

# LEADING THE WORLD TO SUSTAINABLE ELECTRIC VEHICLES

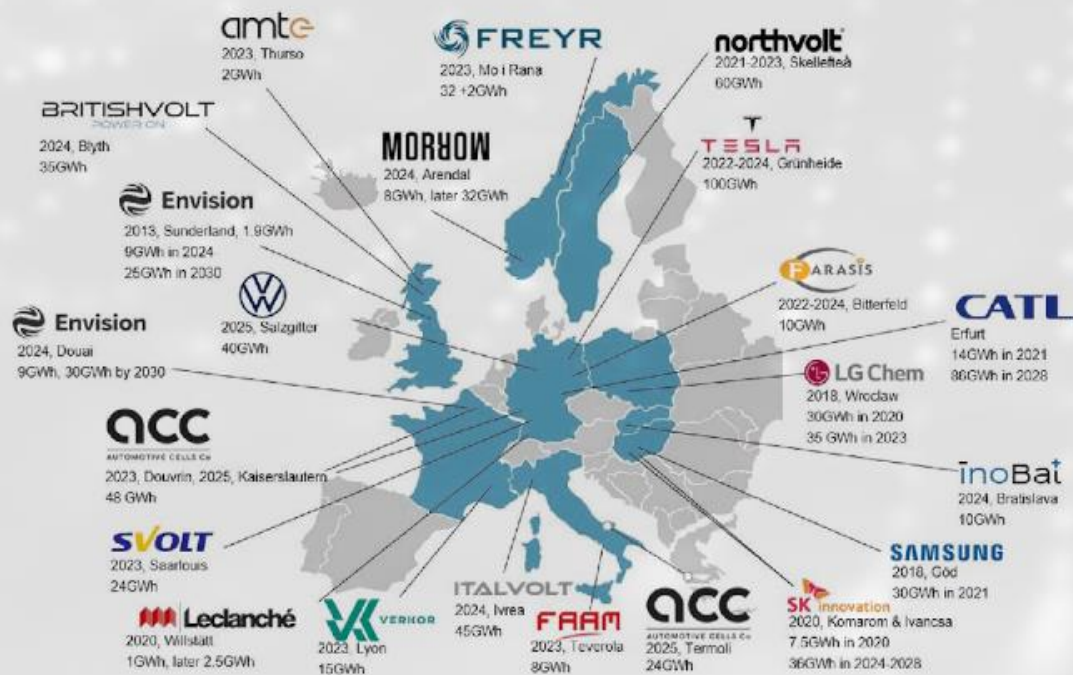
A sustainable use of CO<sub>2</sub> for green batteries



