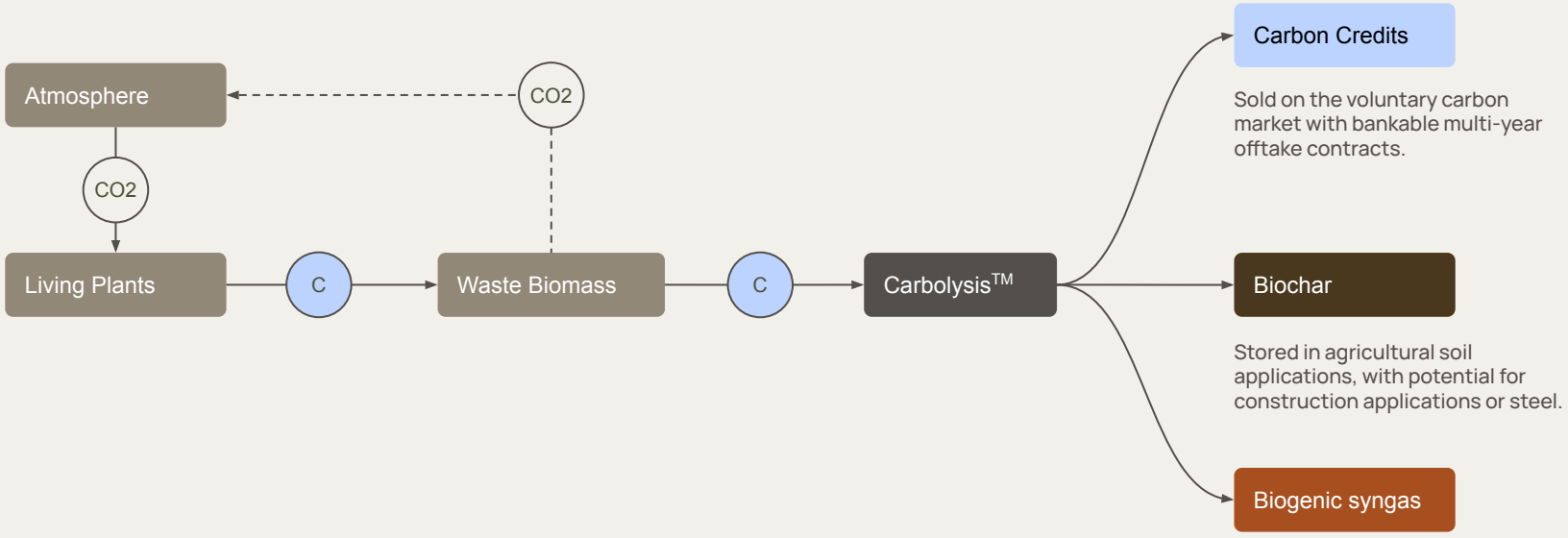
Converting waste plant matter into 3 revenue streams



Carbon Cycle

Carbo Culture

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We have proven our technology and product quality at increasing scales

CALIFORNIA

R1 **In operation**
R&D

R2 **In operation**
Volume scale up 4x

EUROPE

R3 **In operation**
Volume scale up 1.5x
Automated system
Industrial standards

C1 **2025-2026**
Full module FOAK
in development
and contracting

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R3: Automated, industrial sized pilot reactor funded by the European Innovation Council (EIC)

Location
Kerava, Finland. Operational since 2023

CDR potentiaL
3,000t p.a.

- One of the largest CDR facilities in Europe today
- Proven variety of feedstocks and pre-processing requirements identified

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C1: First-of-a-kind biochar carbon removal facility, largest in Europe

Location
The Netherlands. Operational in 2027

CDR potential
24,000t p.a.

- Co-location project partner: Energy company owned by the NL largest greenhouse co-operative
- Multi-year offtake agreement for BCR biochar for sustainable agriculture ensuring safe and permanent carbon storage

