

The VTT logo consists of the letters 'VTT' in a bold, white, sans-serif font, centered within a solid black square. The background of the slide features a repeating geometric pattern of interlocking hexagons in orange, blue, black, and light grey.

VTT

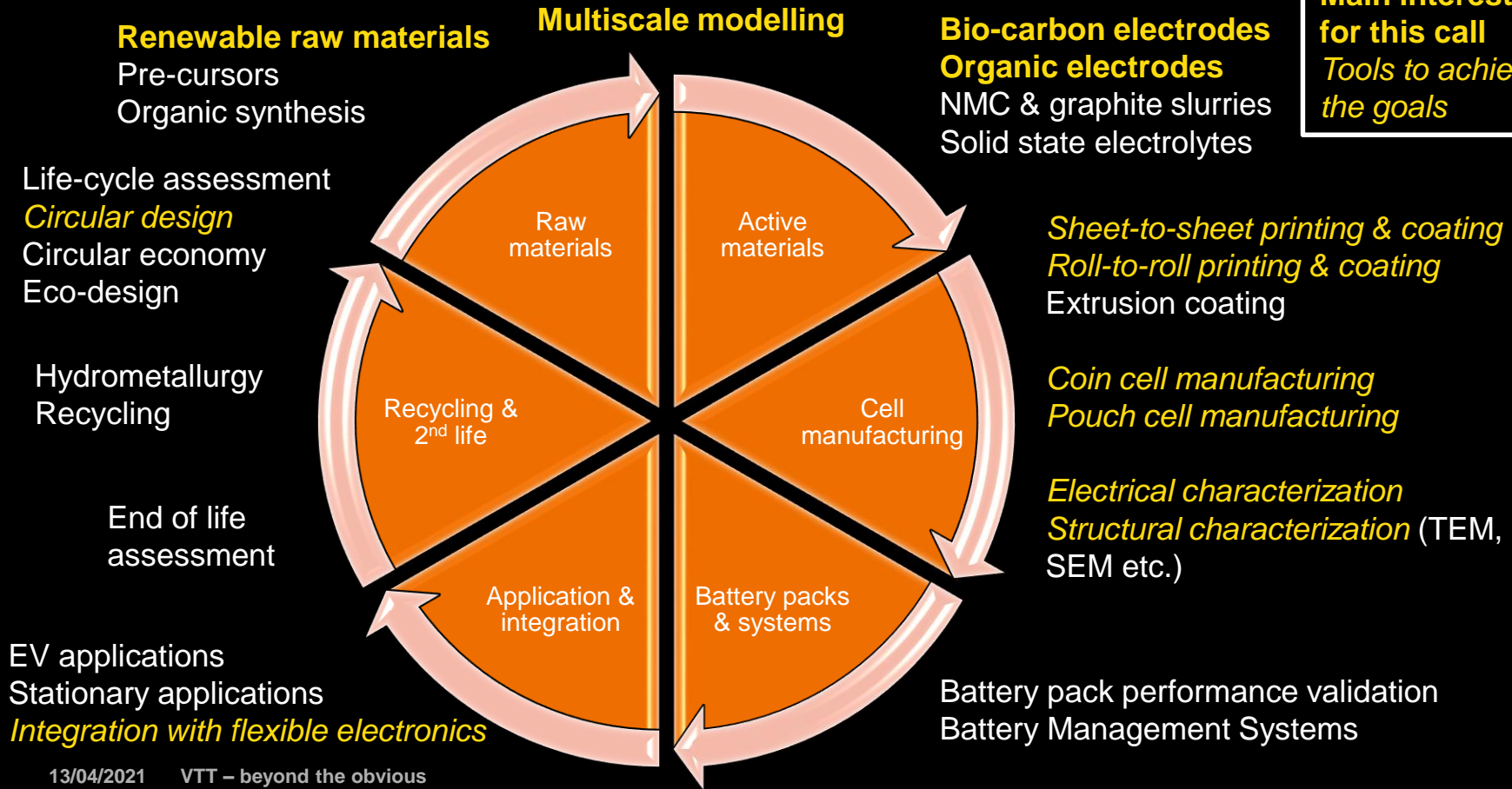
M.Era-Net pitch: VTT Technical Research Centre of Finland