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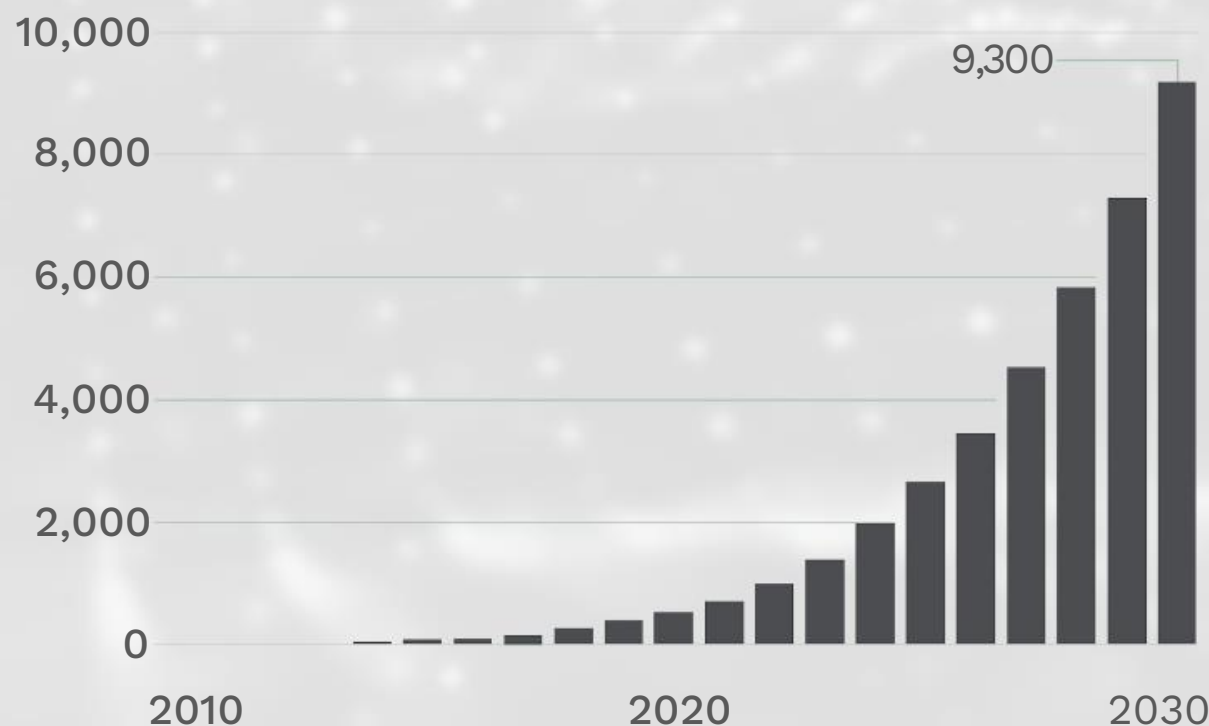
# The Challenge

By 2030 there will be 50 times more **raw materials** for batteries required than today



