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LiFeSiZE's Role in the Development of LIB Production in Sweden

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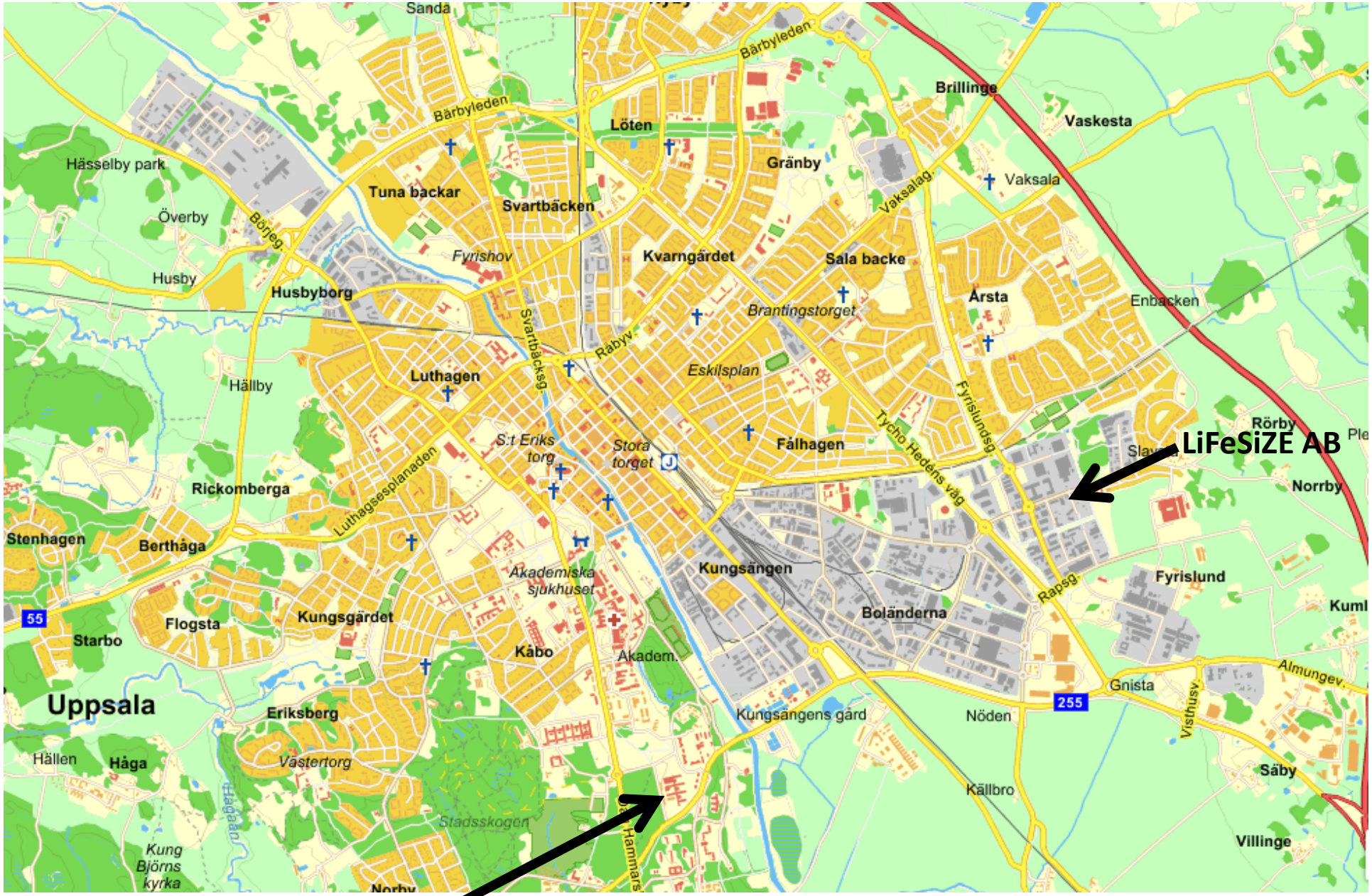
Energimyndigheten



(a spin-off company from ÅABC/UU)

So how can LiFeSiZE contribute to the battery-future of Sweden ?

