



Powering the Future: Circular solutions for energy storage

SustainableSolutionsMatch

Welcome!



Welcome & Introduction

Who's moderating?

Viktoria Fink

Standortagentur Tirol (Austria)

Enterprise Europe Network

Co-Chair TG Sustainability



Who's organizing?



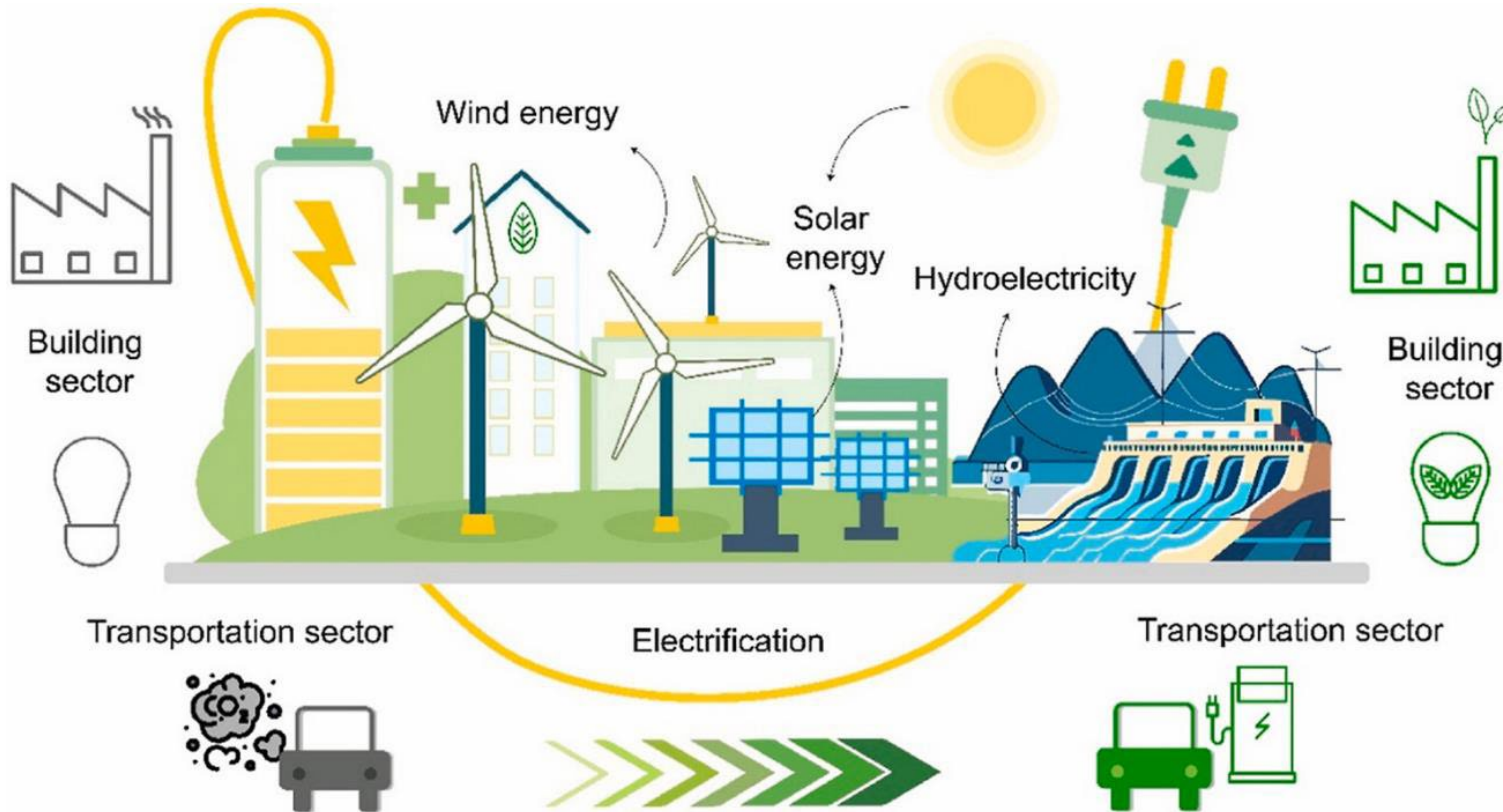


Welcome & Introduction

Let's play by the rules: smooth sailing for our session!

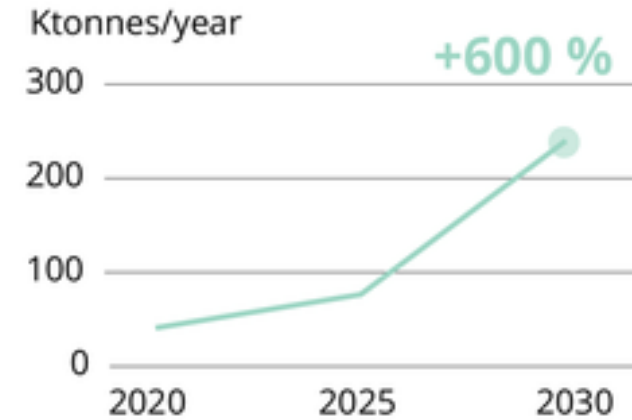
- **Mute Policy:** Please remain muted unless speaking to avoid background noise.
- **Time management:** Pitchers, please keep track of your time. We will inform you if 5 minutes have passed.
- **Q&A Time:** After each pitch, there will be 1–2 minutes for questions. Please use the chat to ask questions.
- **Technical Issues:** If you encounter issues, use the chat to notify the host.
- **No Session Recording:** This session will not be recorded.

Emerging waste streams arising from renewable energies, storage and mobility



Clean energy in the decarbonization transition of multiple sectors

Energy storage and mobility



[EEA emerging-waste-streams final-report](#)

Why circular solutions for energy storage right now?



1. Exploding demand and critical materials

Critical materials are constrained and geopolitically sensitive



2. Environmental footprint over the full life cycle

Life-cycle assessments show that lithium-ion batteries and other storage options have significant impacts on climate, resources, toxicity, land, biodiversity, and water use.



3. Regulatory pressure and market signals

New regulations are rapidly forcing low-waste, low-carbon, circular battery value chains.



4. Strategic timing for stakeholders

For policymakers and system planners, integrating circularity into storage now avoids “locking in” technologies and infrastructures that will become non-compliant or uneconomic.



Summed up: Circular approaches to energy storage ensure that scaling up storage for the clean-energy transition does not create new challenges such as resource depletion, waste, or environmental and social impacts.

Sustainable solutions in the sector

Let's hear from the pitchers!

Turning challenges....

- ☹️ Reliance on critical materials
- ☹️ High production and system costs
- ☹️ Bad environmental footprint and lifetime
- ☹️ Lacking data to optimise performance

etc

... into future potential

- ✅ Increased **resilience** and **resource independence** through **material innovation**, sustainable supply chains, new materials
- ✅ Implementing circular principles to **lower cost of storage**, speed-up market adoption and elevate **competitiveness**
- ✅ Leverage circularity to reduce environmental impact, **extend system lifetime**, **minimize waste**, increase **energy efficiency**, which ultimately reflects in a **better ROI**
- ✅ Using data for **smarter operation**, higher efficiency through **AI prediction**, increased **safety** and **self-optimizing-systems**

etc



Sustainable solutions in the sector

Let's hear from the pitchers!

- Pitch Presentations:
 - Pitch 1: **Batconnect** - R&D/Data Project Manager **Youness Lami** (FR)
 - Pitch 2: **Be.Me** - CTO **Paolo Stufano** (IT)
 - Pitch 3: **Cowa Thermal Solutions** - Co-Founder/CSO **Simon Maranda** (CH)
 - Pitch 4: **Ecolyte** – CEO **Stefan Spirk** (AT)
 - Pitch 5: **Geyser Batteries** - Head of Business Development **Daria Giovannacci** (FI)
 - Pitch 6: **reLi Energy** - CEO **Laura Laringe** (DE)
- Closing Remarks



Pitch Presentations

Time to meet the innovators!

Pitch 1
Batconnect (France)
Youness Lami



BATCONNECT
CONNECTED LITHIUM BATTERIES

Smart Connected Batteries for Energy Transition

Extending battery lifetime through data and connectivity

Batconnect




Youness LAMI

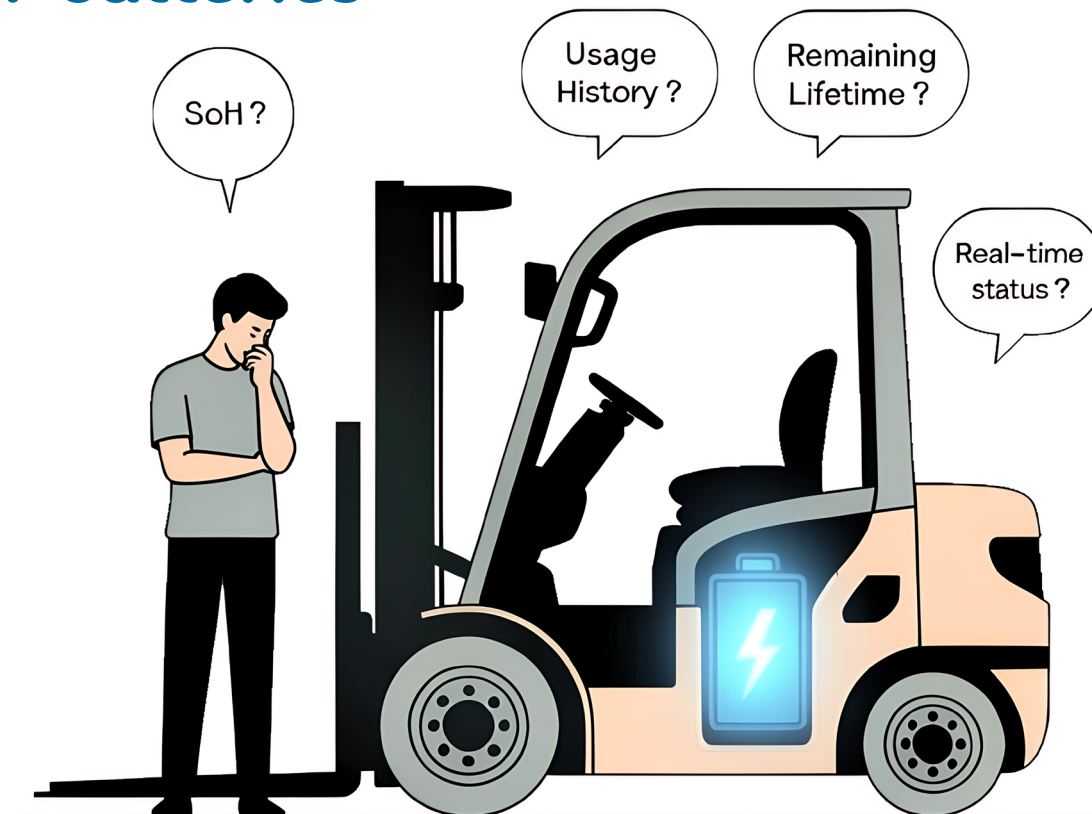
R&D/Data Project Manager

The hidden challenge of batteries

Batteries are central to the energy transition.

