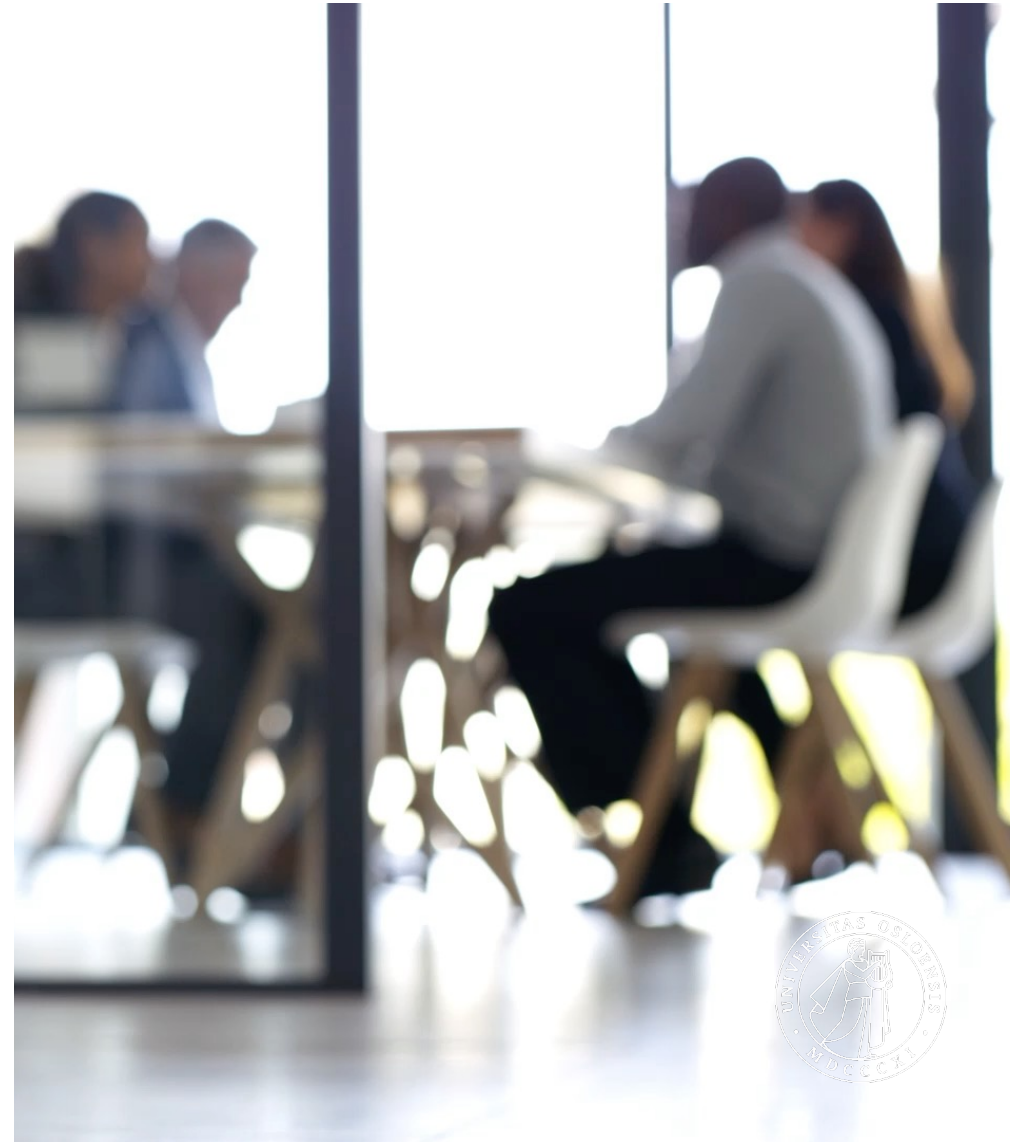


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Case competition, Oslo
October 25-26, 2022

“Sustainability”

Torunn Nyland, Therese Gjessing & Arnt Maasø
Faculty of Humanities
University of Oslo



WELCOME

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What to expect?



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What to expect?

Truls de Lange

Participant in the case competition at Aarhus 2022
Studies German at the University of Oslo



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What to expect?

What?

- Solutions to real world problems
- Develop skills and experience in collaboration
- Find talent
- Build relationships between schools & businesses
- Networking

For you?

- Networking
- Develop skills and experience
- Challenge yourself
- Have fun!



