

Cleantech Capital Day 2022

Teraloop

Dr. Meri Lundahl

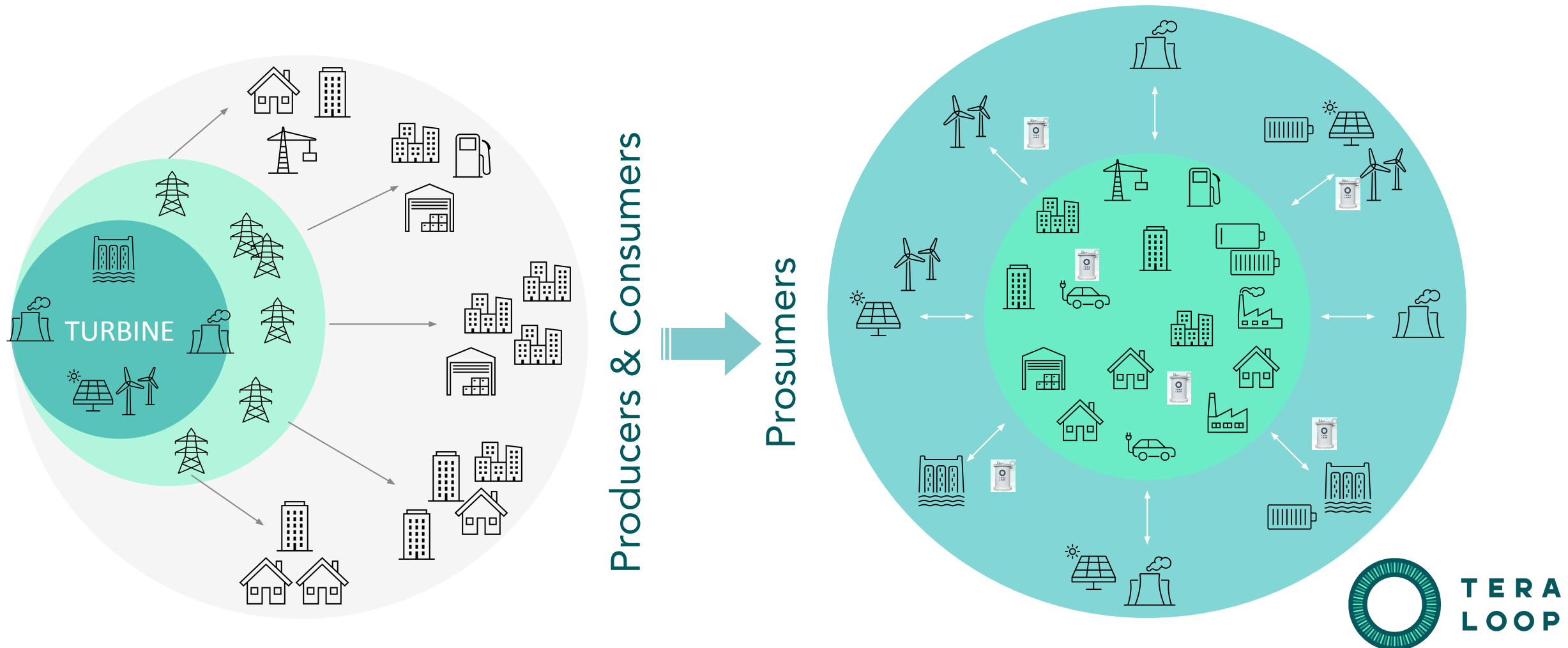


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The energy transition needs power management

The transition from centralised to decentralised energy systems generates needs for additional flexibility in the energy grid



Teraloop's solution



Scalability

- Hubless rotor to minimize the radial stress
- Scalable to different sizes / applications



Sustainability

- Recyclable, non-hazardous materials
- Decreases impacts of batteries

P250-250 kW



- Minimal need for area, even 1 MW/m²
- Low cost of ownership in applications with intense charge cycling



