



graphenix development inc.
ENABLING FAST ENERGY.

100% Silicon Anode: Scalable, High Performing Batteries – for EVs and beyond

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Batteries today – Complex, growing market

Batteries are the key to combating climate change – EVs, Renewable energy backup, Grid storage

~~\$150~~ Billion Li-ion market today

\$ **450** Billion Li-ion market by 2030
electrodes are >30% of the market

Now: Silicon / Carbon Mix

- Pro: Available, and at scale
- Con: Limits to Silicon % with stability, safety, performance

Next: Silicon Dominant, Li Metal, Solid State?

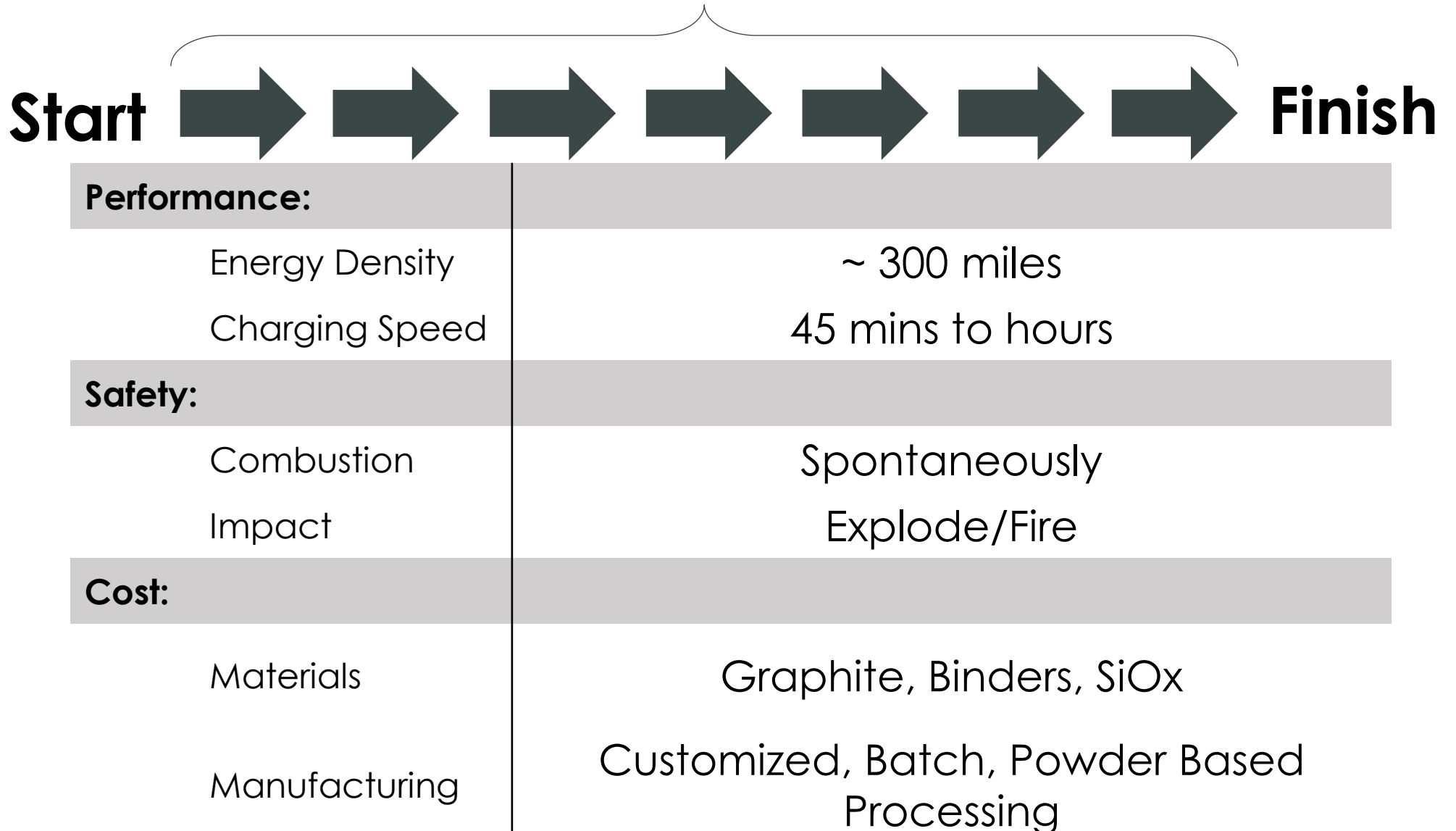
Li-metal: High energy, but expensive and dangerous