Timeline

- **Soon: Presentation of two cases + Q&A with ‘case owner’**
- **Ca 10:30: Teams will meet and start working**
- **12:00 Lunch** (at Eilert Spiseri)
- **13:00:** continue working (Academic staff available for advice).
- **16:00:** *Follow up e-mail questions to ‘case owner’ no later than 4 PM.*
- **20:00** Campus building closes

Tomorrow

- **09:00 Elevator pitches (1 minute)** + feedback
- **12:00 Lunch** (at Eilert Spiseri)
- **14:00 Deadline** to submit material (PPTs) on email to Arnt (cc Therese)
- **15:00 7-minute pitches** to jury
- **17:00 Announcement of winners** (Prizes, food and celebration at Uglebo)

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Supervision & practical details?

Program and links:



Ask Torunn, Therese & Arnt anything

Torunn: (+47) 405 52 150

Therese: (+47) 990 44 523

Arnt: (+47) 414 20 825



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How to start working?

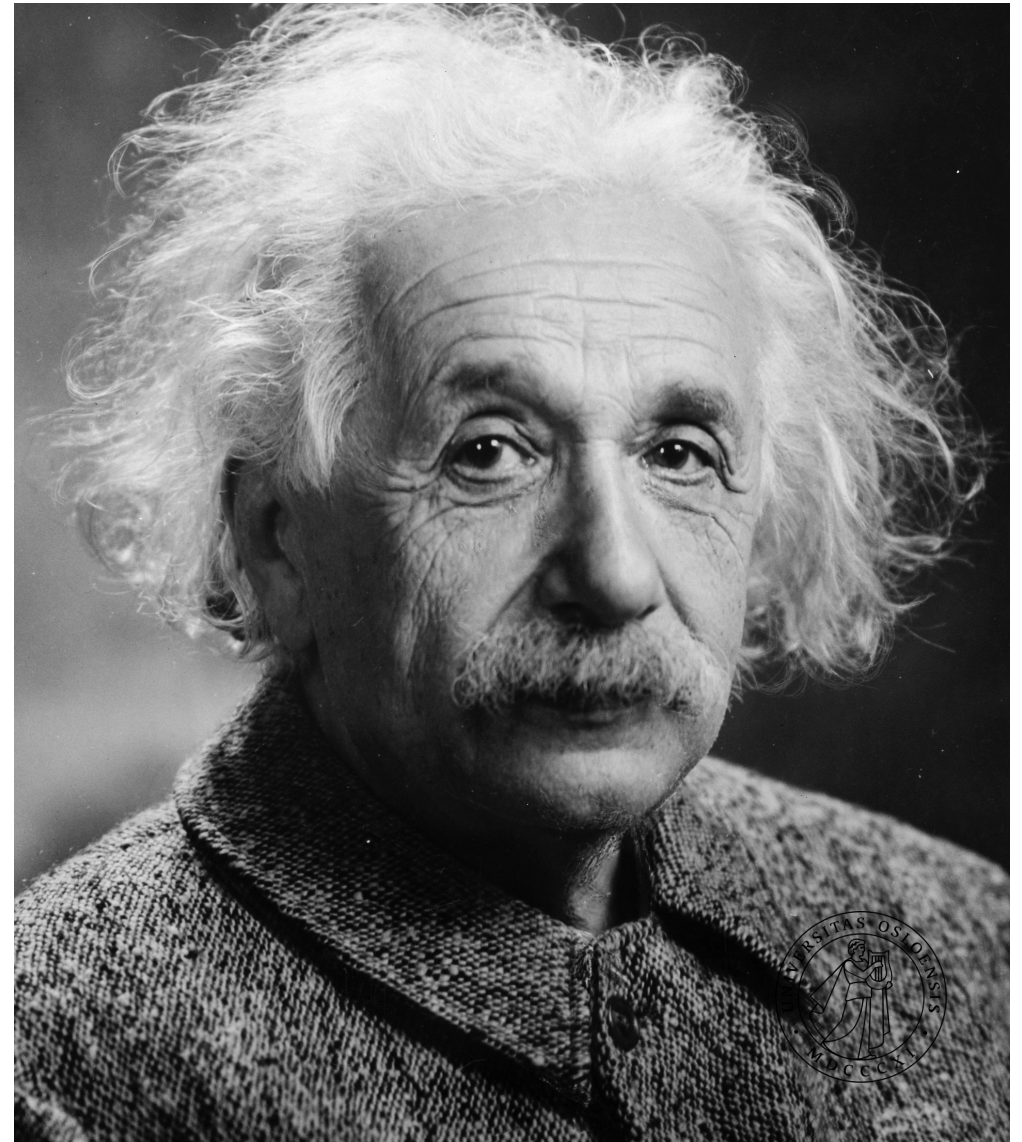
- Get to know each other & calibrate expectations! (To competition? To yourself? To team?)
- Get a sense of strengths, skills, competences (SWOT)
- When to work, How much, How?
- Collaboration tools, sharing & communication in the team?
- Milestones?
- Consult resources @ Growth4SMEs website and research case!
- Ask 'case owner' for clarifications
- Explore the PROBLEM before finding solutions