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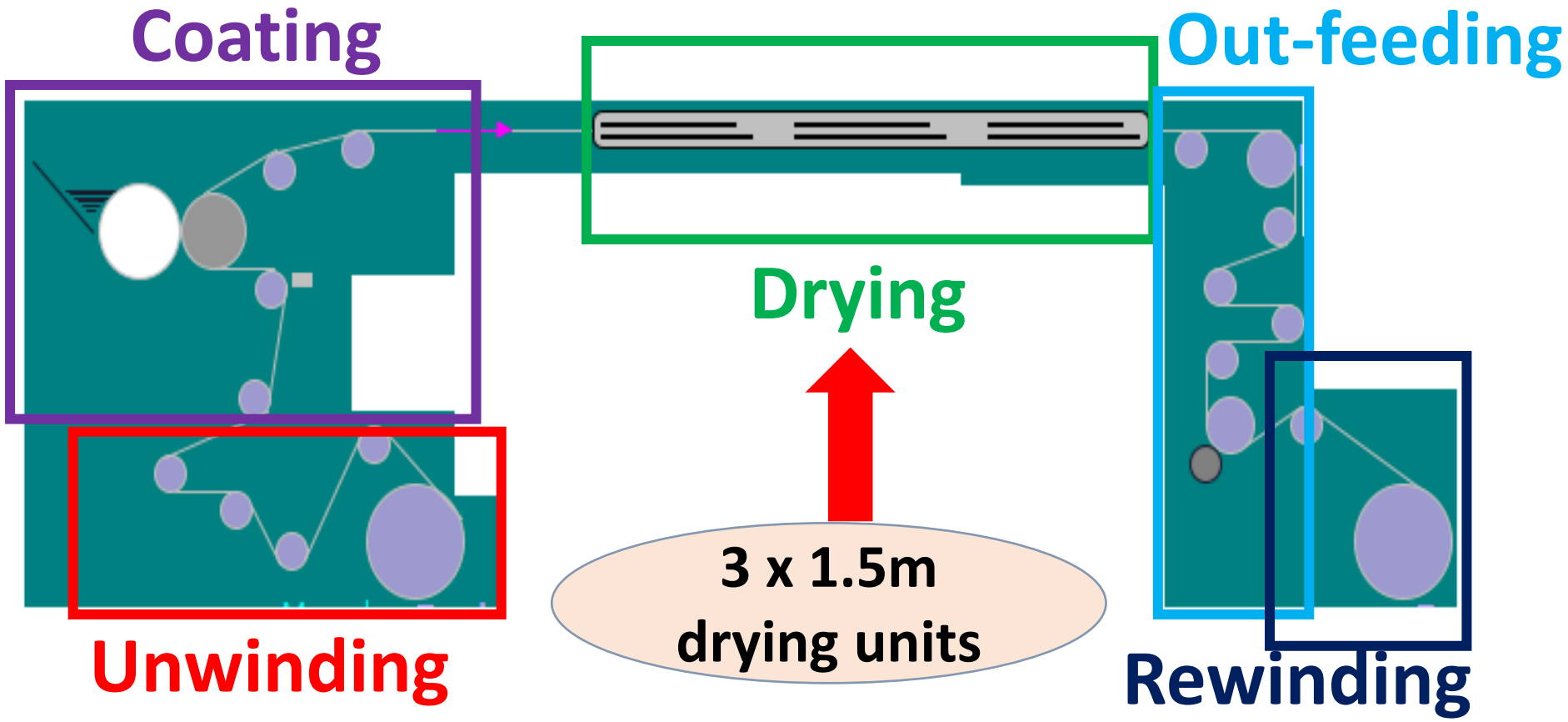
Very simply – by making LIB prototypes . . .

