

Batteries are central in a net zero world but have high carbon footprints.

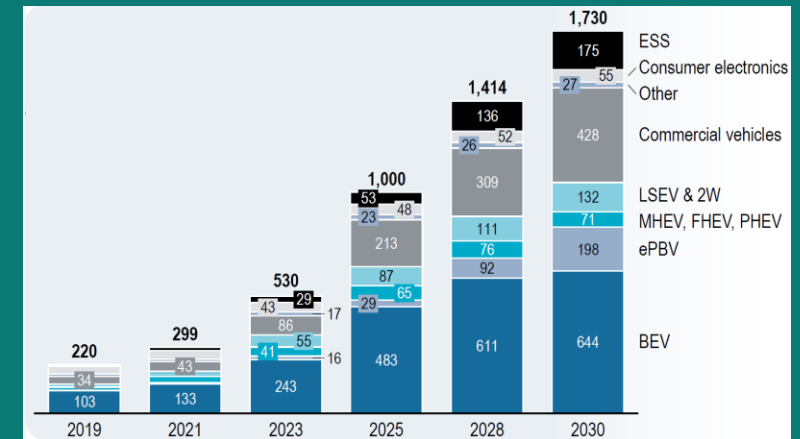
Lithium-ion batteries (LIB) are a platform technology instrumental in numerous low-carbon applications.



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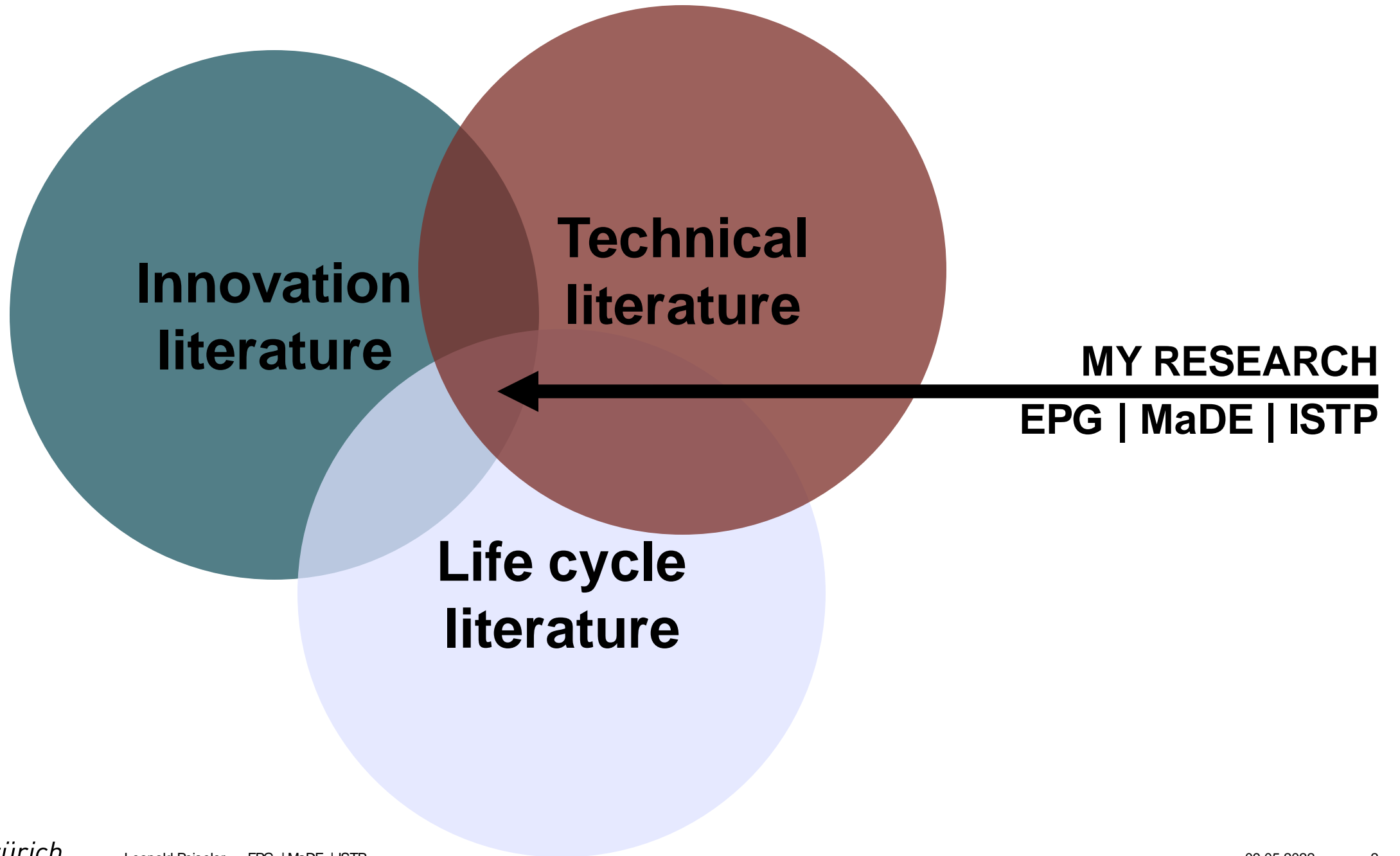