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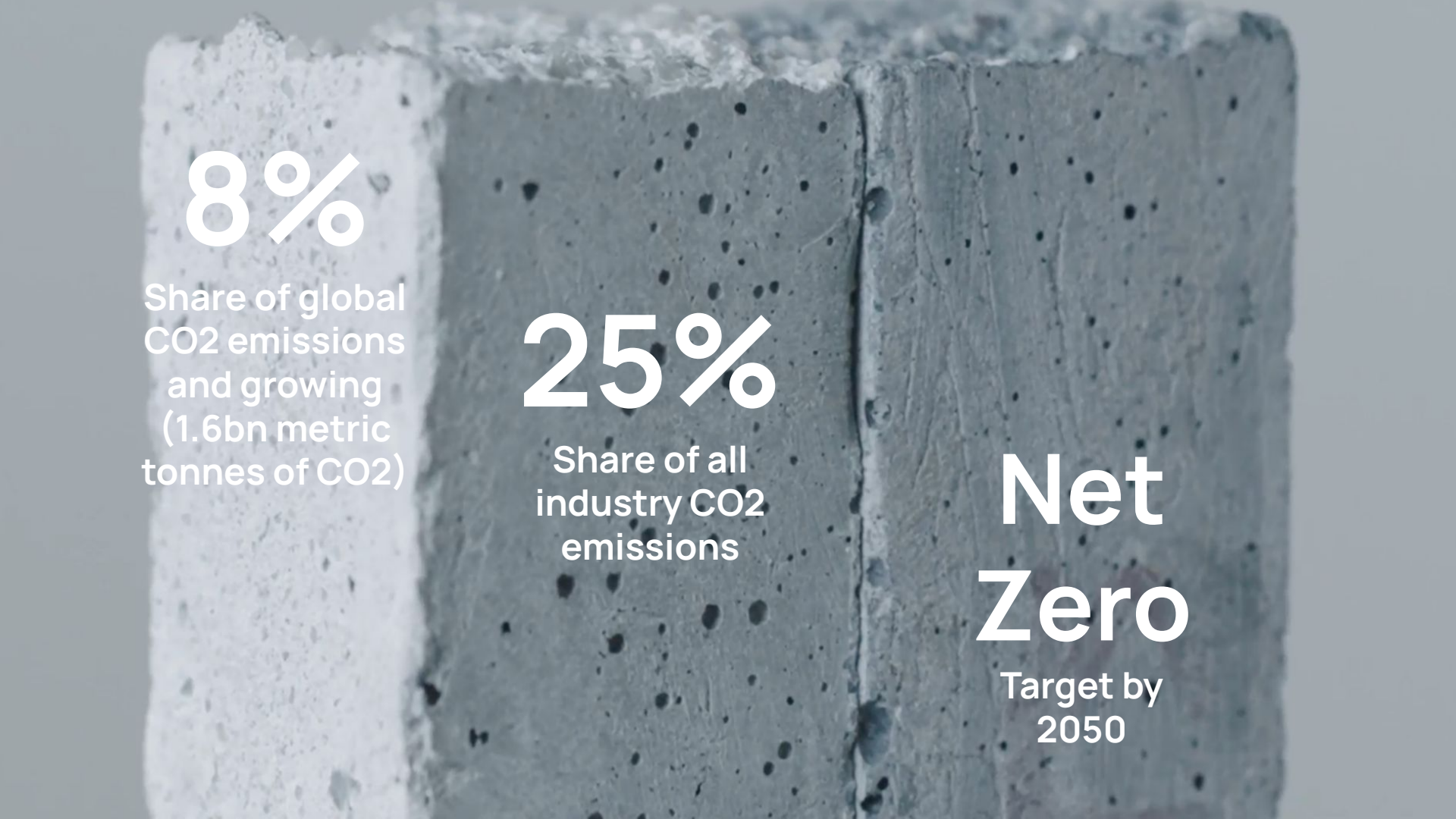
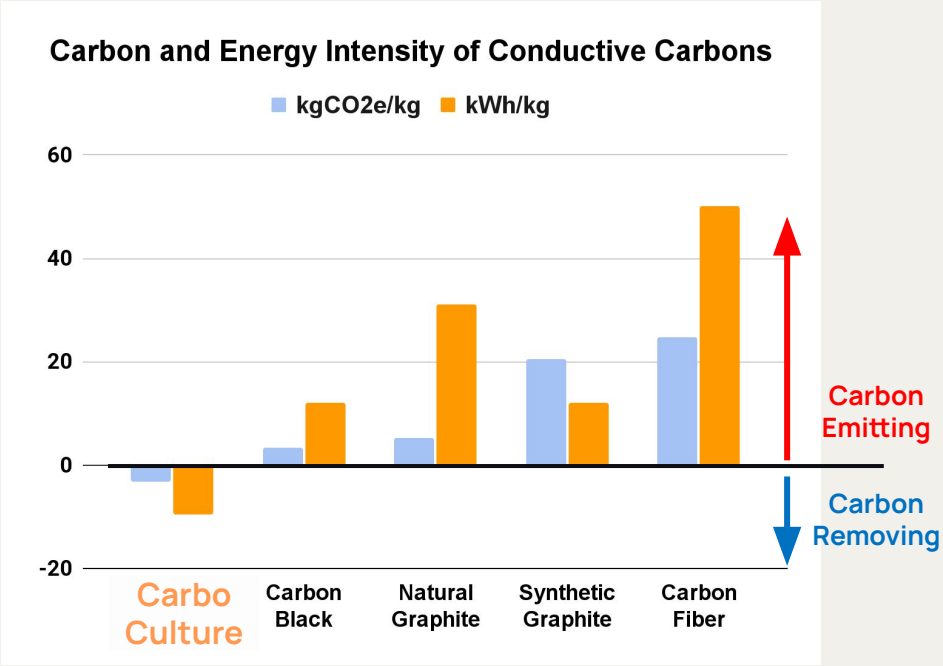
Biochar in construction