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“If I had an hour to solve a problem, I’d spend 55 minutes thinking about the problem and 5 minutes thinking about solutions”

– Albert Einstein



Good luck!

One Company, Two cases

Vianode | vianode.com

Andreas Forfang | andreas.forfang@vianode.com

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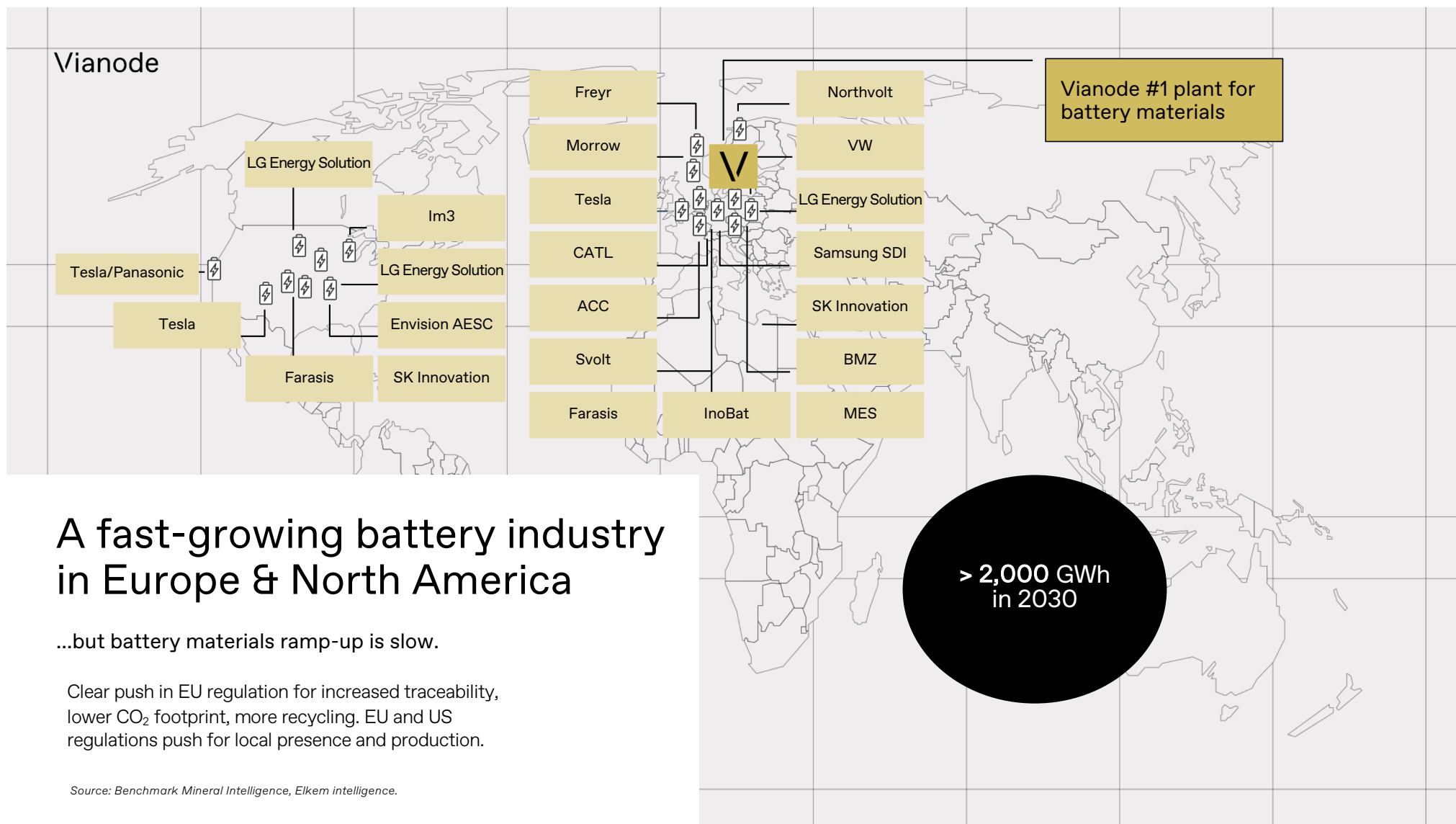