Yet most are still used blindly today!

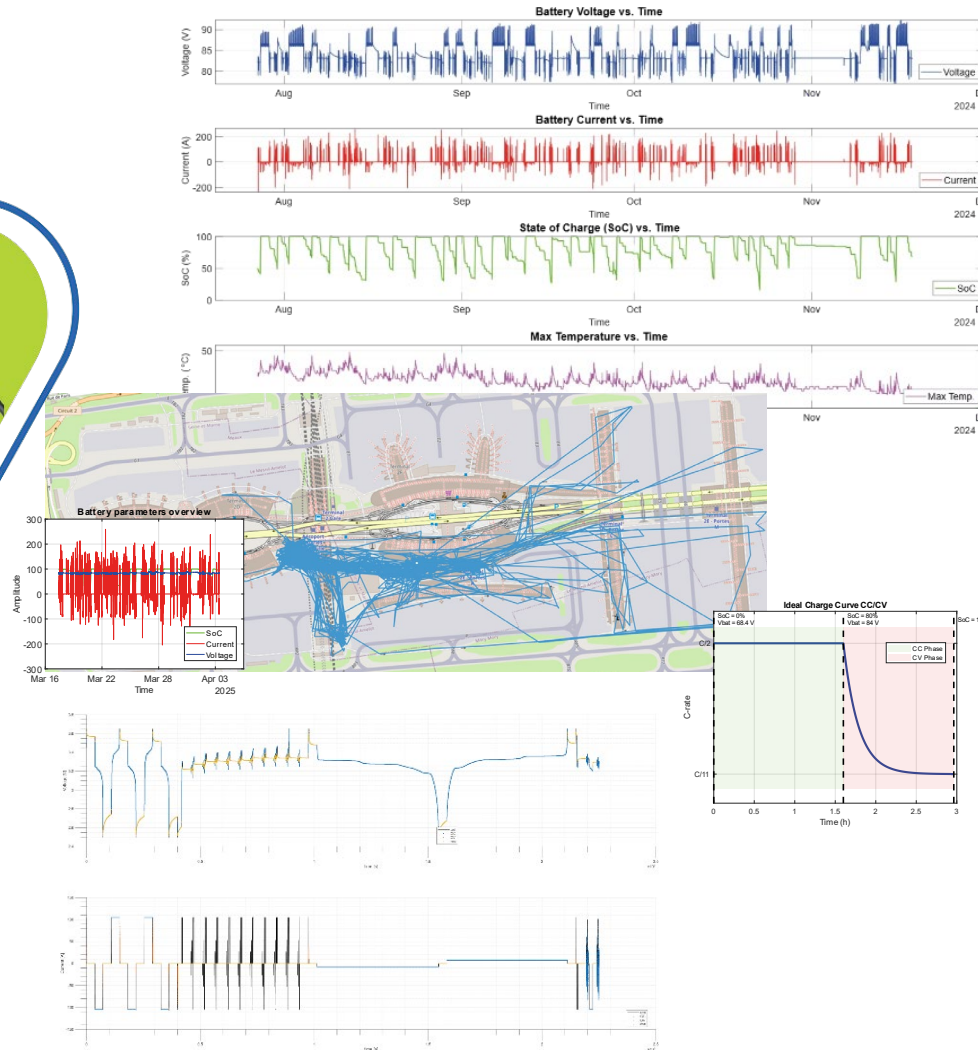
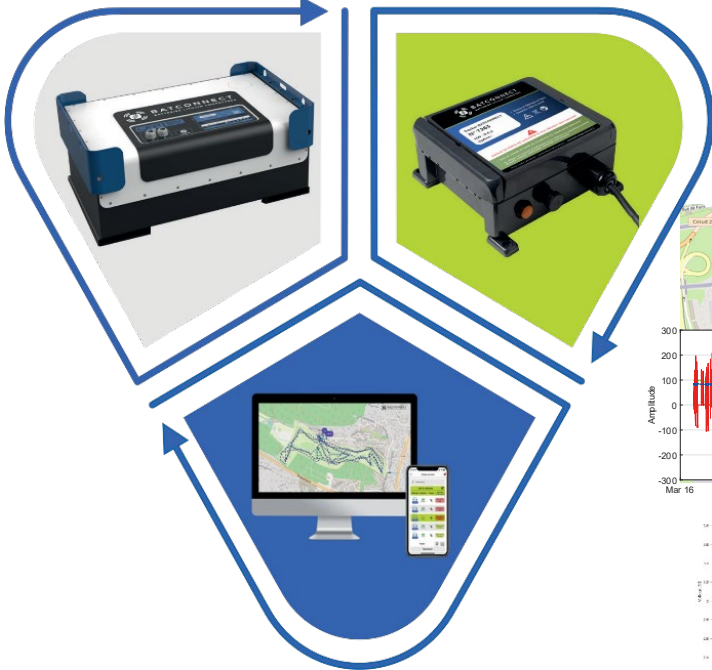
-  **Premature Replacement**
Batteries replaced too early
-  **Safety Risks**
Undetected battery faults
-  **Suboptimal Performance**
Usage not adapted to actual battery condition



Economic Losses & Unnecessary Environmental Impact

Data at the Heart of Batconnect's Approach

The Connected Battery



What connectivity enables

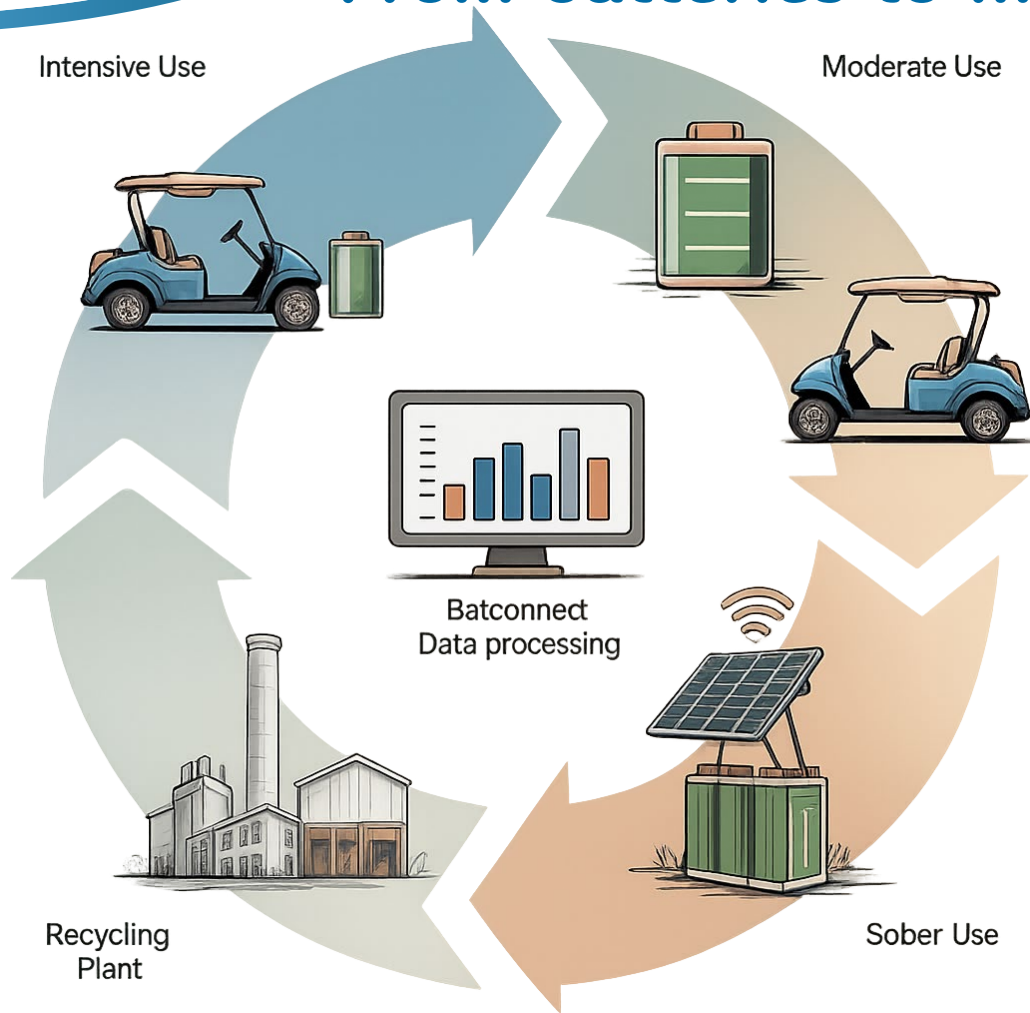
Fleet Monitoring
Proactive surveillance of every battery in real time