Silicon: Abundant and fast charging, but scaling issues

Solid State: Promising, but new manufacturing needed, yield and cost concerns

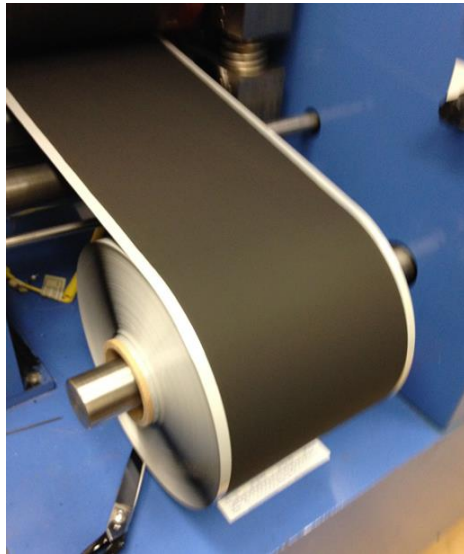
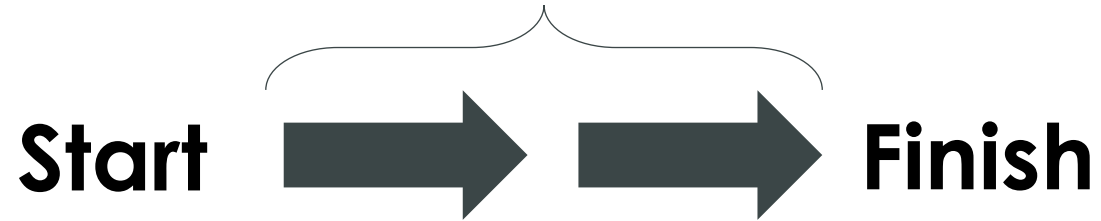
Batteries today – Graphite anode

>7 Steps for Anode



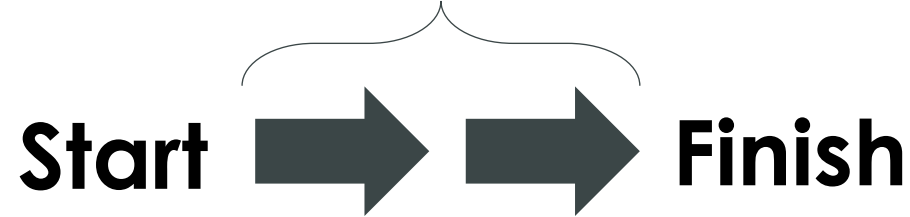
Scalable electrodes – 100% silicon anode

2 Steps instead of >7 steps



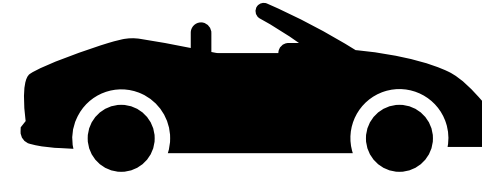
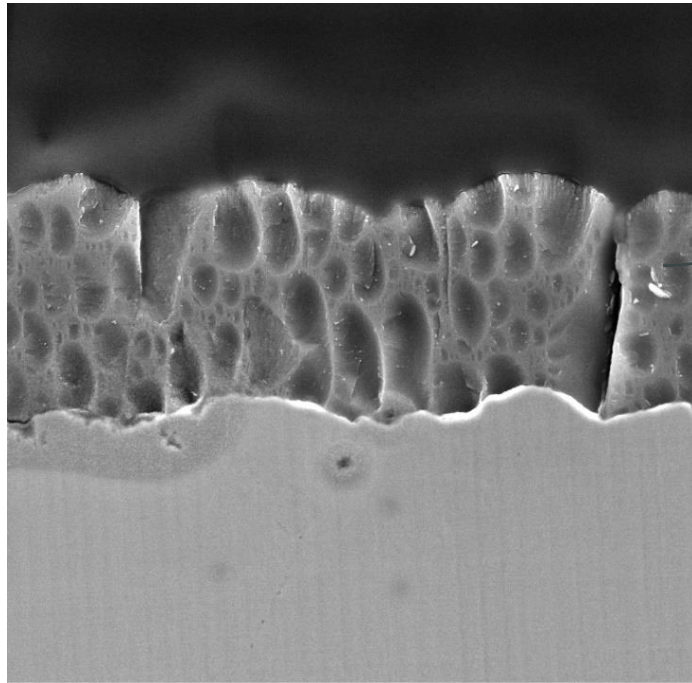
>50% Capex Reduction