Building industrial leadership
in advanced battery materials



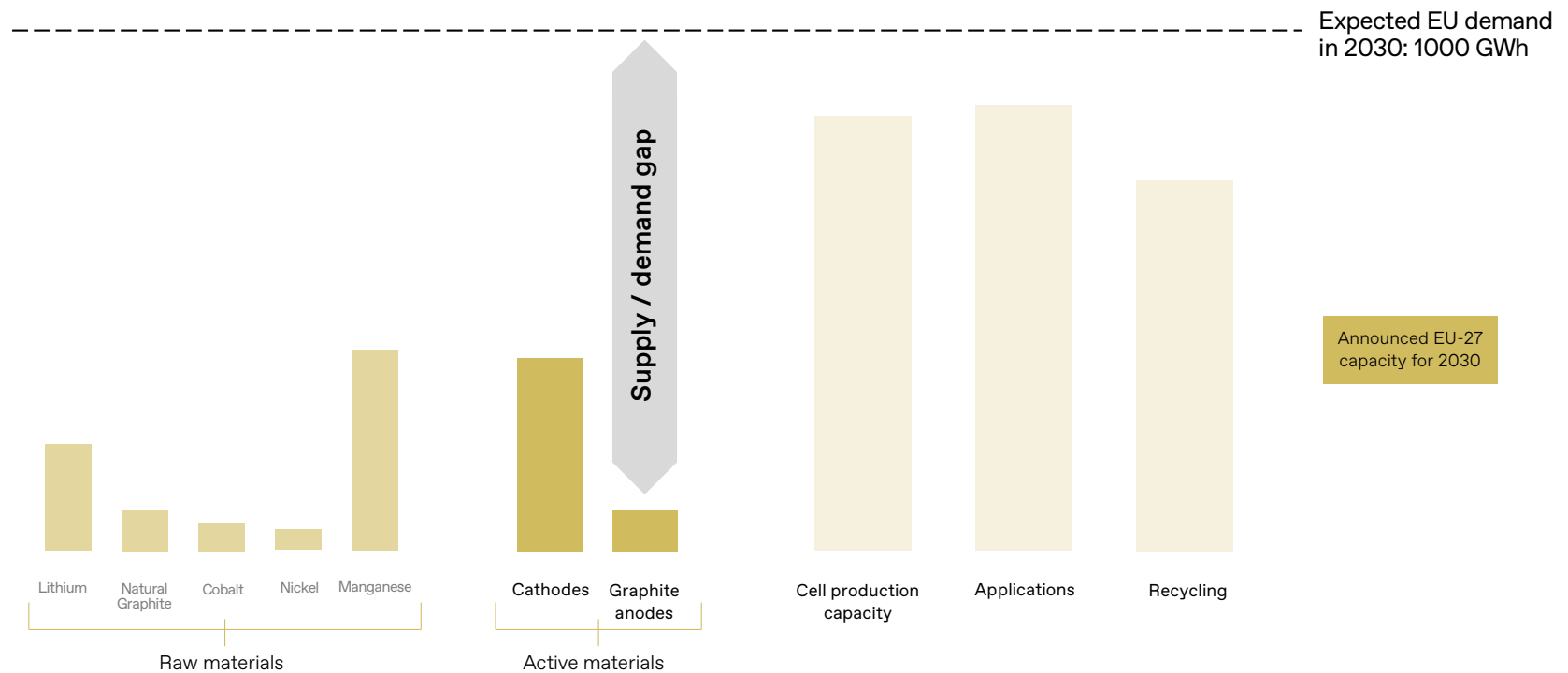
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**UIO
SUSTAINABILITY
CASE COMPETITION**



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Significant anode supply-gap in Europe towards 2030



