Hanna Ojanen, Head of Carbon Markets, Carbo Culture 13.2.25 hanna@carboculture.com

Selection of the industry-leading partners, advisors and clients we are proud to work with

NextGen



Supercritical

GenZero

# carboculture

Tesi

true Ventures

BUSINESS FINLAND

Europear Investment Bank

puro.earth

**\*** Rothschild & Co





We are a biochar project developer with proprietary technology

- Searching bankable offtake contracts and strong JV partners
- Established 2016 with HQ in Finland  $\rightarrow$
- 40 Full Time Employees  $\rightarrow$
- 26M€ equity + 5M€ grants raised to date
- Institutional Investors: Temasek Genzero, True  $\rightarrow$ Ventures, Tesi with over 9B\$ of combined AUM for decarbonisation
- We are initially developing a portfolio of projects across the Nordics and Benelux

Biochar is a critical climate technology, with potential uses in both industrial decarbonization and carbon removal

#### Green steel

**Replace fossil coal** as chemical reagent in steel production

Mitigate  $CO_2$  emissions and reduce compliance costs by switching to bio based carbon, biochar

Further decarbonise energy use with our biogenic syngas to replace natural gas.

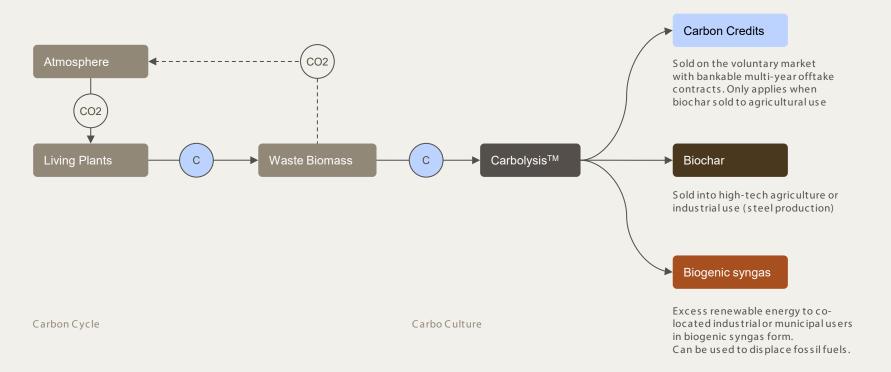
#### High-tech agriculture

Substitute peat (a fossil product) in growing media for greenhouse growing

**Use co-products** (heat and biogenic syngas) to replace natural gas in heating and CO<sub>2</sub> for greenhouse growing

Generate accredited permanent carbon removal, enabled by using our high durability biochar in soil as carbon sinks

## Converting waste plant matter into 3 revenue streams



R3: Automated, industrial sized pilot reactor

Location: Kerava, Finland

Commissioned : 2023

**Objectives:** 

- Commercial sized reactor proven before moving to modular plant design
- Proven variety of feedstocks and pre-processing requirements identified
- R&D for biochar applications for growing media and substrate clients

**Output** :1kt biochar, 3kt of CO2e or carbon credits per annum



# We have proven our technology and product quality at increasing scales



#### CALIFORNIA

R1 In operation R&D



**In operation** Volume scale up 4x

R3

In operation Volume scale up 1.5x Automated system Industrial standards

EUROPE

C1

2025 - 2026 Full module pilot (In development)

# Industrial scale, energy generating biochar production technology

#### **Proprietary technology** In-house design, fulfilment and deployment

**High Quality Biochar** C-Fix >90%, low ash, low volatiles.

#### Scale with modules

A highly standardised module design

### Smart deployment, less construction

The modules are pre-fabricated to be assembled on-site, delivering cost savings to the project

#### High uptime Less maintenance costs thanks to clean outputs, nearfree of tars

Usable Biogenic Syngas Stable production of highquality biogenic syngas with many use cases

**Net energy generator** Ability to produce ~ 15 MW electricity or heat per module



# **Co-location opportunities**

#### High-Value Gas

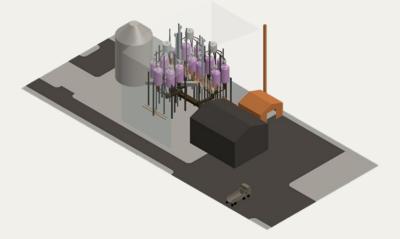
Syngas generated in biochar manufacturing offers an excellent opportunity to reduce the dependency on natural gas.

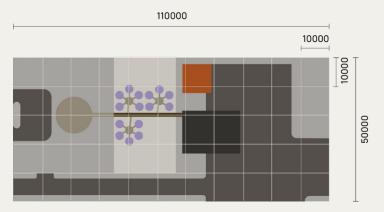
Syngas available in hot (400C +) and pressurized form.

#### Low Factory Footprint

The example plant shown has the footprint of 110 m x 50 m and produces 25kt biocarbon annually. ~ 15 % larger footprint can handle double the capacity.

Footprint does not include on-site feedstock preprocessing.





## We have built a team with deep expertise in multiple fields





Henrietta Moon CEO& Co-founder

CTO& Co-founder

**Chris Carstens** 

A strong footing in key markets the EU, the US and the UK make us poised for rapid expansion and growth. 35+ FTE.

Our team has world - leading **expertise** from multiple decades across energy, infrastructure financing, pyrolysis tech, startups and scaleups.



**Biorn Dahlen** VP, Engineering



Hanna Ojanen Head of Carbon Markets and Policy



Leena Hietakangas Document controlling lead



Henrik Dannström Head of Project Deliverv



**Garrett Manley** Mechanical Engineer



Mari Jonninen Procurement Manager



Siddhartha Gadiraju Phd Head of R&D





Kristian Husman Head of Finance





Kirsi Tanski VP of Agribusiness

Becca Aspinwall



Matti Lepomäki Senior Flectrical Engineer





**Charlotta Liukas** Head of Operations







Dmitrii Dziadevich Mechanical Engineer





Pekka Järvenpää Product **Development Lead** 





Product Manager



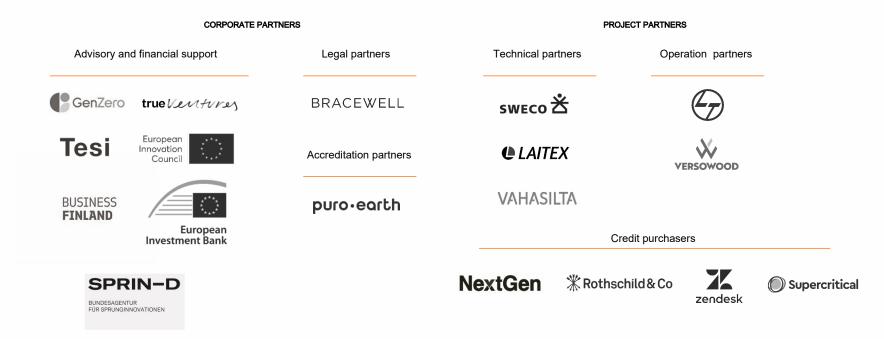
Mikko Niemelä

Chief Automation



Zach Landau R&D Engineer

# We work with industry-leading partners



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