2 Step – 100% Silicon Anode



Performance:	
Energy Density	400 miles
Charging Speed	15 minute >250 mile
Safety:	
Combustion	High Temp Anode
Impact	Replace cells
Cost:	
Materials	Silicon, Copper
Manufacturing	Streamlined, Continuous, Gas to Foil

Approach Li-ion energy apex



Option 1:

300 miles → 400 miles

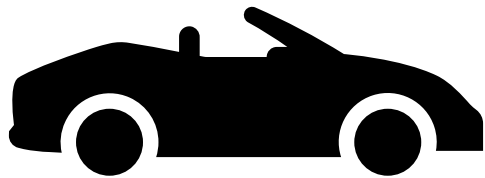
Option 2:

300 miles with 30% lighter battery

**> 30% Energy Density than
current EV batteries**

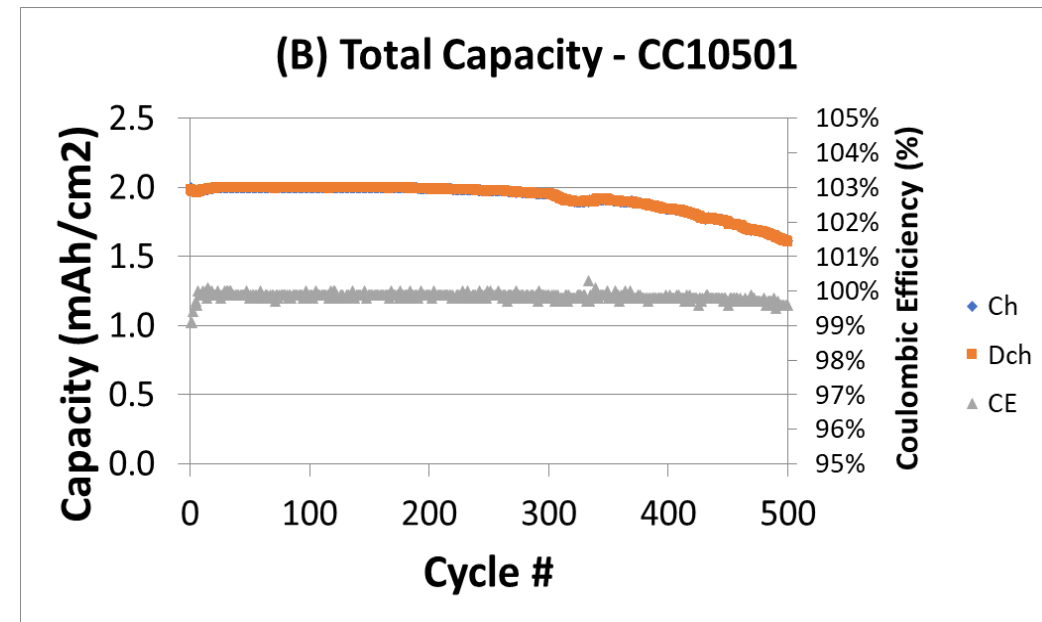