8%
Share of global CO2 emissions and growing (1.6bn metric tonnes of CO2)
25%
Share of all industry CO2 emissions
Net Zero
Target by 2050

Biochar can replace 10% of cement without compromising mechanical performance

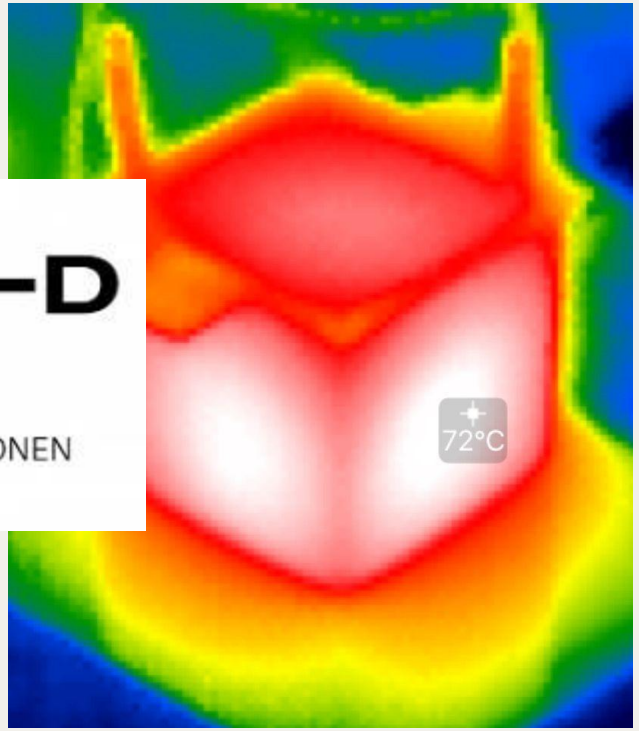


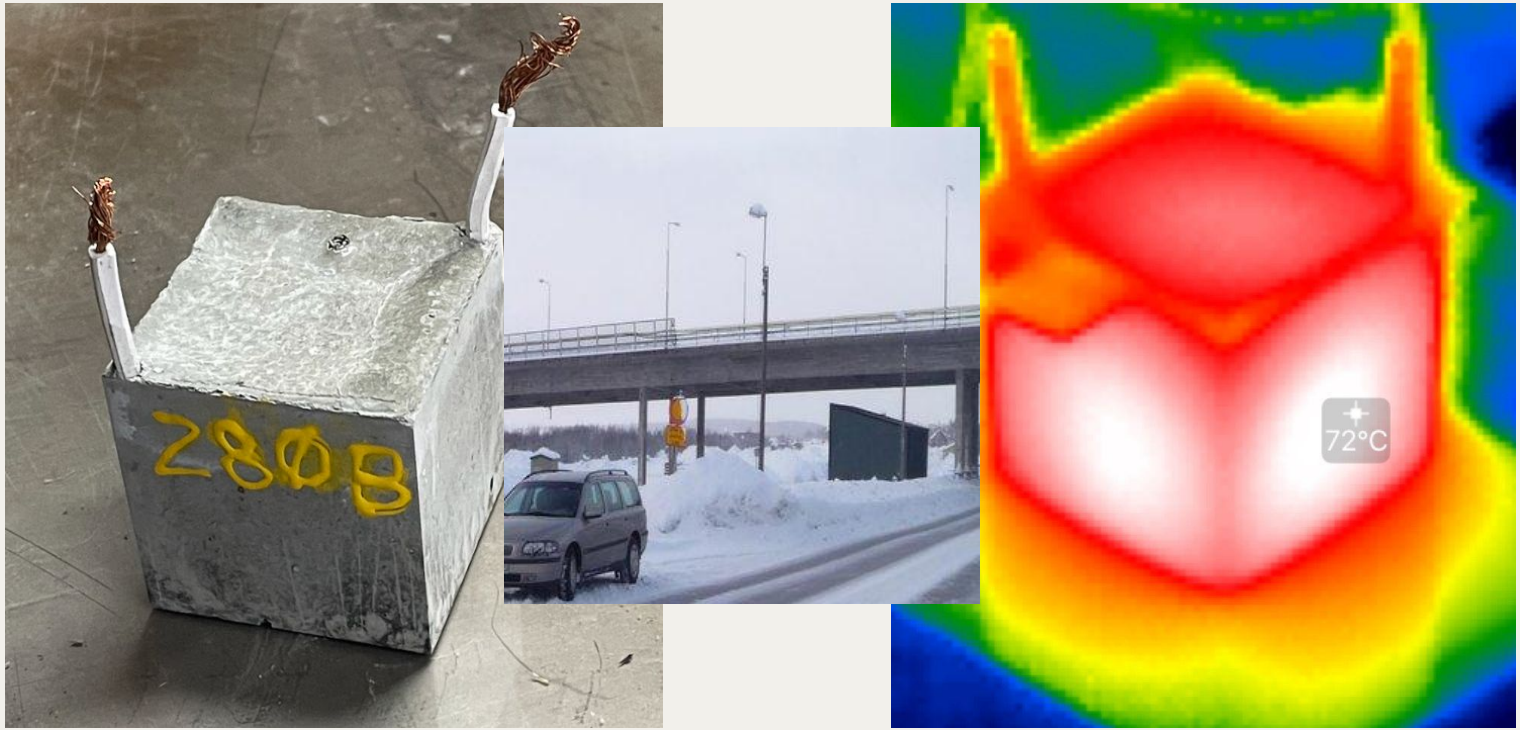
10% replacement of cement = 1.5% of concrete = 40% reduction of CO2 in concrete