European Battery Manufacturers

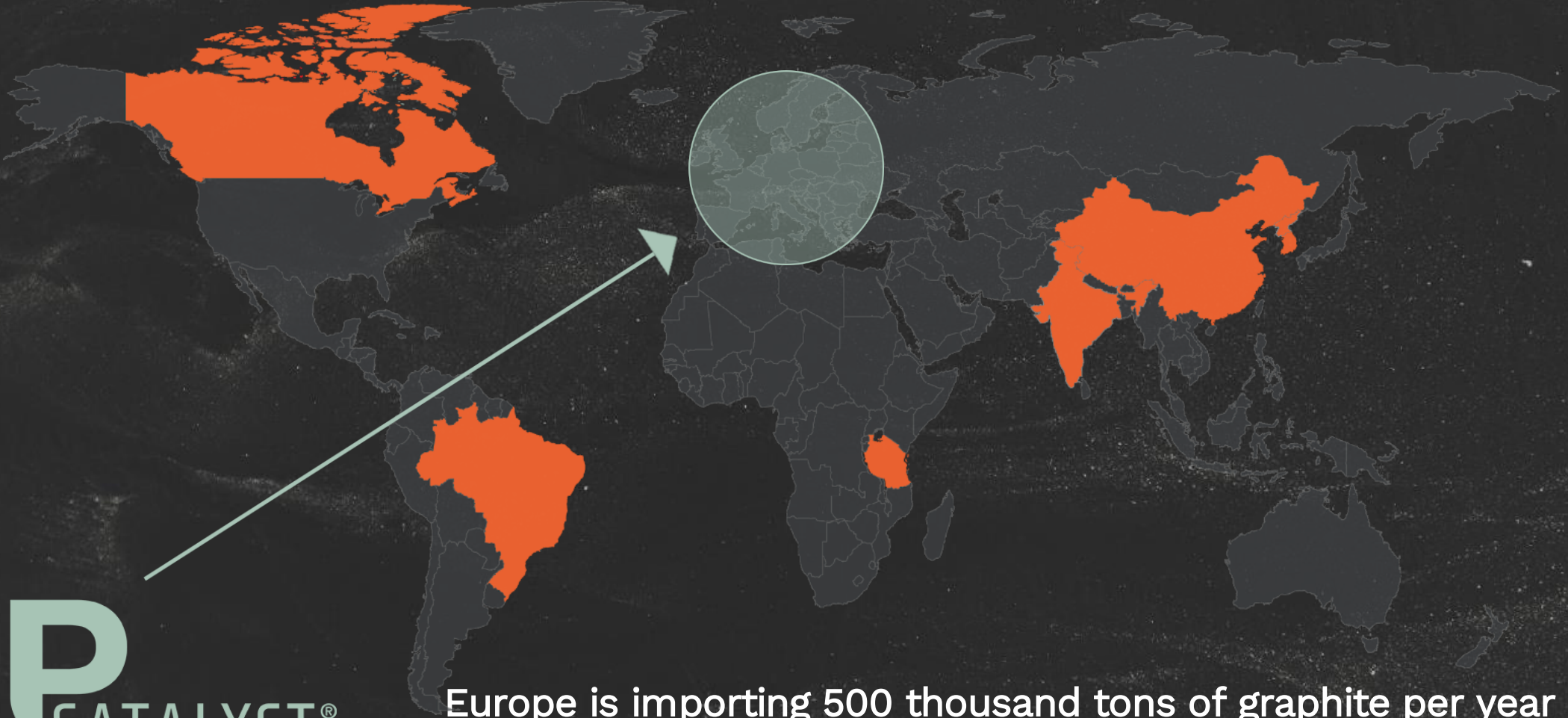
Source: Bloomberg NEF



Li-ion battery demand (GWh)

Source: Bloomberg (2020)

Graphite is produced too far away  
and unsustainably



Europe is importing 500 thousand tons of graphite per year  
– either mined or synthesized through toxic processes

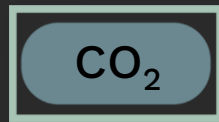




solar energy

$O_2$

Our Solution



*CO<sub>2</sub> isotank*



*shipping container  
synthesis reactors*



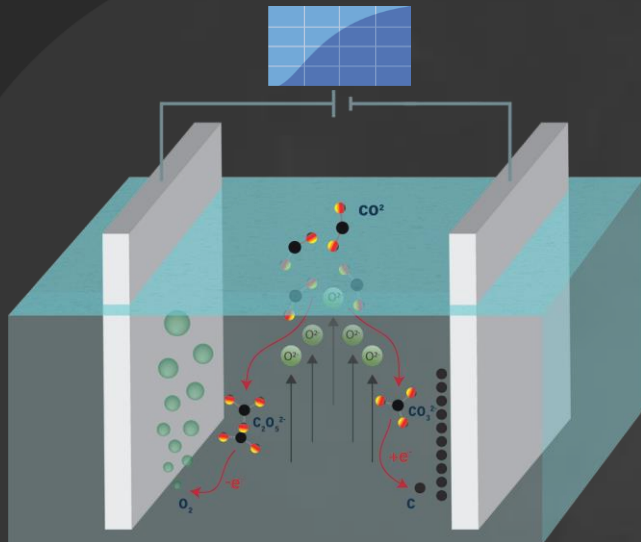
*chemical  
laboratory*



*nanocarbons*



*We produce high-end nanocarbons and  
graphite from combustion exhaust CO<sub>2</sub>*



