How to Pick and Start Green Breakthrough Technologies for the Energy Transition: the case of Solid State Batteries

The **Starting Point**
- The initial difference between premium EVs (requiring high energy density and low charging times) and budget EVs (requiring acceptable prices and good resale value) is slowly disappearing with next gen EVs requiring all 4 KPIs (and Safety of course).
- Prologium Lithium Ceramic Batteries can offer higher safety than LFP and greater energy density by volume/weight than NCM (360Wh/kg; 820Wh/L). They also offer Ultra-fast charging capability (9 mins 5-80%, 5 mins 5-60%) and Reasonable cost (BOM: 97% of NCM LIB, manufacturing cost: 85% of LIB@15-20GWh).
- By returning to modular battery pack designs, it improves maintenance & allows for recycling at the inlay/cell level while facilitating recovery of critical materials

The **Key Challenges**
- Mass production (FPY, Yield ratio , consistency)
- Cost (BOM cost, Manufacturing cost)
- Access to Capital market

The **Strategic Plus**
- New Business model (Sell inlays only; Cooperate with cell makers to reduce CAPEX and expand the market share as soon as possible)
- Better Value of Recycled Content

The **Must Do**
- You need to build factories close to market and with local supply chain.
- Cash is critical; keep on increasing cash reserve for expansion.

The **Must Do**
- Capacity expansion should be flexible depending on the market/ and the learning curve of mass production.