- ✔ €7.5-15B tonnes of biochar into EU concrete
- ✔ €1-2/kg with 20-40% increase in price

SPRIN–D

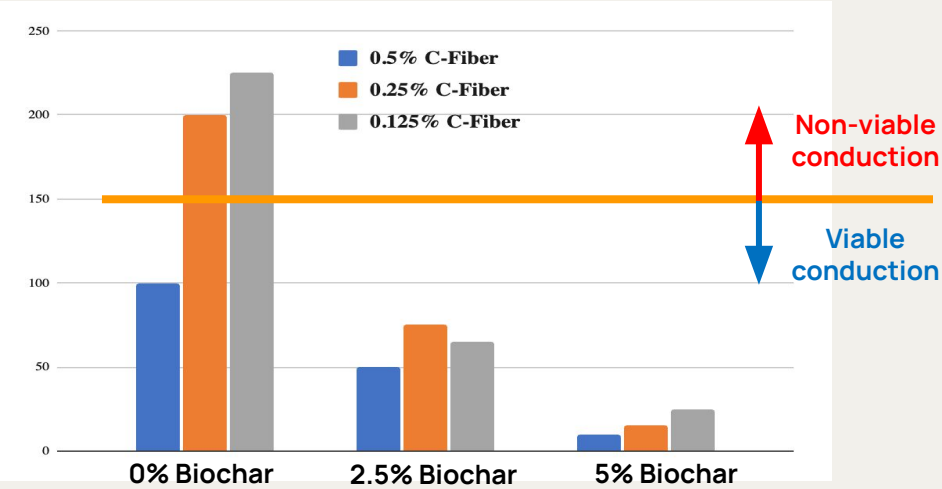
BUNDESAGENTUR
FÜR SPRUNGINNOVATIONEN




Z80B
72°C

The Nordics alone could remove 150 million tons of CO2 with permanent biochar storage in concrete. The sky's the limit with global expansion.