• Source: European Battery Alliance, InnoEnergy

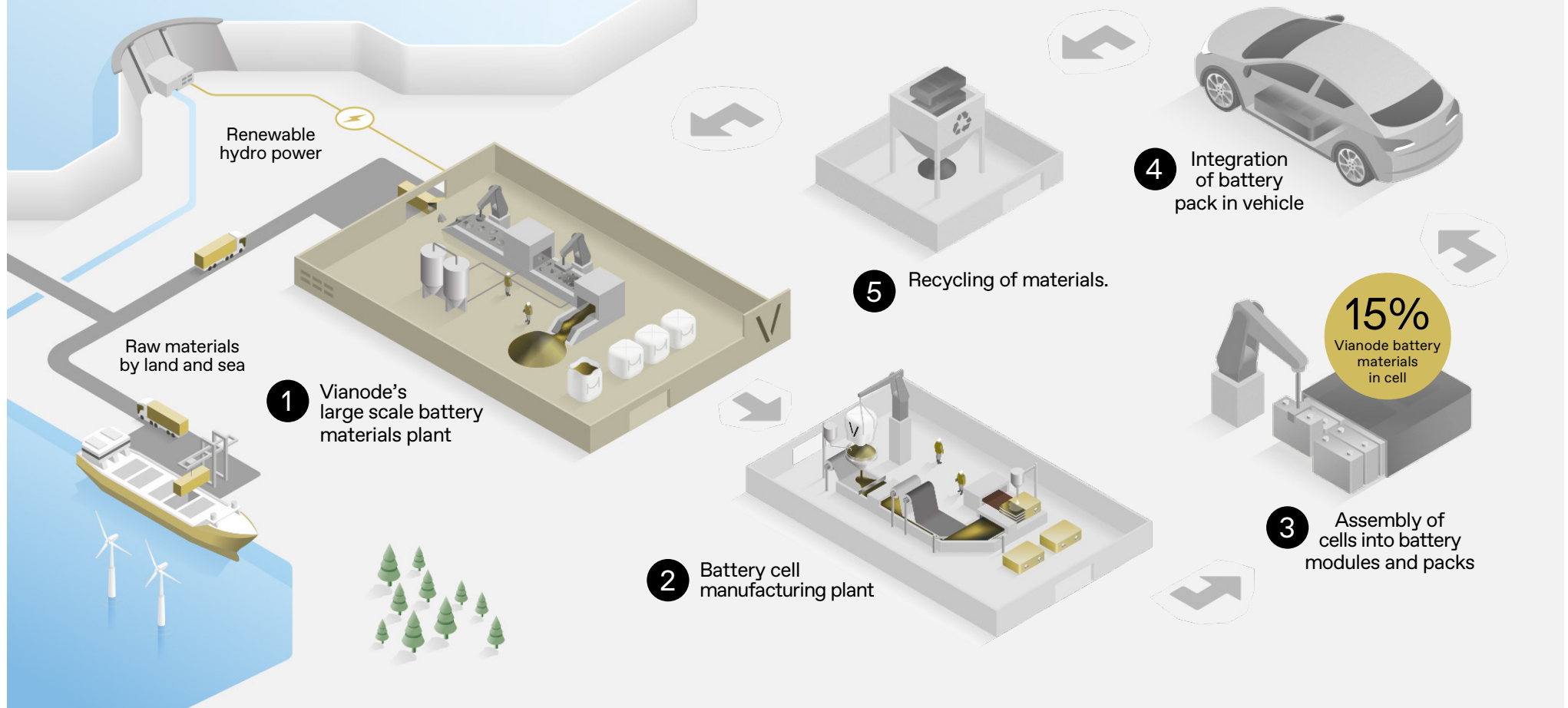
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About the company

- **Founded in 2021** – built on technological advancements and decades of industrial experience.
- Scaling up to full industrial production. First phase **start of production in 2024**.
- Headquartered in Oslo, Norway, pilot production in Kristiansand. Industrial plant will be located in **Grenland, Norway**.
- **65 employees** by October 2022 – growing towards 300 by 2026.
- Backed by **Elkem, Hydro and Altor** with NOK 2 billion initial capitalisation