Overall view of the LIB electrode coater-line at LiFeSiZE

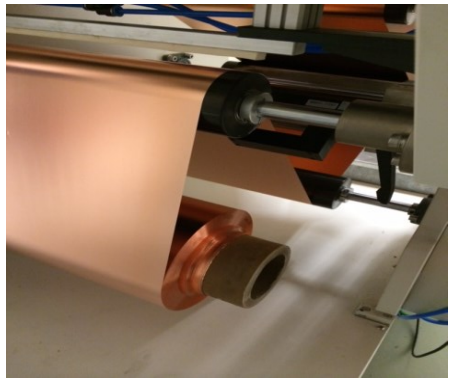
(delfinansierat av Batterifonden)

Operational units of the electrode coater-line *(schematic)*



(single- and double-sided coatings possible)

Operational units of the electrode coater-line

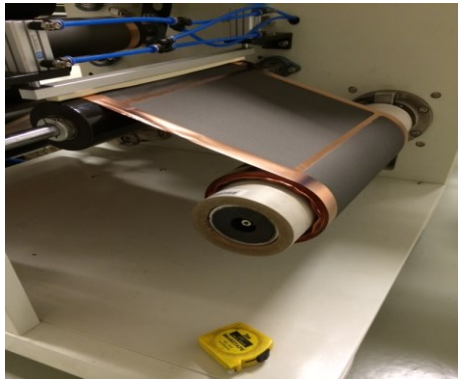


Unwinding

Coating

Drying

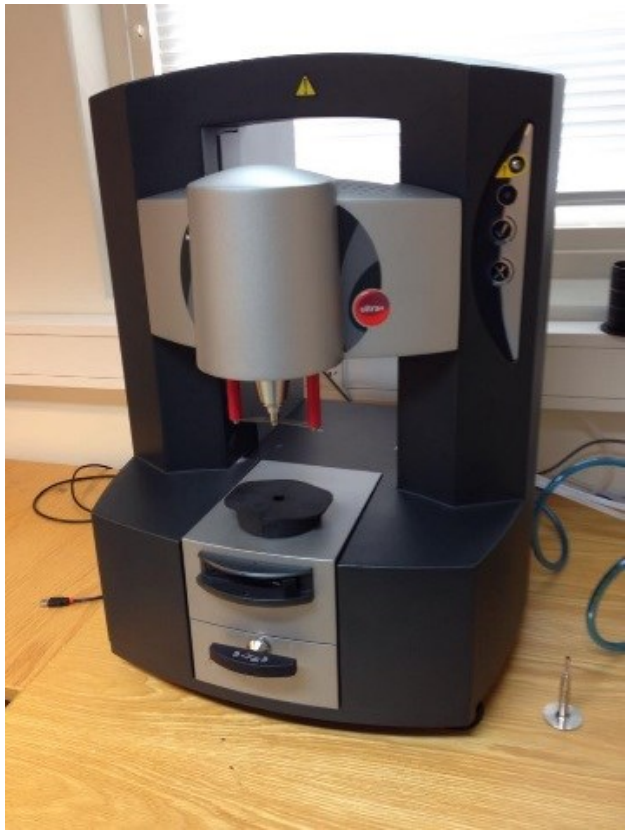
Out-feeding



Rewinding

Some of our other auxilliary equipment . . .

High-power mixer
(slurry preparation)



Rheometer
(slurry optimization)

Cell-testing equipment

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Our coating-line is to be extended to a prototype-cell fabrication facility by the end of 2016 . . . . incl. ”hot-calendering”

(with support from Energimyndigheten)