Bi-directional Connectivity
Dynamic remote adaptation of usage parameters

R&D Data Collection
Feeding aging models and optimization algorithms

Continuous Innovation
Permanent improvement through real-world field feedback

From batteries to intelligent energy assets



Example: Golf Cart Fleets (since 2020)

20 years

Expected Lifespan
with reconditioning and second life

40%

⁽¹⁾

TCO Reduction
vs. lead-acid batteries

50%

⁽²⁾

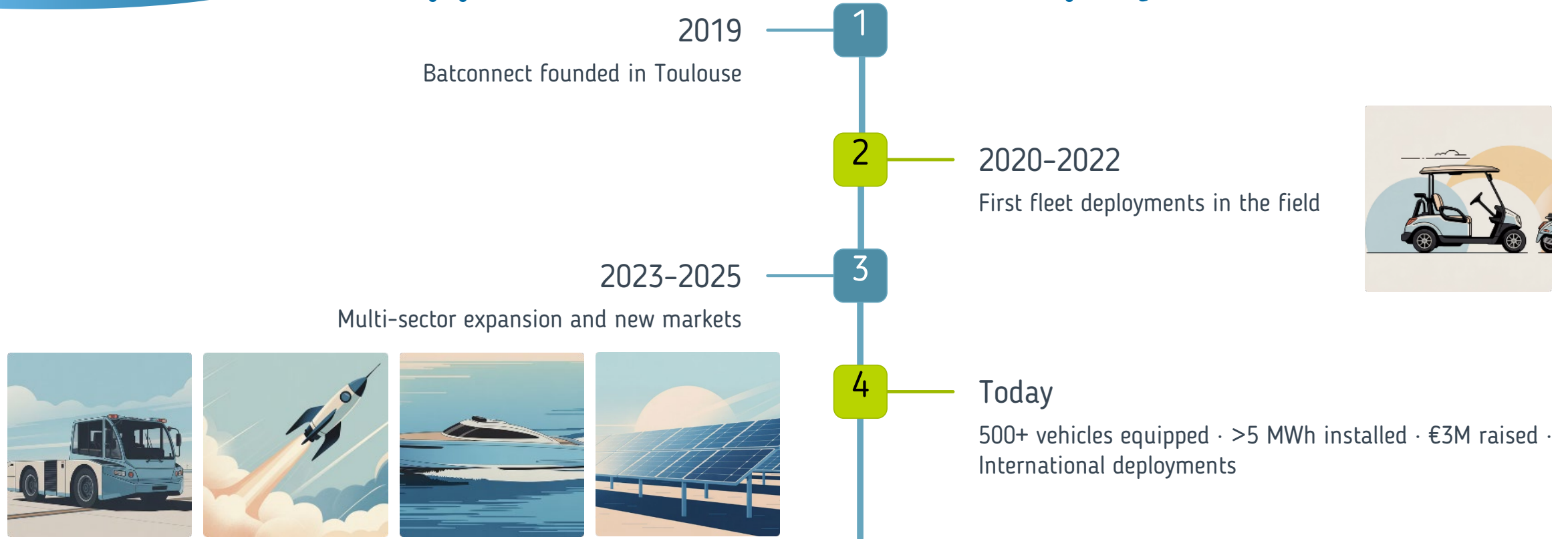
Environmental Footprint
reduced thanks to circular model

(1) Based on assumptions regarding lifecycle, energy efficiency, failure rate, technician visits, etc.

(2) Calculated with the support of BearingPoint, a consulting firm expert in Life Cycle Analysis

Data enables longer battery lifetime and circular energy systems

Applications, Markets & Deployment



Wherever batteries are used, better data enables better decisions!

Scaling data-driven circular battery solutions

We welcome collaborations that help advance smarter, safer, and more reliable battery solutions through a data-driven approach.



Advanced Modelling

Battery behaviour, aging, prediction



Safety & Readiness

Thermal runaway, fault detection, readiness



Smarter Operation

Monitoring, usage optimization, decision support



Data & Insights

Field data, diagnostics, AI, Cybersecurity

RESEARCH LABS

INDUSTRIAL PARTNERS

PILOT PROJECTS



#EENCanHelp

Book a meeting with: Batconnect

Youness LAMI
R&D/Data Project Manager
Batconnect
ylami@batconnect.fr

Cathy ROUAN
Sales Director
Batconnect
crouan@batconnect.fr
+33(0)6 79 26 16 69





Pitch Presentations

Time to meet the innovators!

Pitch 2
Be.Me (Italy)
Paolo Stufano



Bio-based Materials for Energy



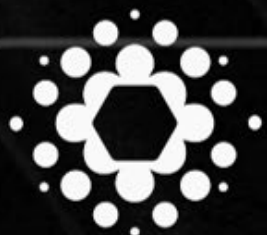
Be.Me

Be.Me SRL

Paolo Stufano
Co-founder & CTO



SustainableSolutionsMatch



Be.Me

We are transforming **energy storage**

natural and circular materials

better electrochemical performances

lower cost





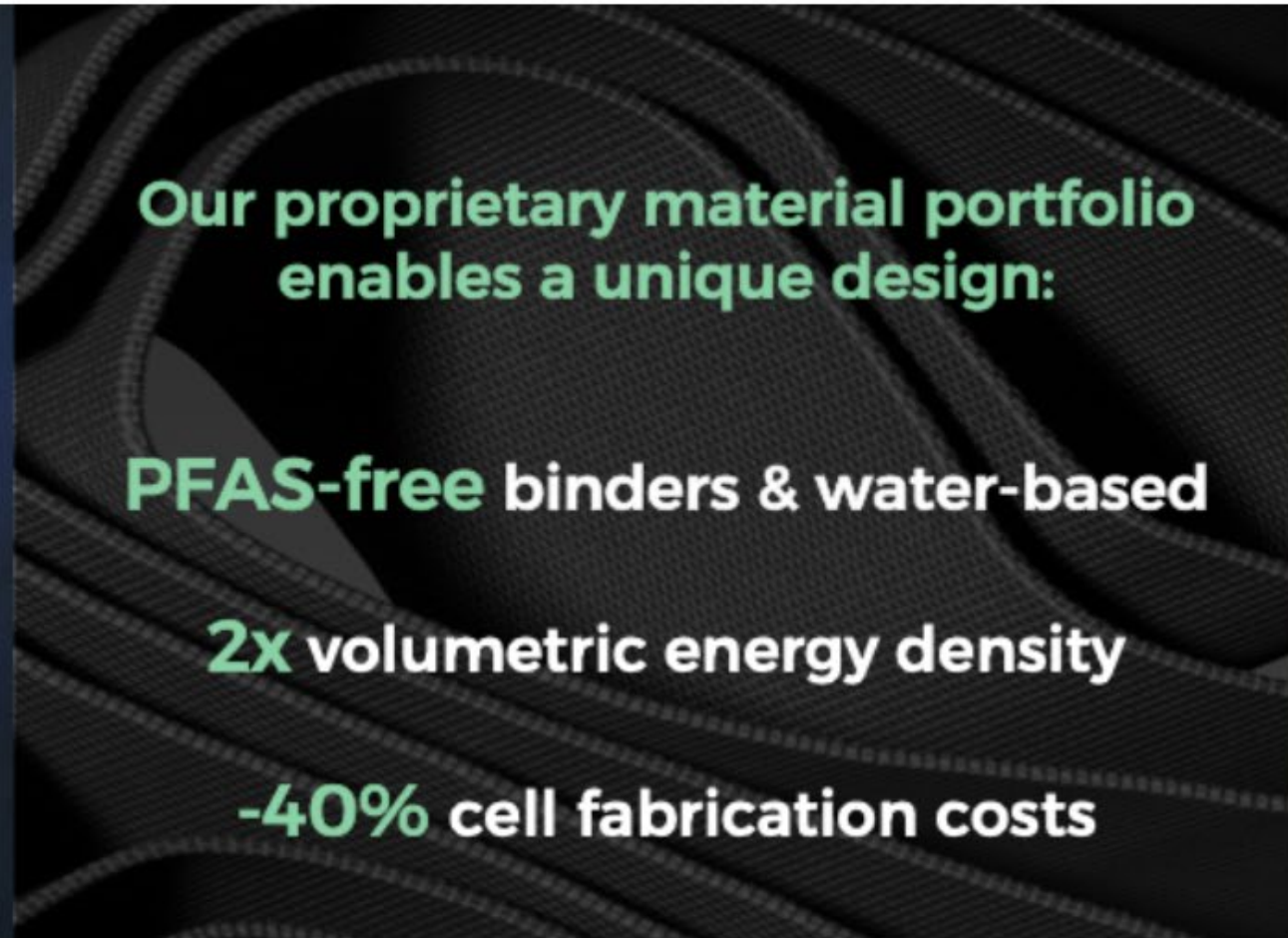
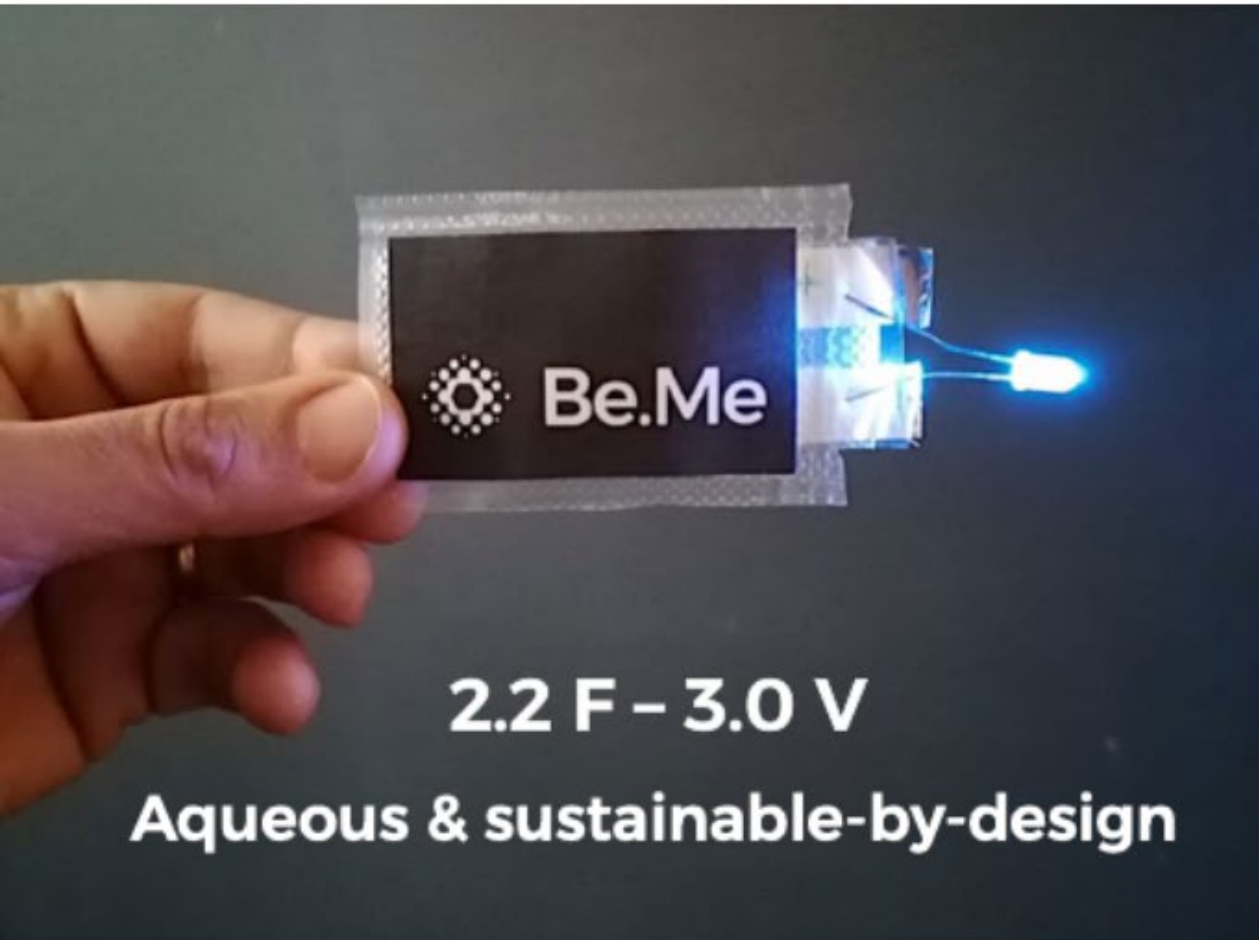
Cell manufacturing