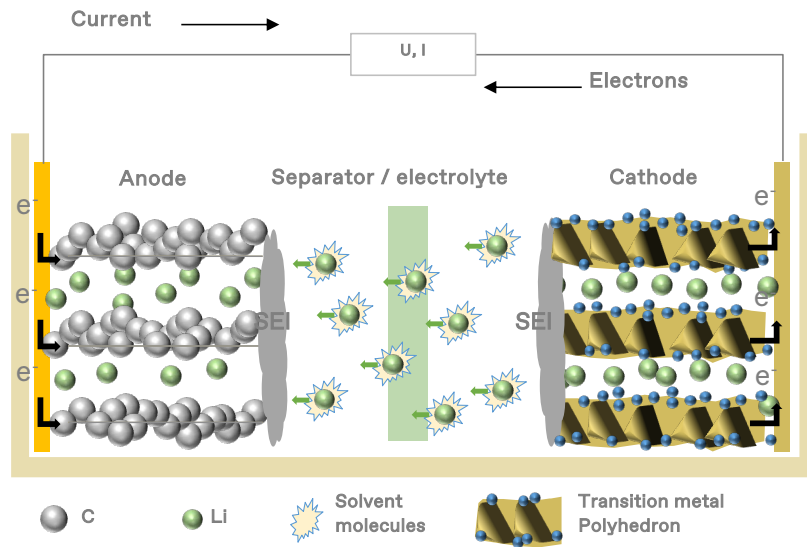


Our materials enables better & greener batteries



Vianode

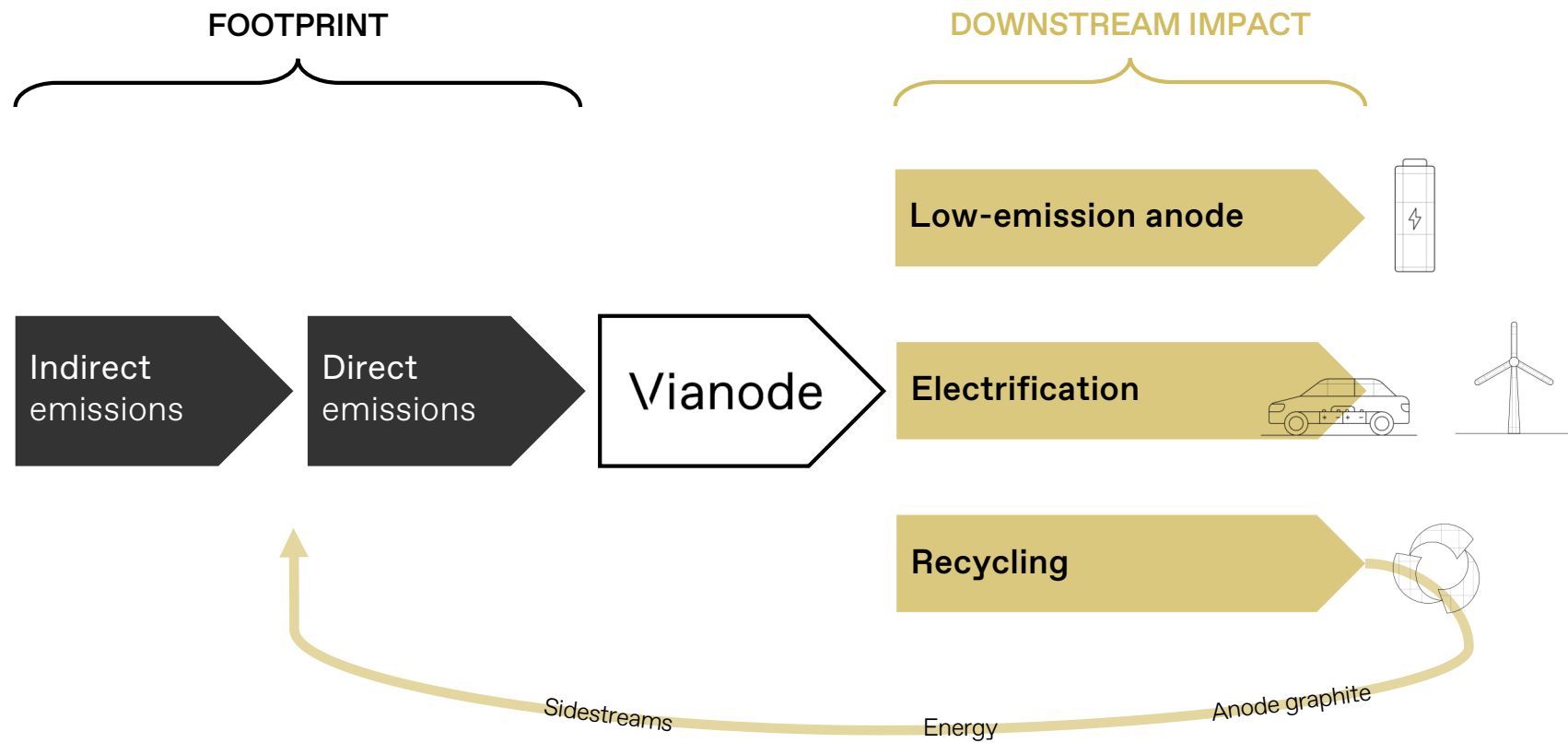
The anode is key in batteries



*“Our cells should be called
nickel-graphite, because
primarily the cathode is nickel
and the anode is graphite”
Elon Musk, Tesla*