*O<sub>2</sub> evolution*

*CO<sub>2</sub> absorption*

*C deposition*

# Uniqueness and IP

SYNTHESIS  
METHOD

PUBLICATION NO:  
WO2020104663

REACTOR  
TECHNOLOGY

3 MORE PATENT  
APPLICATIONS

Inhouse developed

Current patent

Patent filing in progress

Plan for next 2 years

Global graphite market  
€100 billion in 2030

Market Potential

EXISTING CUSTOMERS

**SKELE+ON**  
TECHNOLOGIES

  
UniverCell

 theion

 **CUSTOMCELLS®**  
Ahead in cell innovation

**AkzoNobel** 

**pcc**  
ROKITA

**CONSOLIS**

Global carbon  
nanopowder market  
€24 billion in 2026

EU carbon  
nanopowder market  
€10 billion in 2023

TARGET CUSTOMERS

**Panasonic**

  
**TESLA**

**northvolt®**

**SAMSUNG**

 **VERKOR**

 **TOTAL**

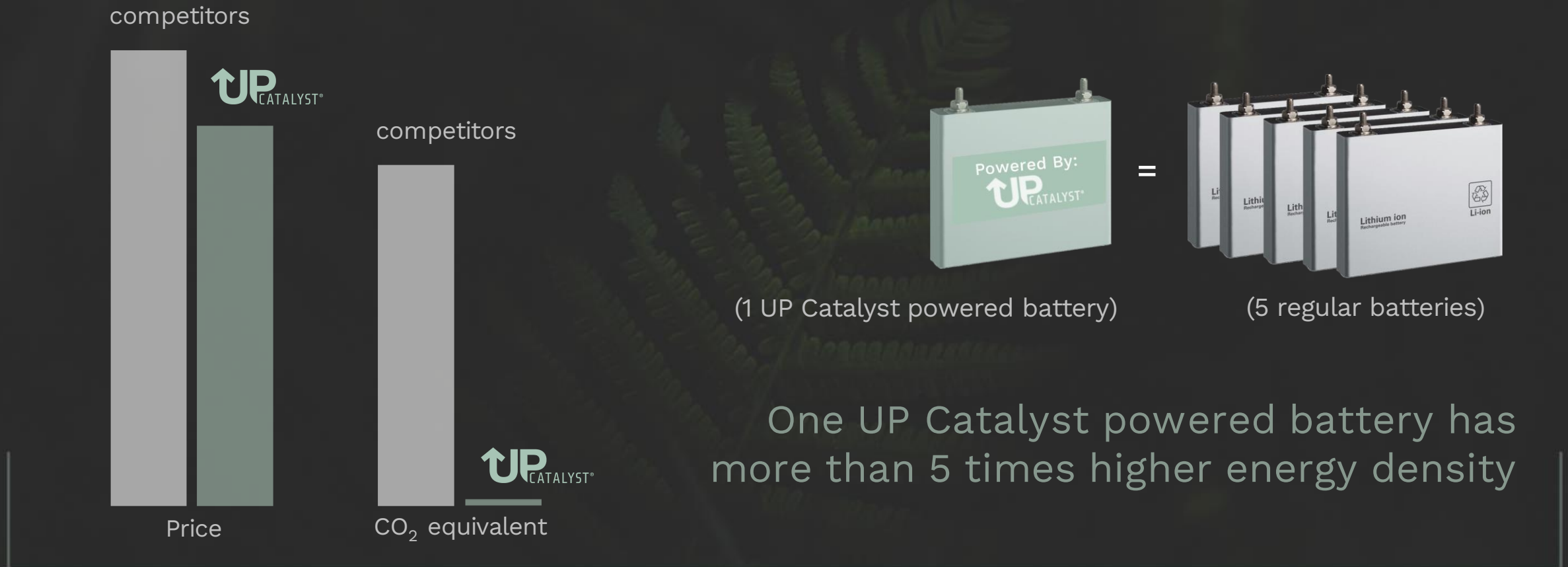
 **FREYR**  
Renewable energy storage

By 2030 there will be around 145M electric vehicles in the world.



An average EV contains 70 kg of graphite equaling 10 million tons of graphite needed by 2030 which equals 100€ billion global market.