NOT SUSTAINABLE by DESIGN

Toxic solvent and electrolytes
Per-fluorinated (PFAS) binders

NOT EFFICIENT by DESIGN

fabrication cost: +100€/kWh
50% of energy spent for solvent recovery



A drop-in solution for the next generation sustainable devices

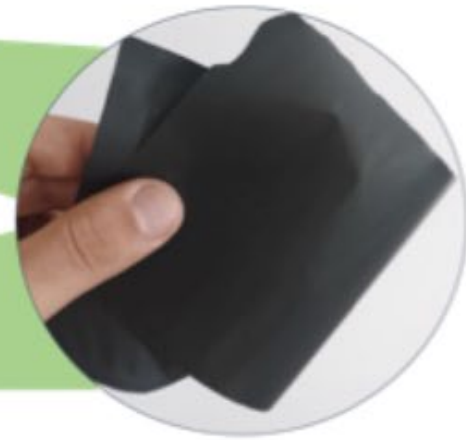
Thermoplastic
Bio-polymers



Recycled
Carbon Fibers

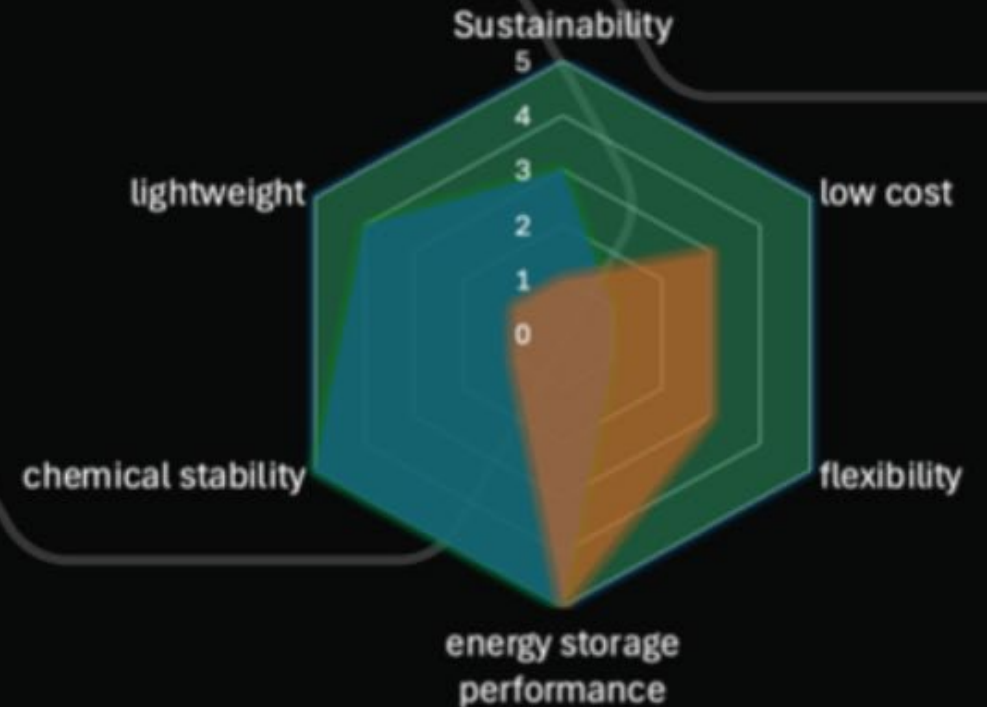


Be.Me



Metal-free current collector

■ Be.Me ■ Carbon electrode ■ Metal collector



Electrochemical Energy Storage Systems (EESS)

241.8 B€
TAM

2028 – Global, market.us

Metal Foil Electrodes

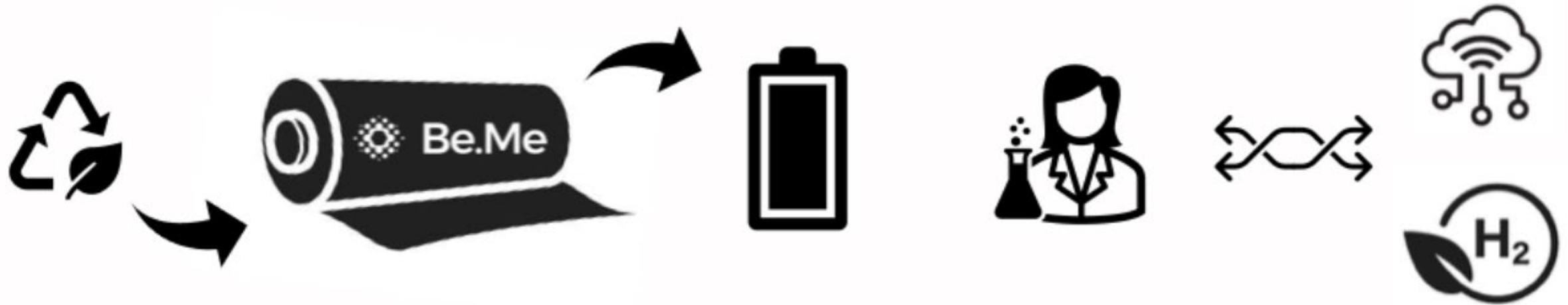
18.4 B€
SAM

2028 – Global, TheInsightPartners

Carbon-coated Aluminum Foils

1.9 B€
SOM

2028 – Global, Maia Research



Production & Sales

Providing sustainable collectors to battery and supercapacitor manufacturers



PoC contracts

R&D and non-exclusive licenses in other sectors (e.g. IoT and hydrogen economy)

New applications, IP & market opportunities

TRACTION: ongoing PoCs (use cases)



Be.Me Laminated

Demo: + 10 cm² **TRL 5**

Supercap, LIBs NMC/LFP-graphite

1 SME, 1 corporate, 3 RTO



Be.Me Free-standing

Demo: 1- 2 cm² **TRL 5**

Aqueous supercap. CDI, RFB

2 SME, 1 corporate



Be.Me Microbial

Demo: + 7 cm² **TRL 3-4**

Biohybrid electrochemical systems (BES)

1 corporate, 2 RTO



Domenico Centrone CEO, PhD
Serial entrepreneur, Venture builder



Chiara Mongiovì COO, PhD
Tech transfer, fundraising



Lorenzo De Giovanni CCO, MSc
Economics & Financials



Paolo Stufano CTO, PhD
R&D and IP management



Rossella Labarile R&D, PhD
biotechnology



Matteo Grattieri R&D, PhD
electrochemistry



Massimo Trotta R&D, PhD
Bio-hybrid systems



Alberto Perrotta R&D, PhD
Advanced materials

+100 years cumulative: R&I and tech-transfer, corporate, startup creation

+10 M€: raised and managed (grant + contracts)

If you are...