Marja Vilkman & the battery team

13/04/2021 VTT – beyond the obvious

VTT can support research and industry within the whole battery value chain, in a circular economy fashion

Main interests for this call
Tools to achieve the goals

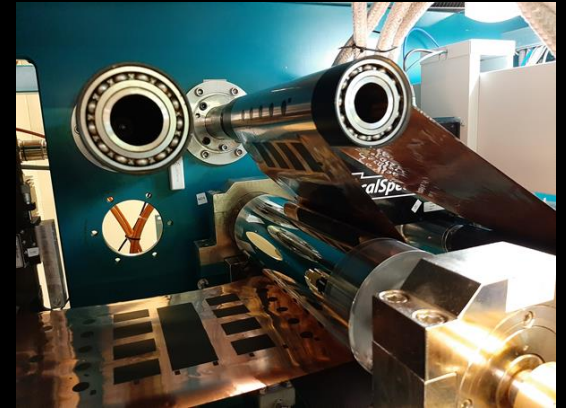


Examples of R2R processing

Rotary screen printing



R2R calendaring



Battery assembly

Coin & pouch cell assembly under argon atmosphere

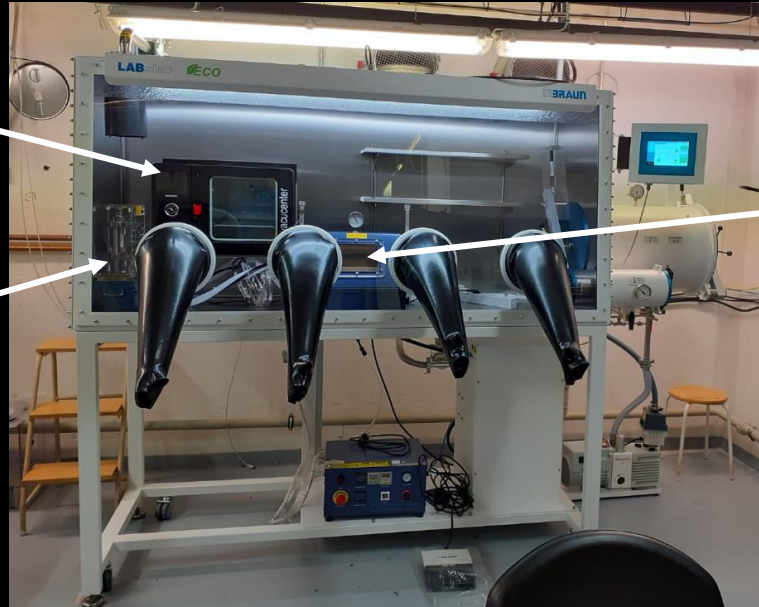
Vacuum oven



Coin cell press



Ar glove box



Vacuum sealing machine for pouch cells



Our main topics of interest

Targeting TRL 1-4

A FLEXIBLE BATTERY
FROM RENEWABLE
MATERIALS

Topic 1: Modelling for materials engineering, processing, properties and durability

- Deep learning in battery materials design and development, property assessment and lifetime evaluation.

Topic 3: High performance composites

- Functional (Bio)polymers in energy and environment applications.

Topic 4: Functional materials

- Next generation materials for batteries: solid state batteries, and materials and systems enabling high-power and/or high-energy, long-cycle-life operation, recyclable and biodegradable battery materials, bio-sourced materials, materials for flexible batteries, materials for structural batteries.
- Dynamic, self-healing smart materials to enable longer service lifetime like detecting defective components and local spots to be repaired in batteries and triggering self-healing processes.

bey⁰nd

the obvious

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