Effectiveness



IP Strategy

- 3 patents granted, growing portfolio
- Other IP protected (e.g. trademarks)



Growing, multinational team of committed, enthusiastic, experienced engineers, business experts



Antonio Capristo
Chief Executive Officer
4 startups on 4 continents



Edward Ridgway Watt
Chief Development Officer
25-year expert in deeptech & electrical engineering



Angelo Prete
Chairman of the Board
20 years of experience in renewable energy



Philippe Pépin
Chief Operations Officer
Co - Founder, IP lawyer



Markus Merilä
Chief Engineer
Multidisciplinary engineer



Meri Lundahl
Chief Sustainability Officer
PhD in Material Engineering



Target market

Operators of distributed energy systems



Battery co-location

Increase the battery's lifetime and utilisation by >20%



Renewables co-location

Participate in grid flexibility markets and regulate the output



Industrial Processes

Avoid outages and voltage sags until backup generation activated

Total addressable market >66 B€
Serviceable addressable market >20 B€
Serviceable obtainable market >300 M€



Business model

Device assembly and sales with distribution partners to customers

Examples on pilot customers (deployment in 2023):

- Virtual power plant operator
- Utility
- Industrial plant

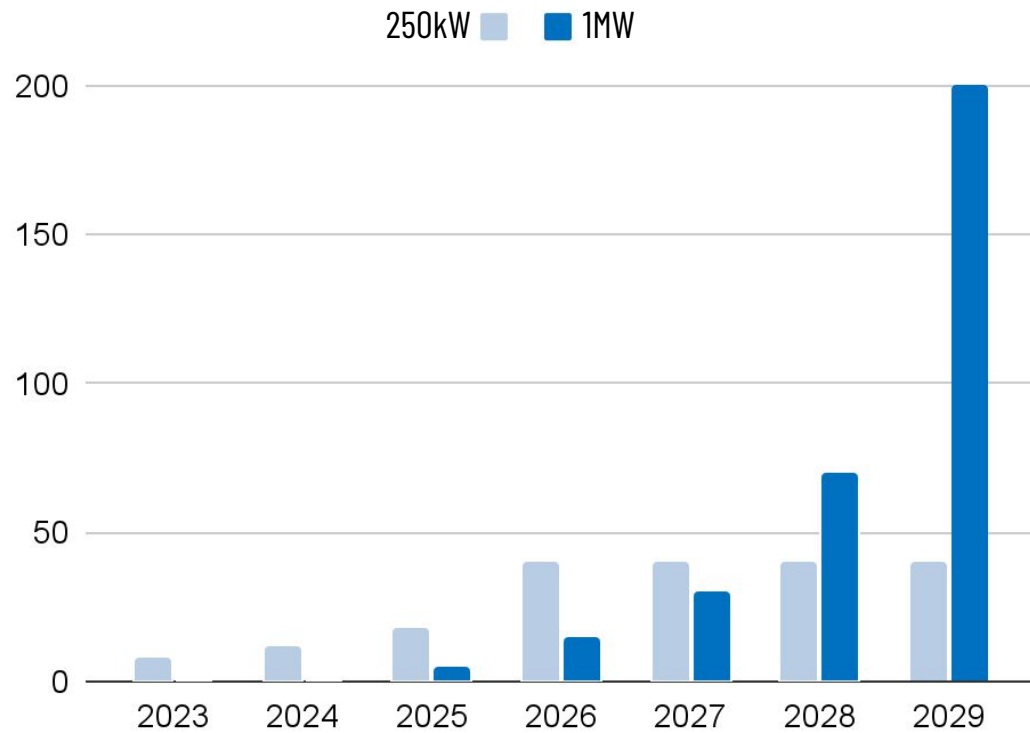
Clients make/save money through

- Decreased need for battery replacements
- Ancillary services

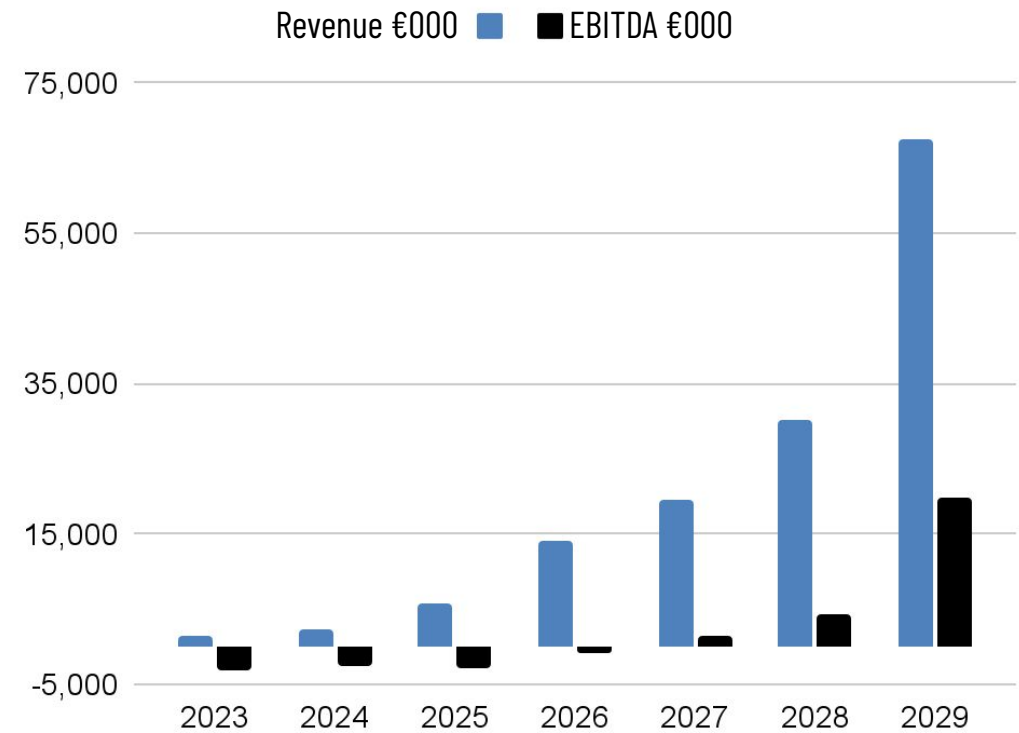


Sales and revenue projections

Unit sales from pipeline



Revenues from obtainable market



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Opening series B financing round in 2023
Looking forward to changing the energy system together



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Meri Lundahl

meri.lundahl@teraloop.com

+358 40 526 0787

<https://www.teraloop.com>



Annex

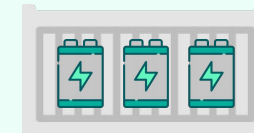


Adding significant value

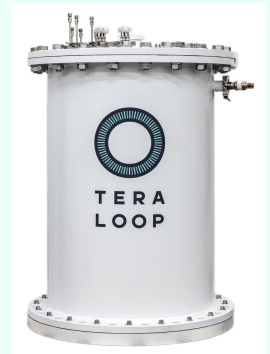
Either as standalone, or co-located with batteries

	Lithium Batteries	Flywheels	Teraloop
Scalability	Modular	Limited by radial stress Mechanical fatigue	Hubless design Modular
Effectiveness	30 - 185 kW / m2 High O&M due to heating	< 200 kW / m2 Medium O&M	1 MW / m2 Low O&M
Sustainability	Requires critical raw materials (Co, Li) Not recyclable	Long lifetime High recyclability	Long lifetime High recyclability New rotor materials
Total Cost	High	Medium	Low

Lithium batteries ideal for energy storage



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Colocation with Teraloop's hubless flywheel extends battery lifetime