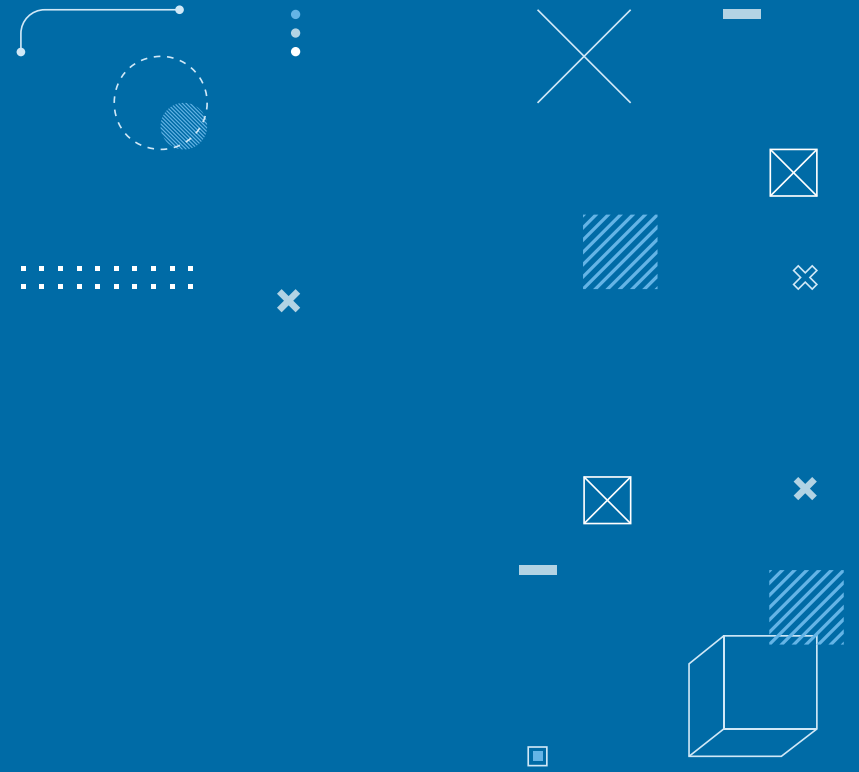
- A **Plastic/bio-plastic or carbon material supplier**
we can **expand your portfolio** application in the electrochemistry sector
- An **Energy Storage device producer**
we can provide a **unique competitive innovation** while improving sustainability
- An **Energy Storage device user**
we can provide a **novel sustainable concept device** for your storage needs

#EUprojects #PoC #jointdevelopment #newbusiness

#EENCanHelp

Book a meeting with: Be.Me SRL

Paolo Stufano
CTO
Be.Me SRL
paolo.stufano@cnr.it



Be.Me





Pitch Presentations

Time to meet the innovators!

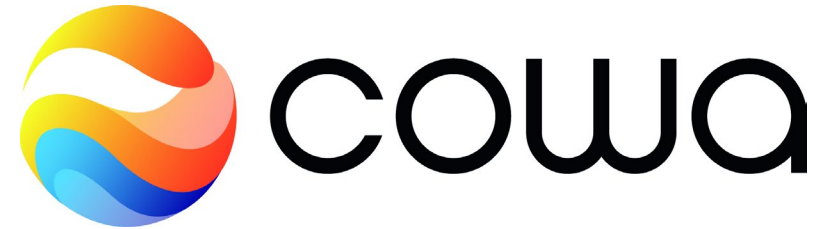
Pitch 3
Cowa (Switzerland)
Simon Maranda



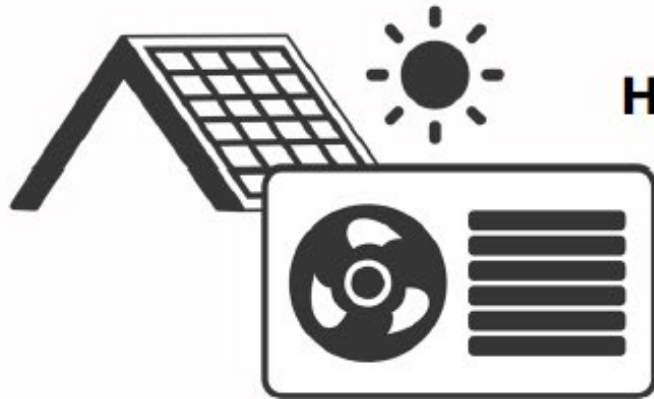
Compact Thermal Energy Storage for the Heating Transition

Cowa Thermal Solutions AG

Simon Maranda
Co-Founder, CSO



Decarbonisation of Heating starts now:



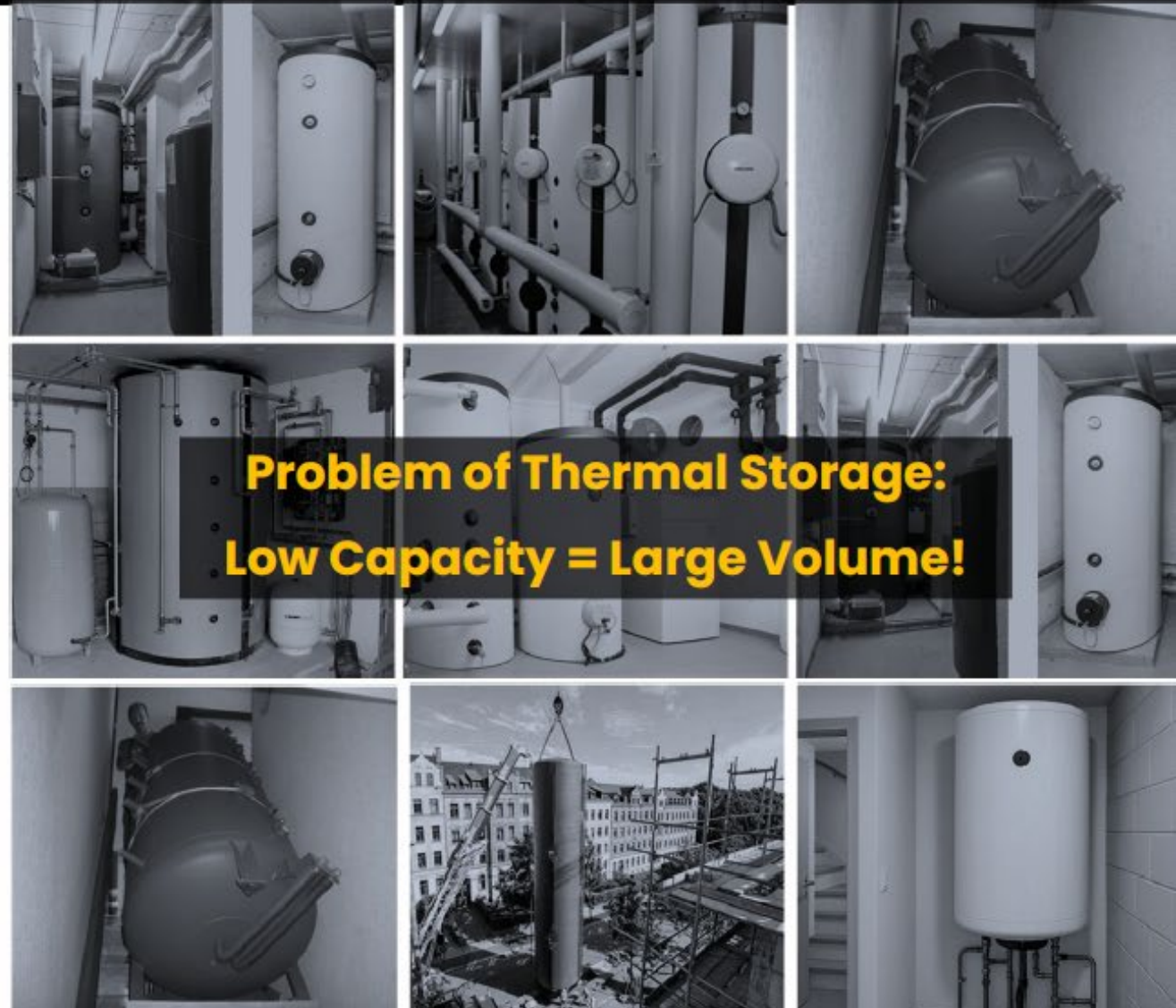
Heat Pump & PV

Heat Pump vs. Gas

Gas: 4'000 kg CO₂/a

Heat Pump: 1'000 kg CO₂/a

Thermal energy storage is key for these systems.

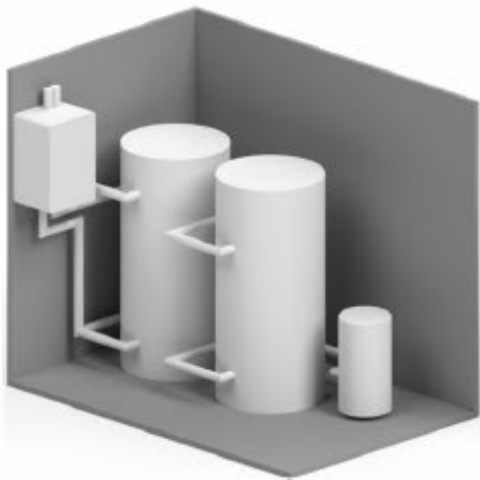




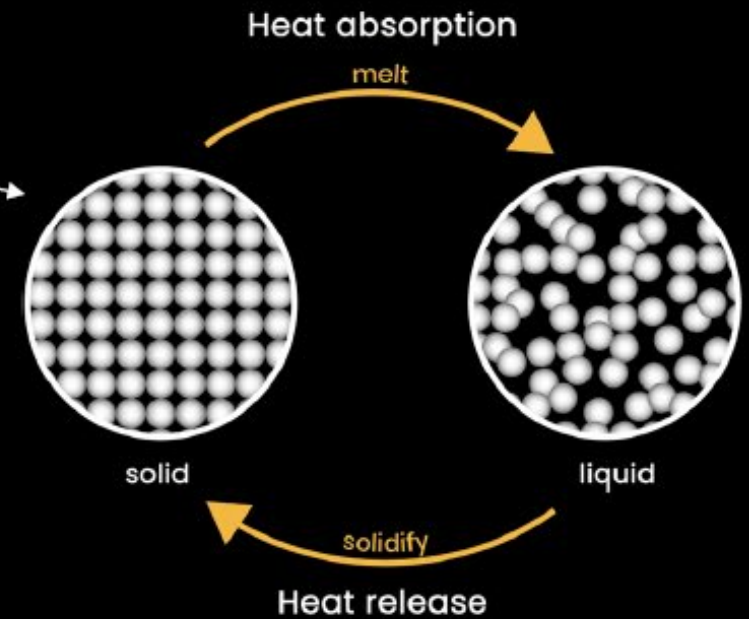
 **COWA**
COMPACT CELL

4 x more compact.