Fast charging ends range anxiety

250 miles in 15-minute charge over 500 times



3.2C 15 min charge,
and C/3 discharge; to 80%

High Performance NMC 622
2.8mAh/cm²



Safer batteries – Dendrites, thermal runaway



**Current
Generation
EV Battery**



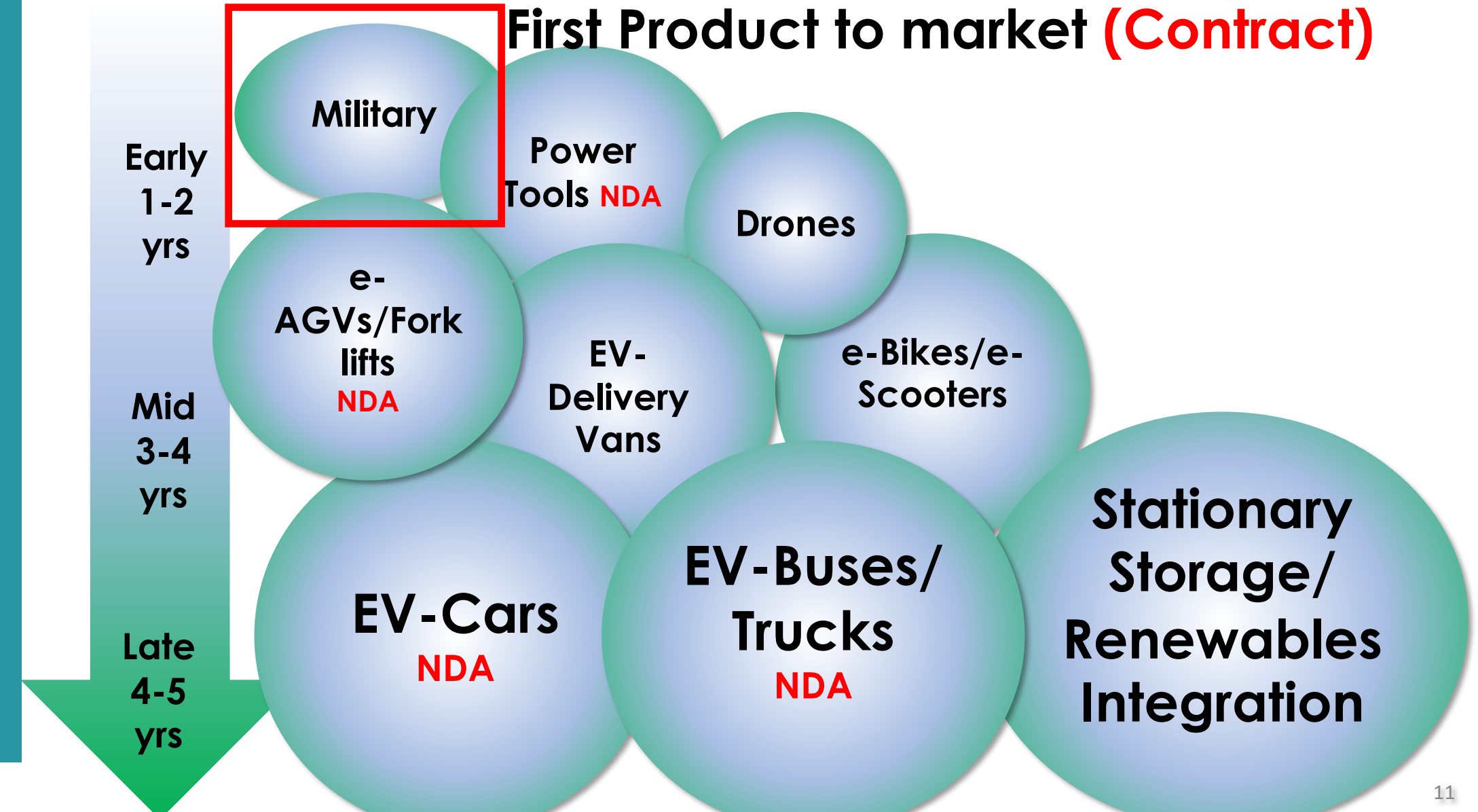
**GDI
Battery Cell
Architecture**

Impaled with a nail and it will still perform

Sell rolls of silicon anodes/electrodes to battery makers and/or end users.