The LIB industry is poised for significant growth (CAGR > 20 % until 2030),

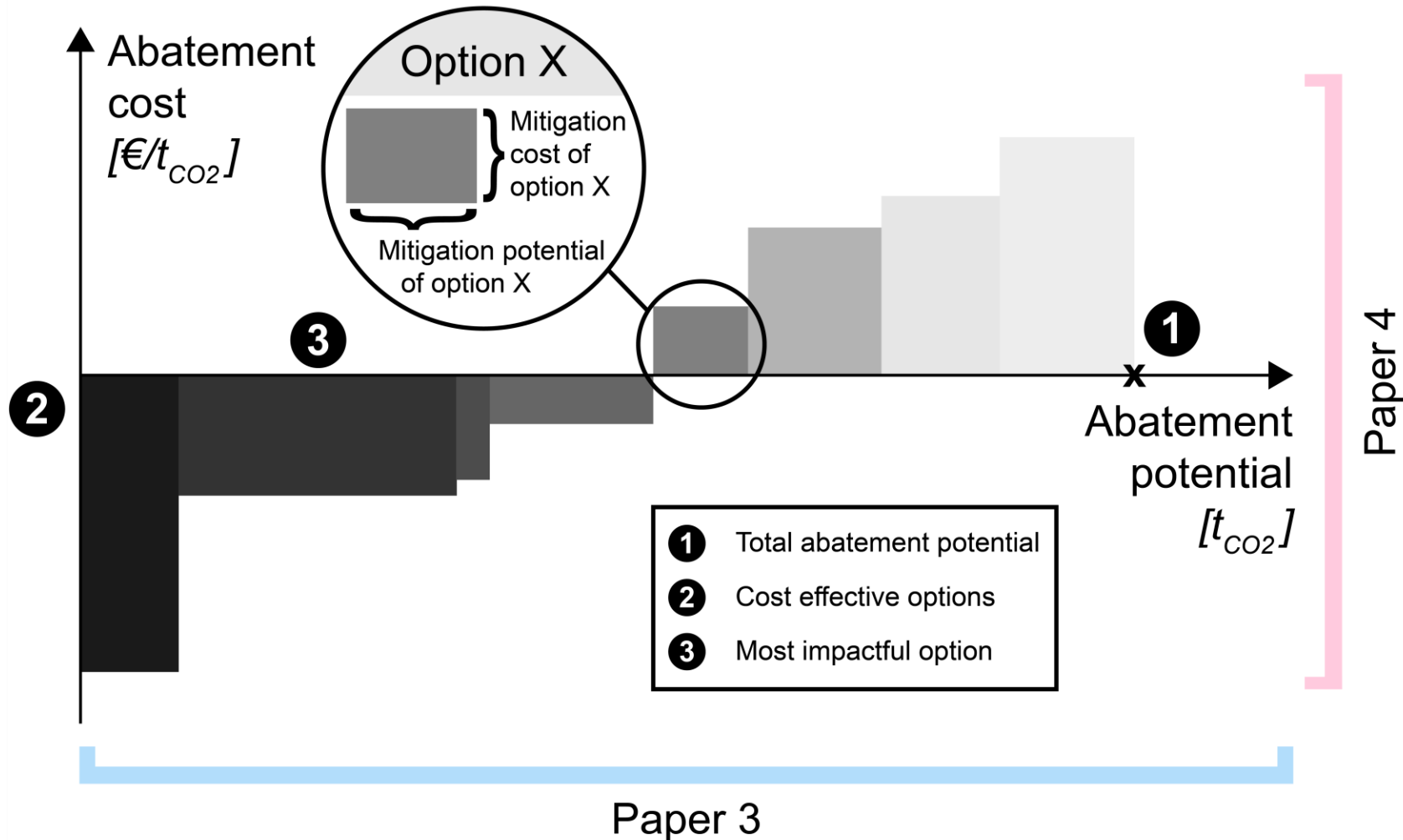


and has been identified as strategically important by the European Commission.

Roland Berger. (2020). *Lithium-Ion batteries New Business Models Emerging*. Roland Berger.



Marginal abatement cost (MAC) curves are a powerful tool to communicate abatement potentials and costs for LIB.



$$AC_{option} = \frac{BC_{option} - BC_{baseline}}{CE_{baseline} - CE_{option}}$$

Techno-economic model

Paper 3

AC: abatement cost
 BC: battery cost
 CE: carbon emission