Today:

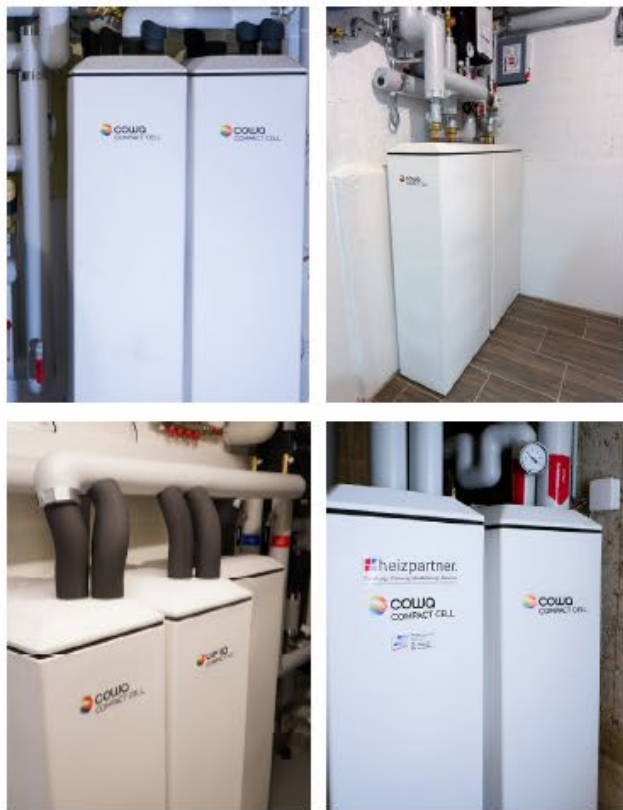


Future:



Materials based on non-toxic and cost effective **Salt Hydrates**.

Standardized Product Range



Customized Solution



Our Offering:

- **Highly compact Thermal Energy Storage for Heating Applications**
- **Standard Product & Customized Solutions.**
- **Certified and Proven Technology, >150 systems in the field.**

We seek cooperation with:

Anyone committed to decarbonizing the building sector!

Manufacturer/Reseller/Planners/Architects:



New Applications:



Manufacturing Partner (Metal Heat Exchanger, Plastic Casings)



Investors

Series A1 (2 MCHF), Closing Date 01.05.26



#EENCanHelp

Book a meeting with: Cowa Thermal Solutions AG

Simon Maranda

Co-Founder, CSO

Cowa Thermal Solutions AG

www.cowa-trs.com

simon.maranda@cowa-ts.com



een.ec.europa.eu



cowa





Pitch Presentations

Time to meet the innovators!

Pitch 4
Ecolyte (Austria)
Stefan Spirk



Paper – no PFAS

Ecolyte

Stefan Spirk
CEO



SustainableSolutionsMatch



IonPap

Replacing toxic PFAS with paper.

Supported by



European
Innovation
Council



Winner of the Innovation Radar
Prize 2025

Cleantech, Energy & Mobility

THE CHALLENGE — PFAS



WIDELY USED IN ENERGY SYSTEMS

PERSISTENT IN NATURE

LINKED TO HEALTH CONCERNS

Paper-based membrane – the IonPap technology



PERFORMANCE

>90% of PFAS-based membranes



SUSTAINABLE

Paper (>95%) and innovative polymers

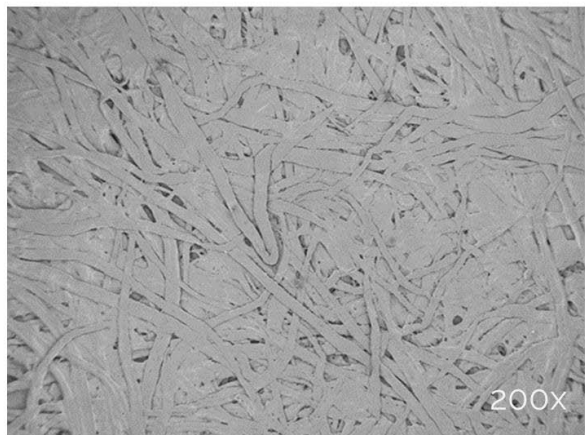


COST COMPETITIVE

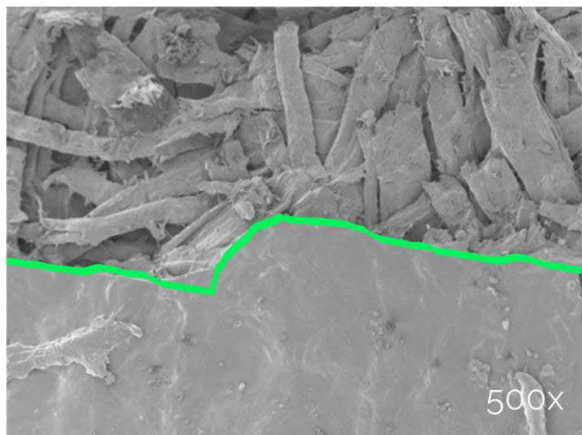
Up to 90% cheaper than current membranes

Scalable processes used already in paper industry

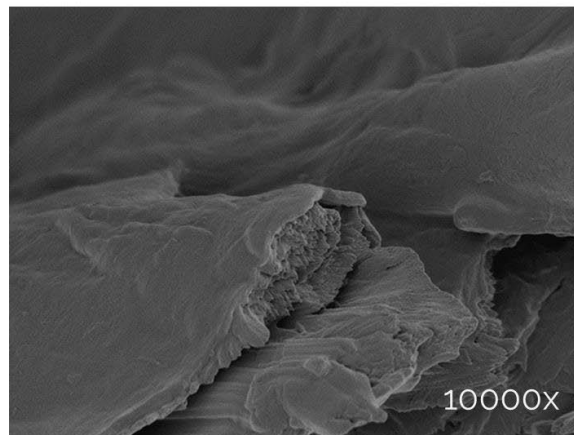
Electron Microscopy Images



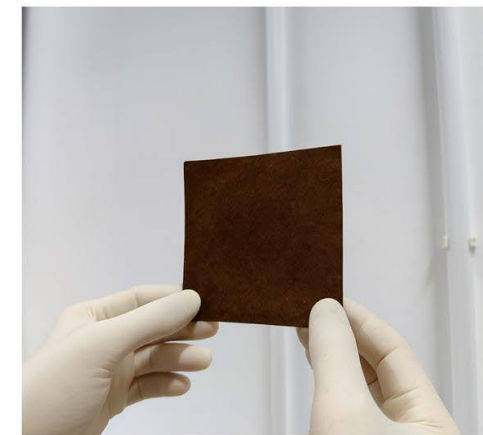
Pristine Paper



Ion Conductive Paper



Cross-section of single fibre
coated with poly-ionic liquid



Final Membrane

Fibre/paper

Impregnation

Polymerization

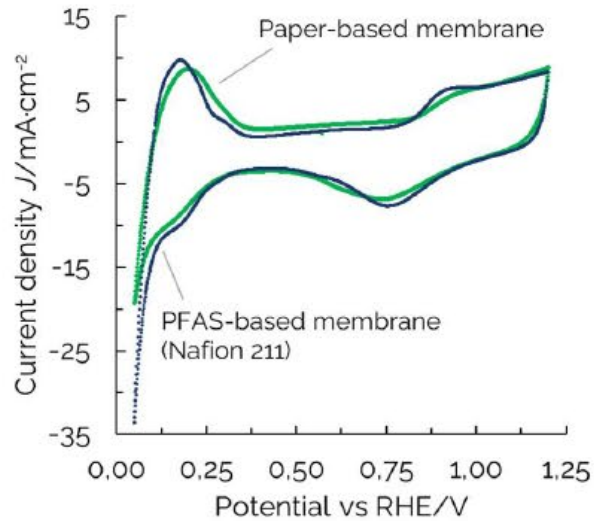
Post-finishing

Membrane

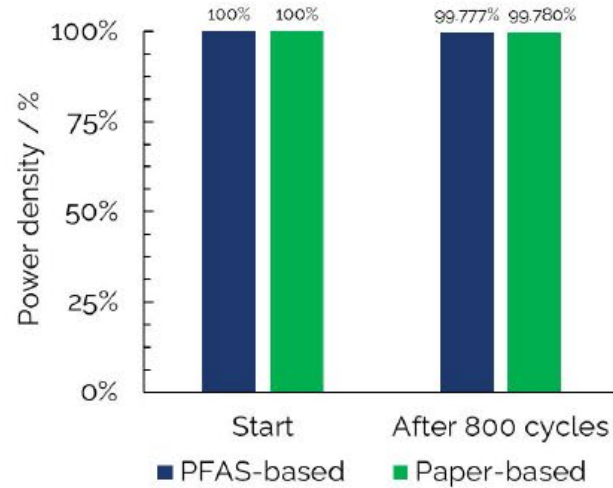
Similar performance as currently used PFAS materials

Performance Data

Current Status



Fuel cell testing in half cells



Organic flow battery
(1M H_2SO_4 , 49 days; anthraquinone)