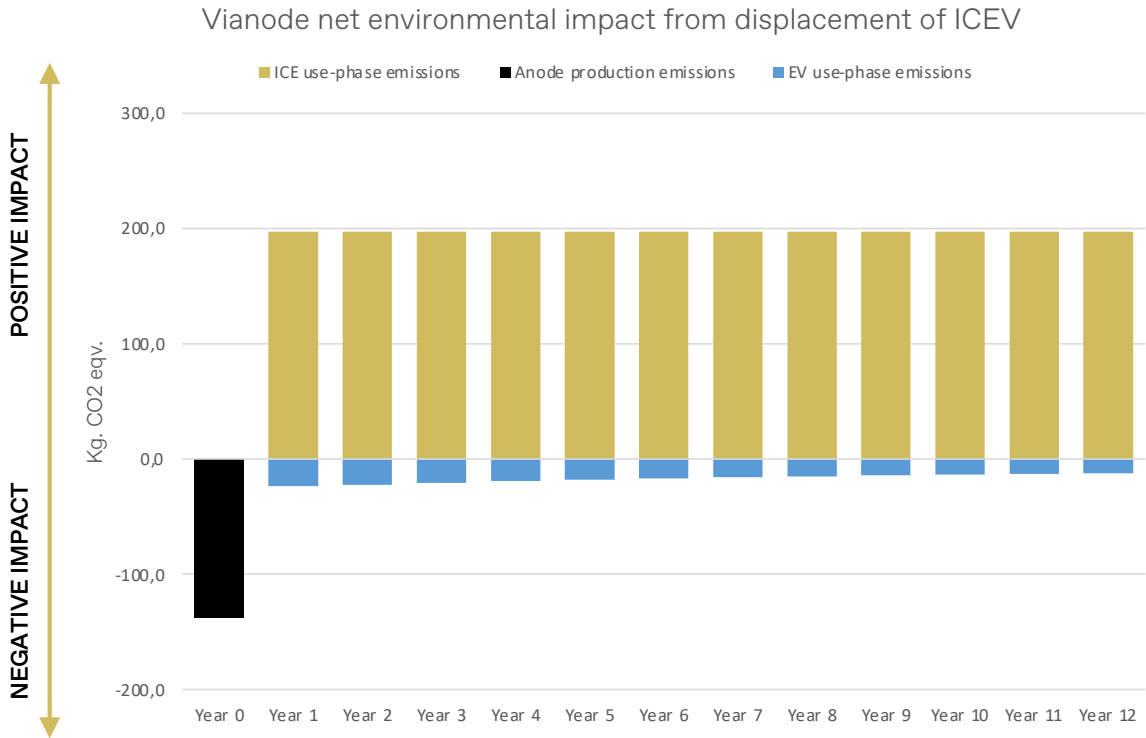
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Vianode environmental impact



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Electrification impact – displacement of personal ICEV