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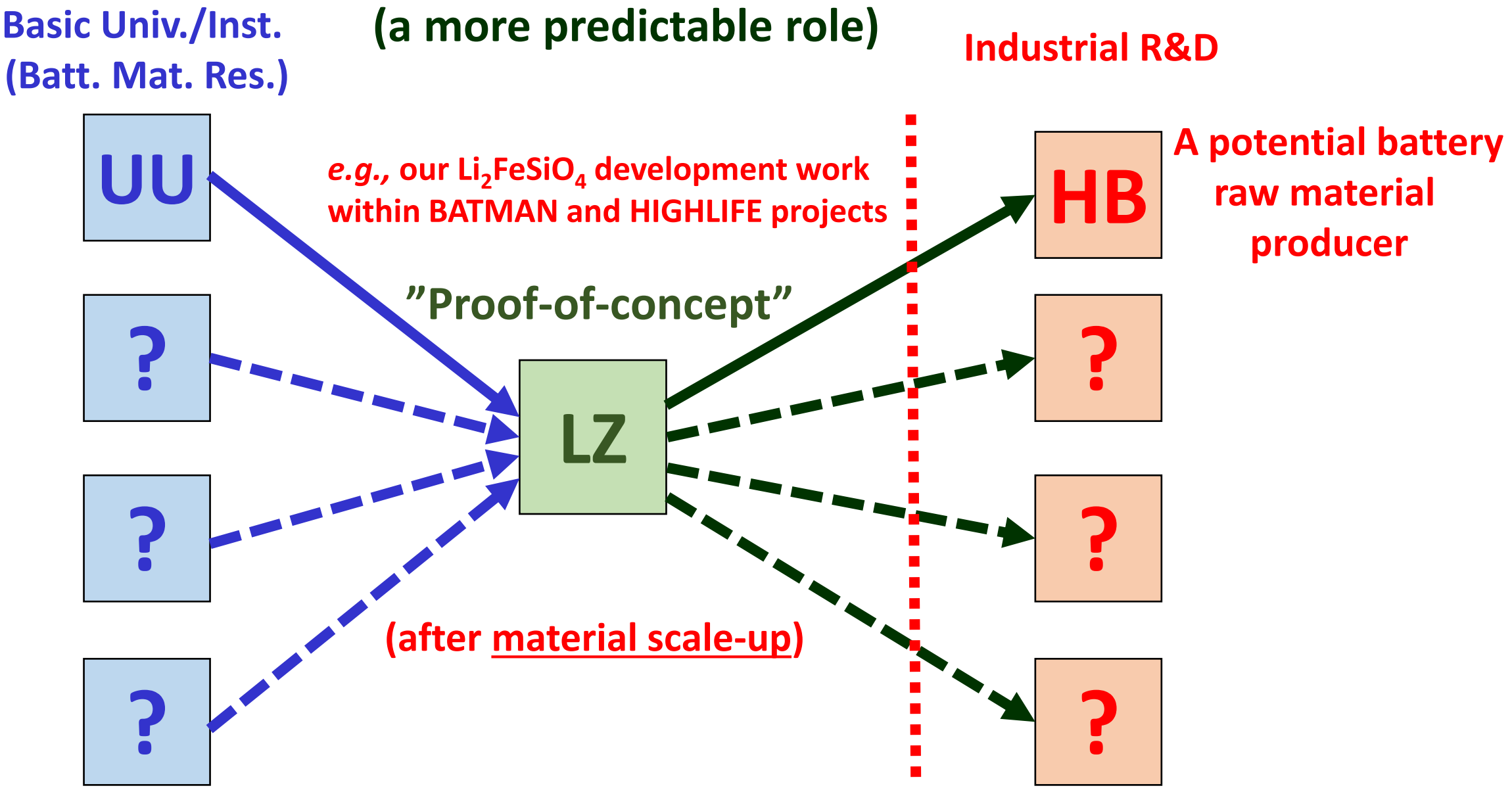
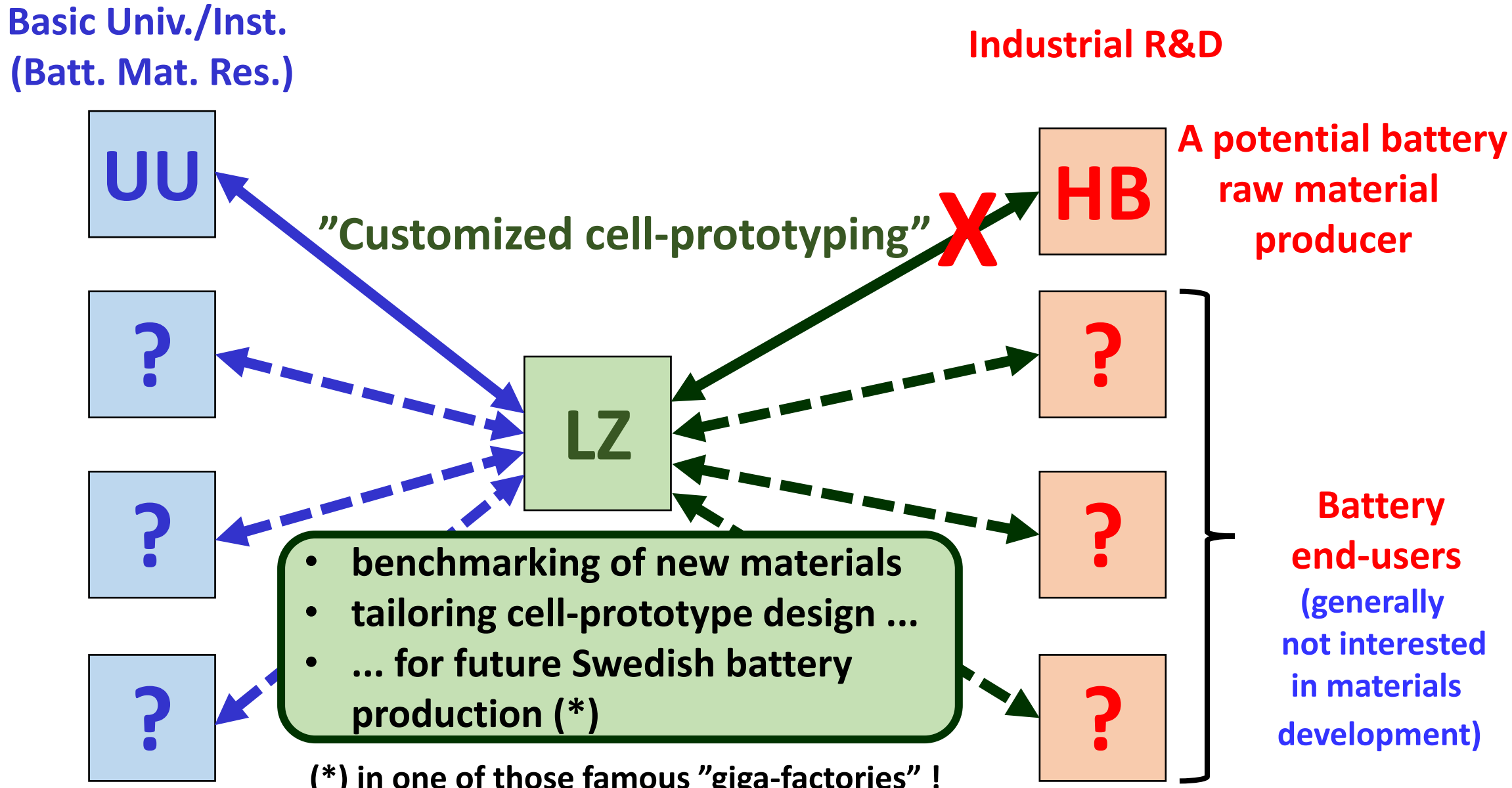
LiFeSiZE's role - from a materials research perspective:



LiFeSiZE's role – from a battery end-user perspective:



The future role for LiFeSiZE in basic battery research . . .

The production of industrial quality, " form-factor prototyped" test-cells with full control over novel state-of-the-art cell ingredients and design.

Advantages to the battery end-user community:

- **Benchmarking of new battery concepts using state-of-the-art materials *vs.* standard materials.** ***(for aging, abuse, etc. testing)***
- **Tailoring cell-design to a desired performance (cost, P-, E-density, safety, future regulations, *etc.*)**

……

- **On a longer time-scale: help promote Swedish battery production in exploiting novel LIB (and other) battery technologies !**

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As a ”basic researcher” . . .

WHEN should you consider an industrial ”scale-up” process?

- when you know you can scale up your synthesis from a lab-scale.
- when the cost of the raw materials is not prohibitively high.
- when your ”new” material fulfils a genuine market need.

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What electrode coatings can we assist with?

- Li-/Na-ion batteries (“LIBs” and “NIBs”)
- Supercaps
- “Li-S” (?)
- “Li-air” (?)
- Other . . . (?)

What do you need before making a test coating?

- Preferably *ca.* 50g of “active” material for one(1) coating test – but at least 1 kg for slurry optimization.
- Some idea of your desired slurry components/proportions.
- Some milling/slurry-mixing experience of the material.
- Your preferred substrate (we can provide Al-/Cu-/”plastic”-foils).

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Welcome!