Proven performance in small cells

Market-driven technical objectives (TOs) & KPIs:

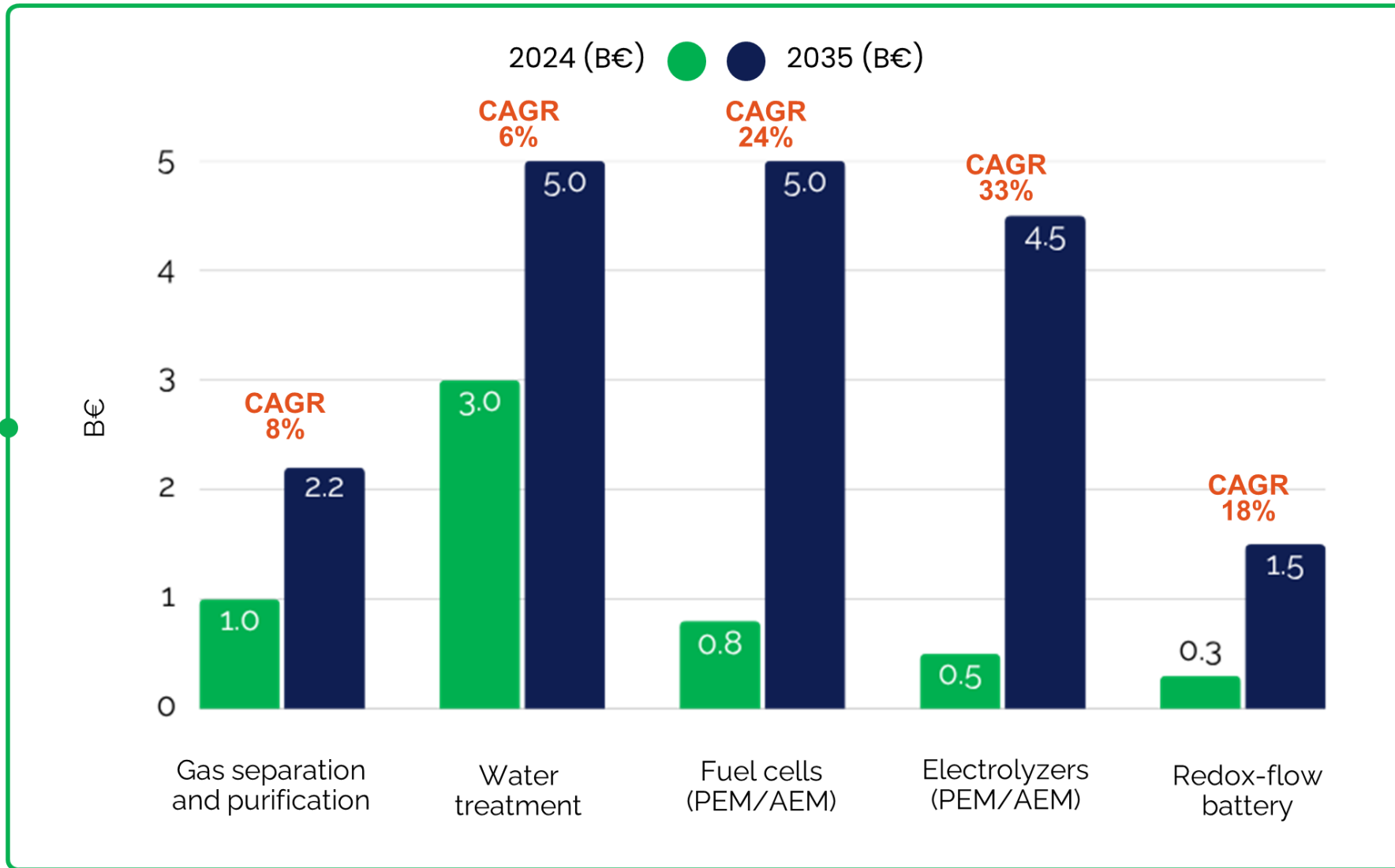
Larger & more membranes

Adaptable product parameters

Stability validation

→ Main technology tasks in EIC Transition project

Markets



Regulations

EU is seeking to ban PFAS



Market growth

Key growth across many industries



Technology breakthrough

Paper membranes are a technology jump

Key Impacts



Replacing harmful PFAS membranes in key technologies

Energy, water treatment, and gas separation



Using existing infrastructure in paper industry

Low CAPEX for later scale-up, innovative product in strong EU industry by diversification of product outlets



Adapting products by variation of paper grade or poly-ionic liquid

Product flexibility and diversity, more business opportunities



Establishing European value chains

Lower costs, more supply chain security, regional job creation



Lowering overall system costs

Faster market penetration of green technologies, job creation, better life quality



SUSTAINABLE DEVELOPMENT GOALS



Partners to develop new products and services please contact us!

#EENCanHelp

Book a meeting with: Ecolyte

Stefan Spirk

CEO

Ecolyte

Stefan.spirk@ecolyte.at



een.ec.europa.eu



Ecolyte





Pitch Presentations

Time to meet the innovators!

Pitch 5
Geyser Batteries (Finland)
Daria Giovannacci



Sustainable Fast Energy Storage



Geyser Batteries Oy

Daria Giovannacci
Head of Business Development

Introduce Your Sustainable Solution

Geyser Batteries: Sustainable Fast Energy Storage

A new generation of high-power batteries using water-based electrochemistry. Supercapacitor power with times more energy.

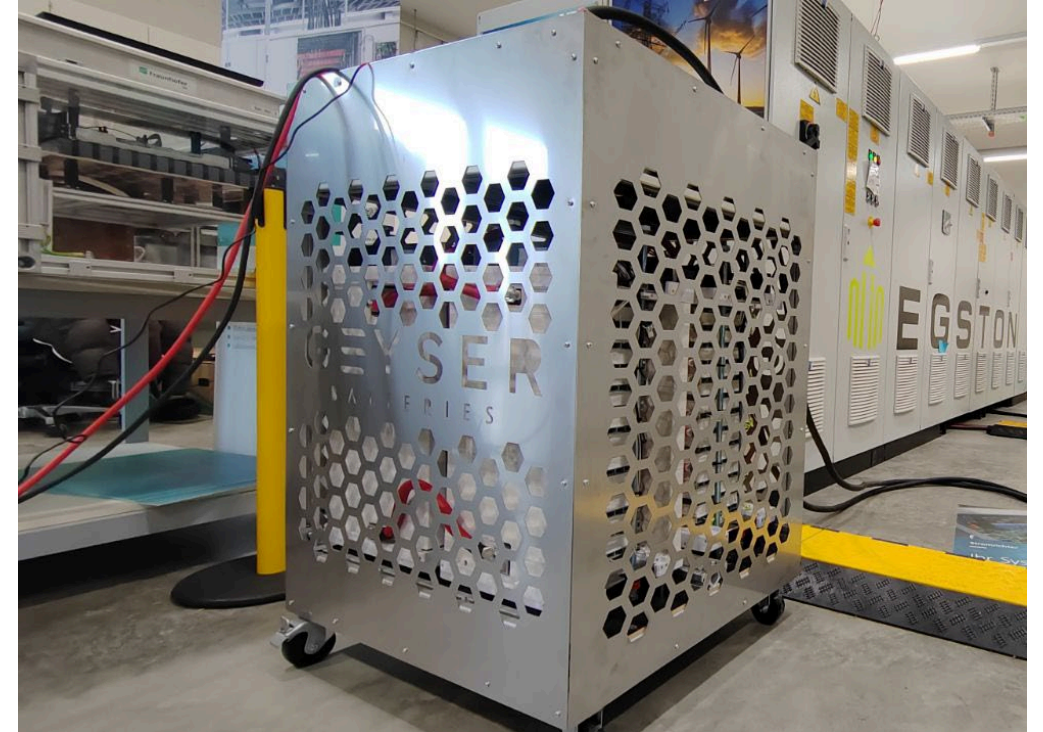
<1ms response · **3 min** full charge · up to **1M cycles** · **0% CRM**

Adaptable Across Industries

- Grid stabilization, Power-to-X, hydropower
- Heavy machinery & marine electrification
- Fast charging infrastructure for e-buses & ferries

Key Advantages

- 80% lower production cost
- Fire-safe (no thermal runaway)
- Sustainable supply chain



Technology Deep Dive

Aqueous Electrolyte

- Water as a solvent – not flammable, no thermal runaway risk
- No dry/clean rooms needed

Bipolar Cell Design

- Cells stacked by layering sheets – fewer components, higher volumetric performance
- Simplified production

Patented Electrochemistry

- 1 electrostatic + 2 electrochemical reactions (low wear, up to 5x energy of supercaps in target use-cases)
- Tolerant of diverse materials – no critical raw materials required

Result: Mass-Produced at a Fraction of the Cost

No drying, no Gigafactories needed. Modular containerised manufacturing.

Differential Value & Sustainable Impact

What Makes Us Different

- Fast storage using water-based chemistry
- 100% free of critical and conflict raw materials
- No supply chain dependency on China
- No thermal runaway – inherently fire safety
- No Gigafactories needed for production

Key Metrics

74% lower CO₂ footprint · **80%** lower cost
>40% recycled materials

Measurable Sustainable Impact

- Enables fossil-free grid stabilisation
- Renewables can cut >14 Gt GHG/year
- Circular design: recyclable materials
- Modular production deployable in EU
- Compliant with EU Battery Regulation

Recognised by Gartner as a Tech

Innovator in Energy Storage (2023)

Market/Target Audience – Who Can Apply Your Solution?