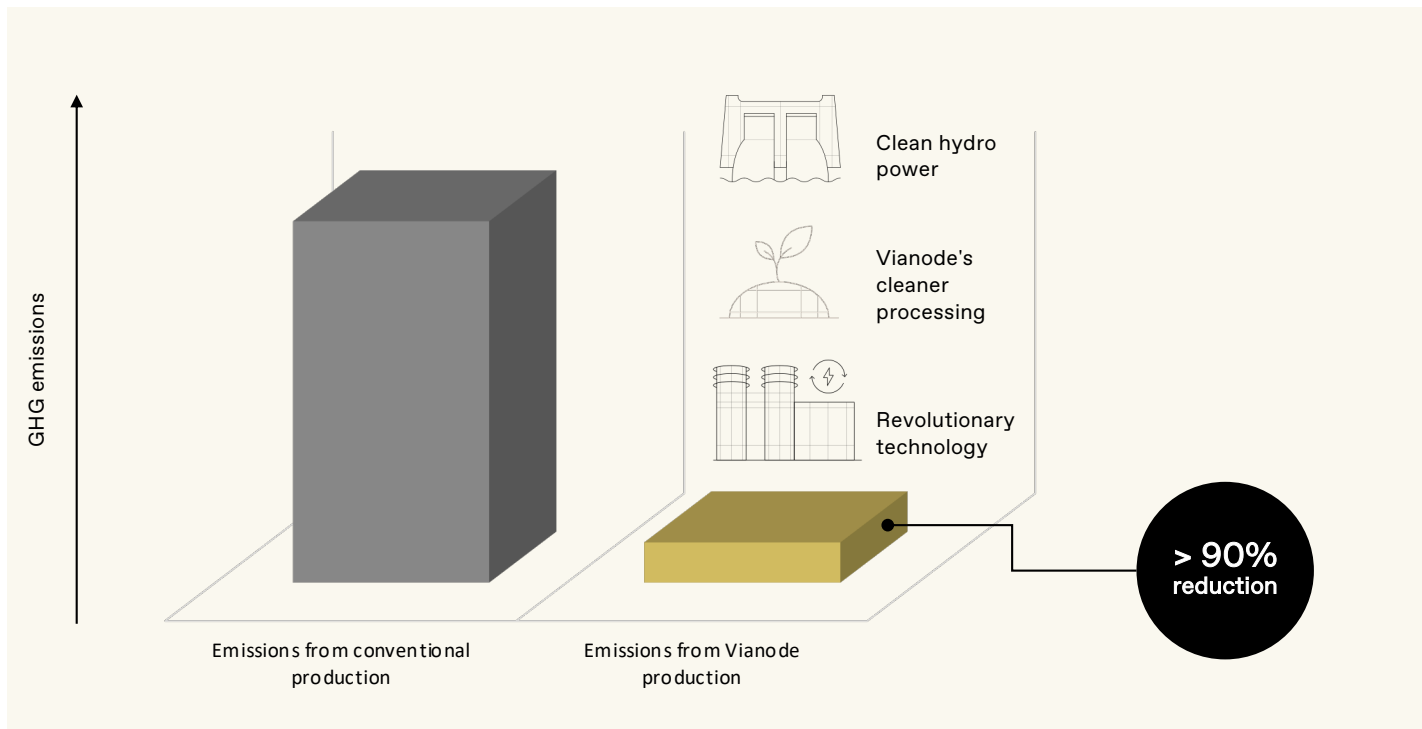
7x
positive impact
> 2 tons CO2 eqv. per EV

Key assumptions	
Avg. car lifetime	12 years
Annual driving distance	12,000 km
Average EU EV battery size	80 kWh
Emission intensity of EU electricity in 2030	114 kg. CO2 eqv./kWh
Value-allocation to anode	10 %

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Vianode anodes with near zero emissions

Emission reduction compared to the production process in today's market ¹



¹Based on LCA data from Benchmark Mineral Intelligence and Norsus

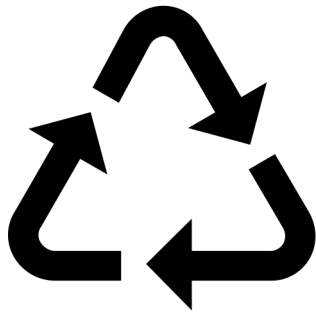
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Case 1: Draft Vianode's sustainability strategy

1. Draft Vianode's sustainability strategy, including:

- a. The most relevant UN Sustainable Development Goals
- b. Which investments to prioritise
- c. Which customers to target
- d. How to adopt circularity
- e. A climate footprint roadmap
- f. A set of sustainability key performance indicators (KPIs)

Case 2: Is it more sustainable to reuse or recycle electric vehicle batteries?



- Analyse what is more sustainable; to reuse a battery for second life, or to recycle a battery after first life, considering:
 - A birds-eye view on how best to reach global climate goals
 - Net cradle-to-grave climate impact of various battery applications, such as electric vehicles and energy stationary storage
 - The supply-chain limitations in the battery industry
 - Challenges with scaling up new industries for reuse and recycling

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Questions?

- **1x** e-mail per group
- By **16.00** today
- To **andreas.forfang@vianode.com**

Vianode

A thin, light brown L-shaped line is positioned in the bottom right corner of the slide, consisting of a horizontal segment and a vertical segment meeting at a right angle.