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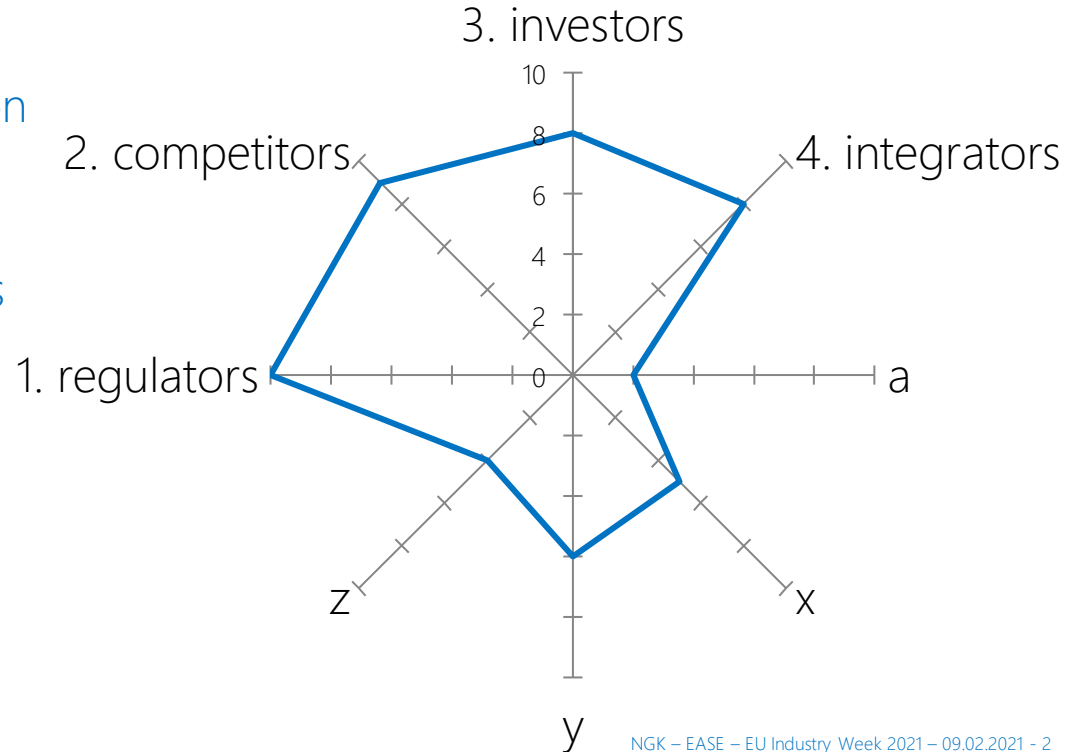


## Challenges for battery manufacturers

*webinar developing the batteries of the future: actions to take today*  
Europe Association for Storage of Energy (EASE)  
EU Industry Week 2021  
February 9<sup>th</sup>, 2021

# new contenders for batteries in the energy storage sector

- focus on EU market
- focus on manufacturers of non lithium-ion batteries (new contenders)
- focus on the key stakeholders with the highest power
  - regulators
  - competitors
  - investors
  - integrators



# 1. regulation is not fully technology agnostic example of recycling

- the EU regulation put the responsibility of recycling on manufacturers
- it is a burden for new contenders, that LIB manufacturers don't face anymore
  - need to develop the full recycling supply chain (it already exists for LIB)
  - if material are cheap, abundant and relatively environmental friendly, recycled batteries have no value ⇒ recycling is a pure cost (not a good start to develop a new market)
  - clients ask for bank guarantee (to cover risk of bankruptcy within 10-20 years)

to support innovation, in particular in non-LIB technologies,  
additional measure (mutualisation?) should be put in place, at least at the beginning  
else new contenders are left alone and have to bear all recycling costs  
(not only the for the recycling itself, but also to put the full supply chain in place)

## 2. competition and market

- energy storage as a service means that the sector is in practice an energy trading market
- capacity market could help but regulation practically prohibits long duration contracts
- there is no hope to find a niche market for a new technology and the market is not segmented between short and long duration storage

in practice, the EU energy storage market is a pure energy trading one

- total cost of ownership being equal, such market favours cheaper short life batteries vs. more expensive but long life batteries  
⇒ is it the type of batteries we want to produce in the EU ?

### 3. investments

- lithium-ion battery market looks so bright, in particular for EV, that investing in another technology could look not such a wise decision
- new technologies providers and their investors must
  - prove that they will beat LIB on price on the long term (the famous target of USD 50 to 100/kWh for full DC system)
  - beat LIB on price on day 1 of commercial production
    - attain expected low long term costs asap
    - rapidly scale up the production to capitalise on economies of scale
    - be ready to sacrifice the margin at the beginning?
  - be quick (tomorrow's market price is lower than today's one)
  - be ready to reinvest over years – R&D takes years + continuous development

## 4. technology agnosticism of integrators, good or bad?

- when integrators say that they are technology agnostic, it means that they are free to move to another battery supplier, just for the sake of their own interest
- they are perfectly right doing so, they must do so, it would be an error not to do so
- but it means that battery manufacturers cannot count on stable partnership we see it now with the move from NMC to LFP
- it is therefore an opportunity for new contenders (integrators can in principle move quickly from one technology to another one)
- at the main condition that their battery is cheaper than LIB

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thank you for your attention

gauthier dupont  
gdupont@ngk-e.de