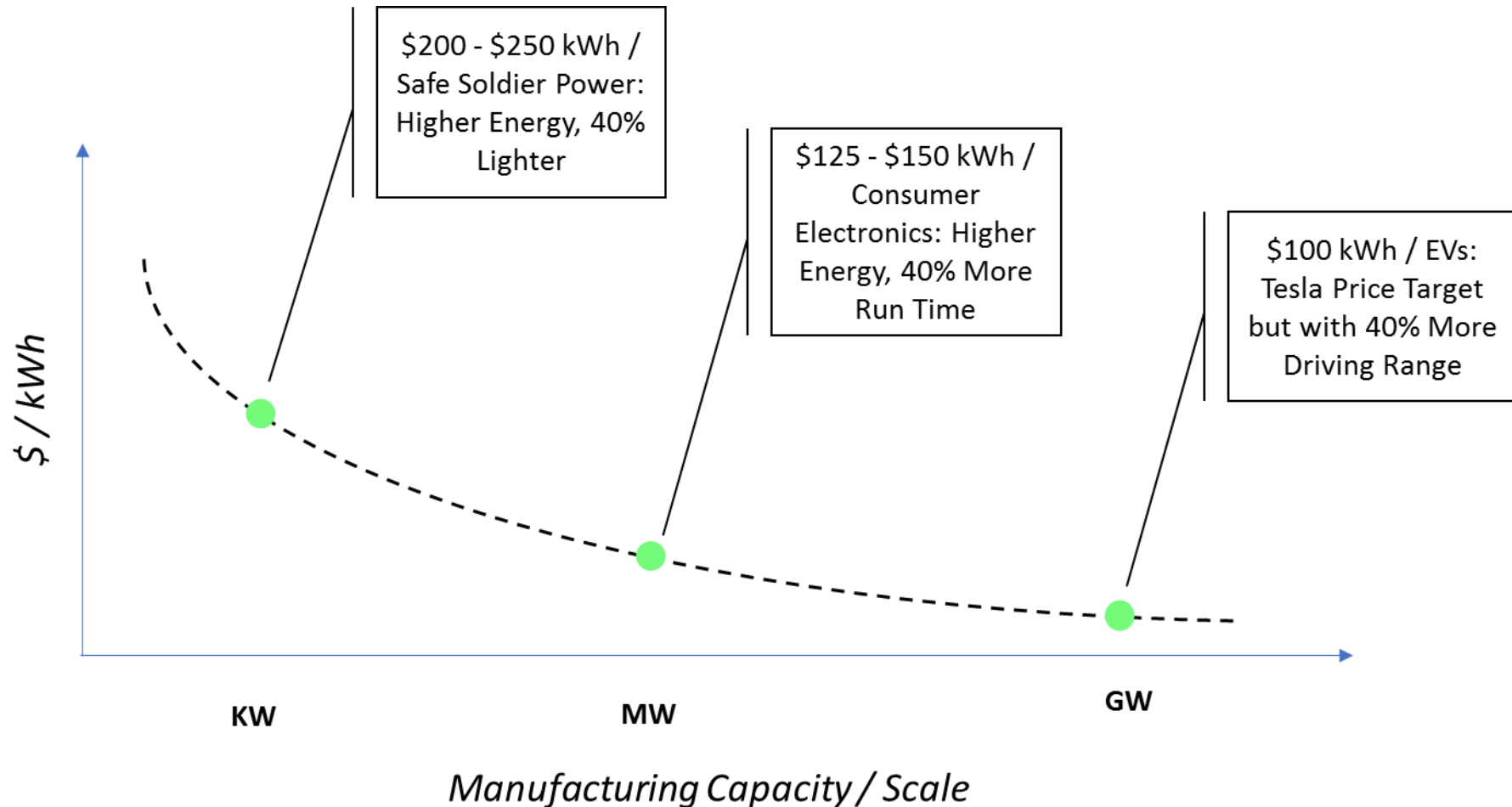
- No need to invent new manufacturing equipment and processes
- GDI can have fully domestic production chain in EU and US
- **Traction:** Current contract with Army for military cell suppliers buy GDI electrode and utilize in their cell builds

Go to Market Roadmap - Discovery



Battery Cost Curve

Solar manufacturing will drive the costs down to the EV sweet spot at Gigawatt scale



Highly Experienced Team and Partners

Multi-disciplinary team with decades of experience in advanced materials, manufacturing, scale up, and global product lines



Robert Anstey, JD, CEO

10+ years in Energy Storage, Advanced material development & Global Commercialization; Leads strategy, business development & NREs, and fundraising; Co-inventor of GDI IP



Joe Rankin, M.S., Director of Manufacturing

20+ years in process engineering, multiple manufacturing sites, continuous improvement, advanced manufacture coating methods; 28 Issued US Patents; Black Belt / Six Sigma



John Brewer, PhD., Director of Research

25 years in product development & directing research teams at Caltech, Kodak, and Dow; Led team that created Technical Academy Award-winning product; Inventor of GDI Si patents



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Robert Anstey

CEO and Founder

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