## Better in Price and Sustainability



**400x better for environment** than fossil-based alternatives

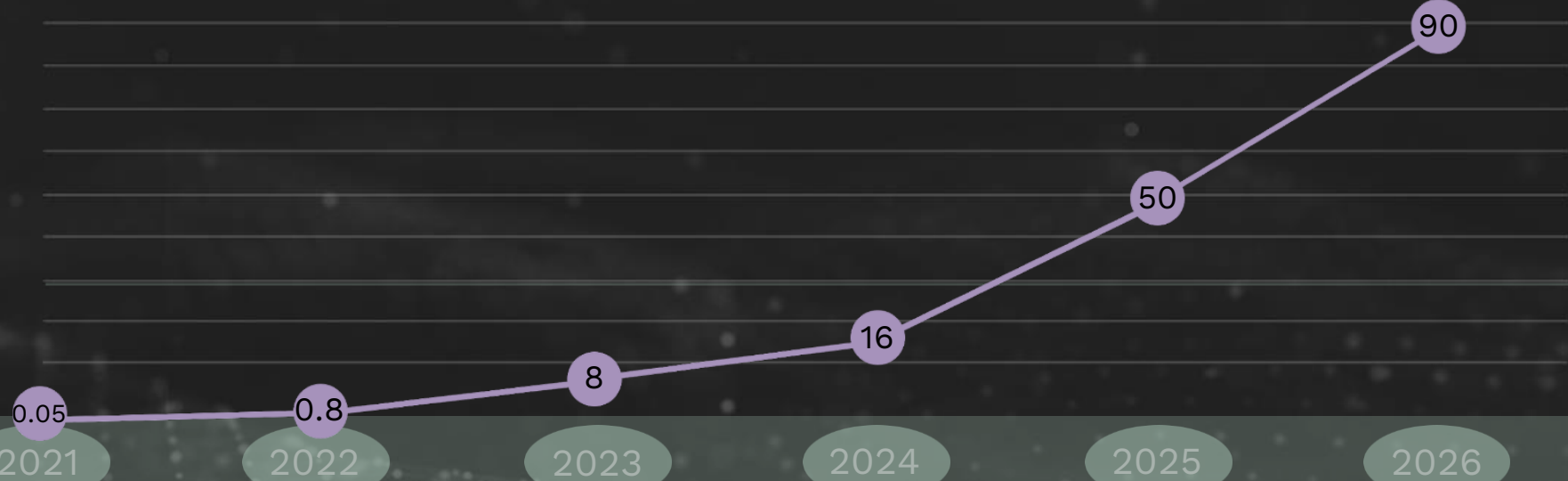


# Timeline

## Financial forecast

Million €

● NET TURNOVER



2019

2020

2021

2022

2023

2024

2025

2026

UP Catalyst  
established  
Product development



Lab-scale  
production  
started  
First sales and 4 LOI-s



Small-scale  
production in kg-s  
Consumption: 2.5 T CO<sub>2</sub>/yr  
Production: 500 kg/yr  
Sales price: 1300€/kg



Pilot container  
size production on  
industry site  
Consumption: 5 T CO<sub>2</sub>/yr  
Production: 1 T/yr  
Sales price: 1000€/kg

Product container  
size scale-up  
on industry site  
Consumption: 50 T CO<sub>2</sub>/yr  
Production: 10 T/yr  
Sales price: 800€/kg

Industrial large-scale  
synthesis reactor on  
industry site  
Consumption: 500 T CO<sub>2</sub>/yr  
Production: 100 T/yr  
Sales price: 30-500€/kg

**Licensed technology**  
Synthesis reactor investments made  
by the licensing company



**Dr. Gary Urb**  
CEO, co-founder

13+ years  
AkzoNobel & Wolf Group



**Dr. Ivar Kruusenberg**  
board member, co-founder

14+ years research in  
nanomaterials and fuel-cells



**Dr. Sander Ratso**  
CTO, co-founder

8+ years research  
in nanomaterials



**Dr. Einar Karu**  
Head of Innovation and R&D

6+ years Max Planck Institute for Chemistry,  
atmospheric research



**MSc. Kätlin Kaare**  
Head of Production, co-founder

6+ years research in  
electrochemistry



**Teele Niidas**  
Head of Marketing

7+ years marketing and  
international relations



**Karl-Gustav Tamberg**  
Head of Sales

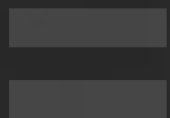
7+ years international  
sales and Resinex

# Fundraising

We are looking for an investment of **500k EUR**



that will be matched with grants of **1.2M EUR**



equaling **1.7M EUR**

**1.7M EUR WILL BE USED FOR:**

SALES

MARKETING

IP PROTECTION

PRODUCTION SCALE-UP

# UP CATALYST®

LEADING THE WORLD TO SUSTAINABLE ELECTRIC VEHICLES

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THANK YOU!