Beachhead Market: Grid & Stationary Fast Storage

- Energy utilities, hydropower operators, TSOs/DSOs needing fast-response storage

Multi-billion € market

Follow-On Market: Heavy Machinery & Marine

- OEMs and Tier-1 suppliers electrifying off-highway vehicles and marine vessels

€10B off-highway + €11.6B marine by 2030

Growth Market: Fast Charging Infrastructure

- MW-scale opportunity charging for electric buses and ferries

Growing EV charging market

TAM: €24–28 Billion by 2030 (Grid + Off-Highway + Marine + Automotive)

Cooperation Partners Along the Value Chain

Beyond customers, Geyser seeks strategic cooperation across the entire value chain:

R&D & Materials

- Carbon suppliers, separator innovators

System Integration

- Grid-scale engineering, power electronics

Manufacturing & Scaling

- Production automation

Research Consortia & Policy

- AGISTIN (Shell, RTE, CARTIF) · BEPA, EASE, EBA250

Recycling Partners

- End-of-life recycling leveraging CRM-free design – seeking ecosystem partners

Goal: Build an EU-based, China-independent supply chain and scale globally through licensing

#EENCanHelp

Book a meeting with: Geysler Batteries

Daria Giovannacci

Head of Business Development

Geysler Batteries Oy

d.giovannacci@geyslerbatteries.com



een.ec.europa.eu

GEYSER
BATTERIES





Pitch Presentations

Time to meet the innovators!

Pitch 6
reLi Energy (Germany)
Laura Laringe



Making Every Battery Cycle Count



reLi Energy

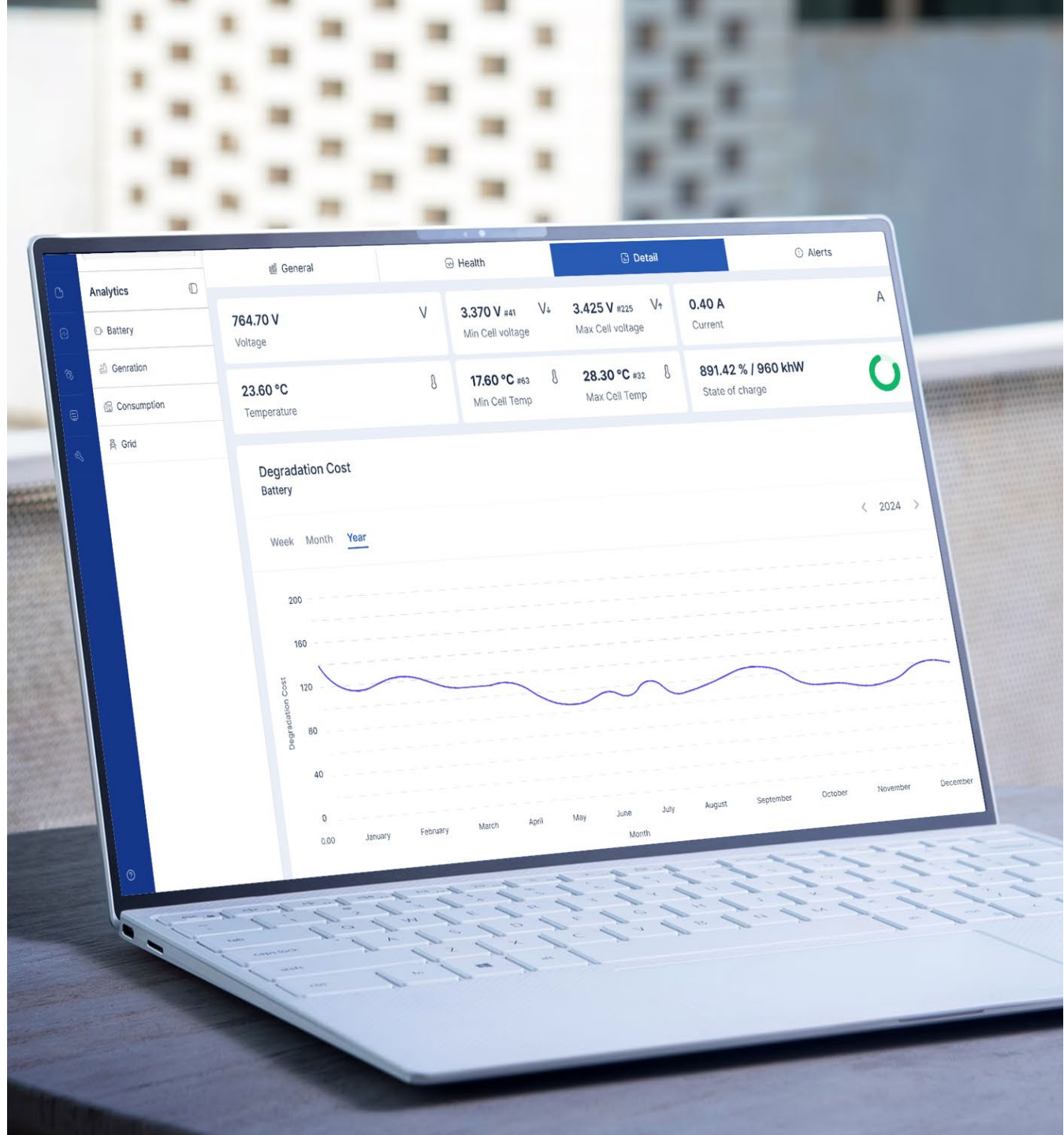
Laura Laringe
CEO

€60M Profit Loss per Project

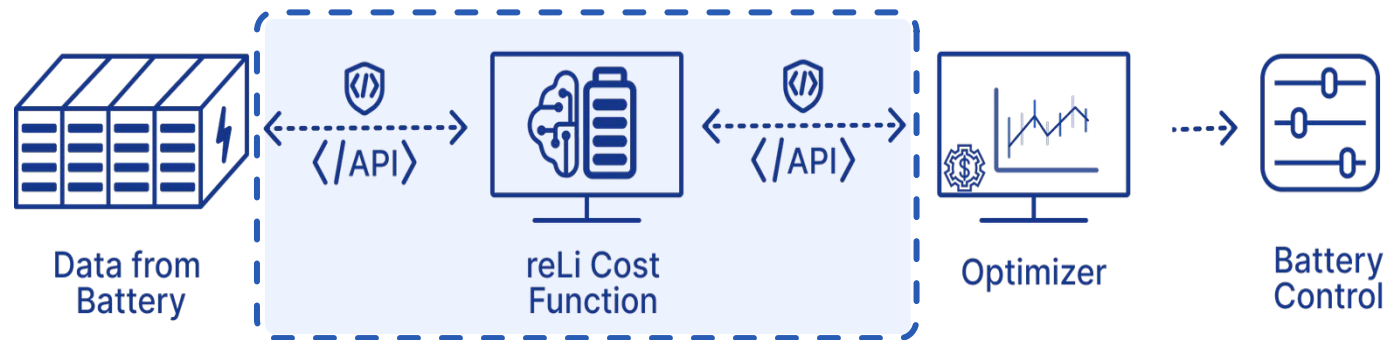
- **Degradation costs** aren't accounted for in operations
- Assets fail **earlier**, forcing costly **replacements**
- Operators **lose revenue** while efficiency falls



We show the real cost of energy storage operations, and our AI-model chooses the best one.



We quantify battery degradation into monetary terms resulting in efficient battery management



- Calculates real-time degradation cost in €/MWh.
- Balances short-term revenue against long-term profits & health.
- Helps energy operators unlock higher revenues, extend asset lifetimes, and make better investment decisions

Current Tools



Reactive Monitoring

3 yr

longer life time

€5M

extra profits/year

300 t

Waste Avoided



Proactive Optimization

Key Customer Segment

Primary



Energy Storage Operators

- European Operators of **grid-scale energy storage**
- Expansion to **US** in 2027

Partners



Energy Traders

- Partners from 2027 to **scale**
- Trading **software** providers to integrate our software

We're Looking for Partners who can Support us

Energy Traders / Optimizers

Researchers on Energy Markets

Energy Investors (BAs - VCs)

#EENCanHelp

Book a meeting with: reLi Energy

Laura Laringe
CEO
reLi Energy GmbH
laura.laringe@relienergy.de



een.ec.europa.eu

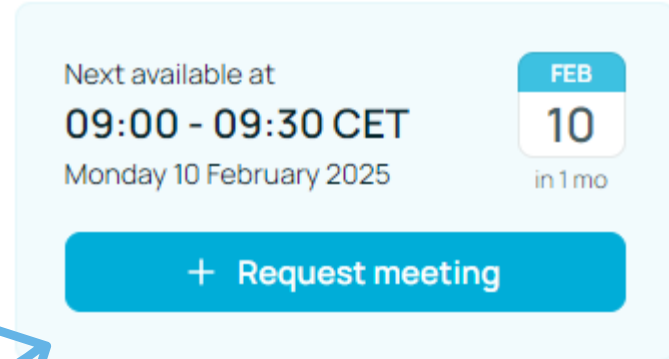




Closing Remarks

A big thank you to all pitchers and attendees!
We appreciate your participation today.

If you'd like to connect with any of the pitching companies, please use the matchmaking tool to **book a meeting!**

A snippet of a meeting booking interface. It shows the text "Next available at" followed by the time "09:00 - 09:30 CET" and the date "Monday 10 February 2025". To the right is a calendar icon for "FEB" with the number "10" and "in 1 mo" below it. At the bottom is a blue button with a white plus sign and the text "Request meeting". A blue arrow points from the text "book a meeting!" in the previous block to this interface snippet.

Next available at
09:00 - 09:30 CET
Monday 10 February 2025

FEB
10
in 1 mo

+ Request meeting

Need support? **Enterprise Europe Network is here to help!**

Reach out to your local Network partner:

<https://een.ec.europa.eu/local-contact-points>

#EENCanHelp

Thank you!

Viktoria Fink

Enterprise Europe Network | Co-Chair TG Sustainability
Standortagentur Tirol (Austria)
viktoria.fink@standort-tirol.at



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STANDORTAGENTUR
TIROL