500bn kg	50bn kg	0.5bn kg
Concrete in EU	Concrete in Nordics	Total potential for biochar in Nordics



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- ✔ €7.5-15B tonnes of biochar into EU concrete
- ✔ €1-2/kg with 20-40% increase in price
- ✔ More biochar means more conductivity
- ✔ Carbon fiber €25/kg / 28 kgCO2/kgC
- ✔ Biochar €1/kg / -3 kgCO2/kgC

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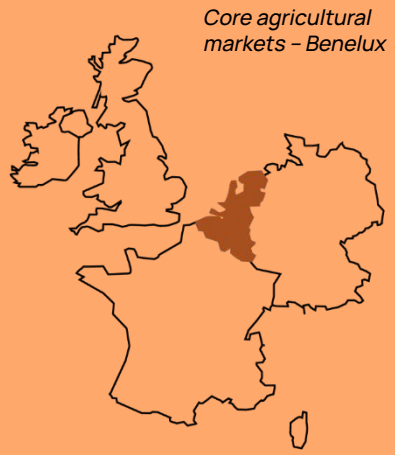
Biochar in greenhouses

High-tech agriculture must replace high-quality but carbon-intense product components and processes

- Growers want **high-quality growing media, year-round heat and CO_2,** to improve yield and enhance soils – high-tech agriculture is a **strategic food security target** for the EU
- **However, costs associated with CO_2 emissions** in agriculture are likely to rise – from carbon-intense products (peat) and processes (heat and CO_2 for greenhouses)
- Industry bodies have already committed to **halving the use of peat** (12Mt CO_2e emissions p.a. in Europe) – companies need to find replacements
- Growers also face challenges with **replacing natural gas and CO_2** for greenhouses – especially in constrained grids



Core agricultural markets – Benelux

2nd

The Netherlands is the 2nd largest agricultural exporter globally

50%+

Proportion of land use for agriculture in the Netherlands – 2.2m hectares

8m+ cubic metres

Professional growing media market size in the Netherlands

250k+ tonnes

Potential biochar demand from growing media companies in Benelux alone

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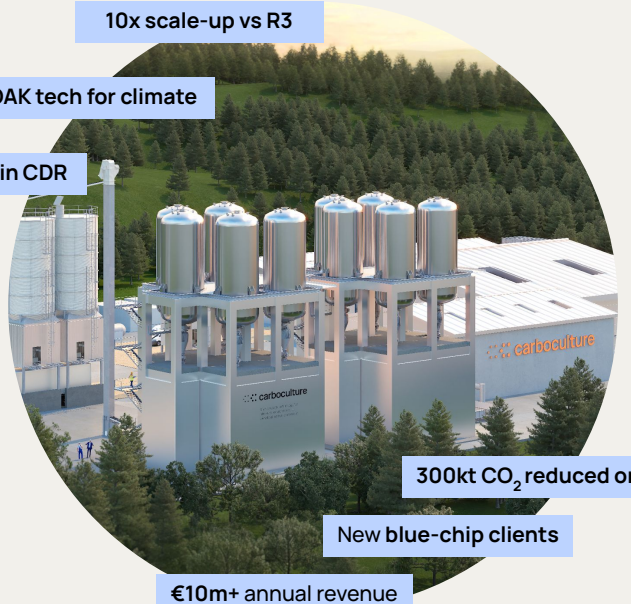
We are now working on our **first-of-a-kind commercial** facilities

R1

R2

R3



10x scale-up vs R3

FOAK tech for climate

Leaders in CDR

300kt CO_2 reduced or removed

New **blue-chip clients**

€10m+ annual revenue

Future agri sites

8m m^3 demand from growing media in Benelux alone

Expansion into steel

1m tonnes biochar by 2030 in the EU alone for one type of steel plant

Compliance carbon markets

Expanding coverage of carbon removal to EU ETS

€100m+ annual revenue

5-10 sites by 2030

€2bn pipeline lifetime revenue

Where we've come from

Demonstrate R&D

Where we are

First commercial factories

Where we're going

Unlocking markets

Permanent European Biochar Carbon Removal

hanna@carboculture.com
+358 50 341 7043

carboculture.com

Follow us on LinkedIn

Hanna Ojanen
Head of Carbon Markets and Policy

carboculture