

Carbion

Recharge Domestic Manufacturing

Onshoring critical mineral supply chains
with **battery-grade graphite** from biomass

hello@carbion.xyz



Carbion team



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Head of Product



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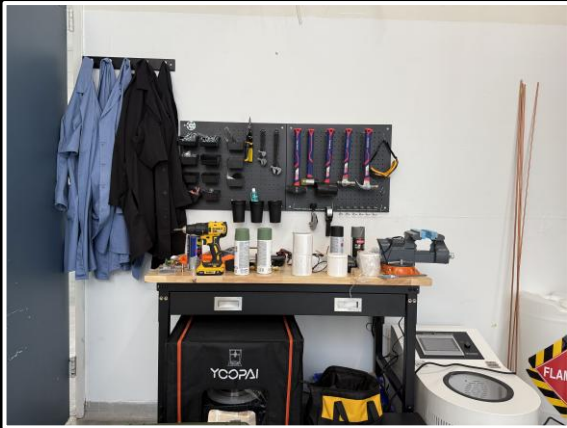


Dr. Kevin See





Carbion R&D infrastructure in New York City



Partners




DOWNSTATE
HEALTH SCIENCES UNIVERSITY

COLUMBIA
NANO INITIATIVE

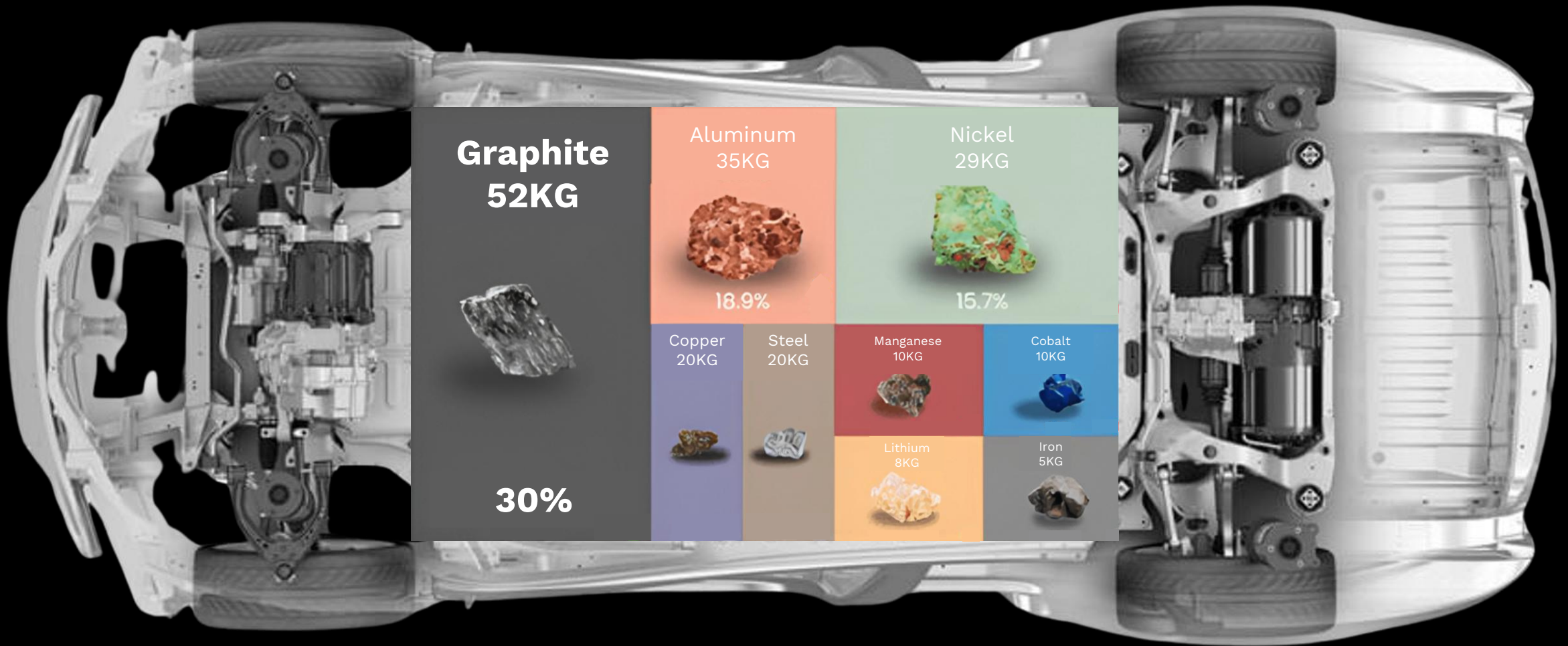


CONNECTING INDUSTRY TO CUNY

Newlab



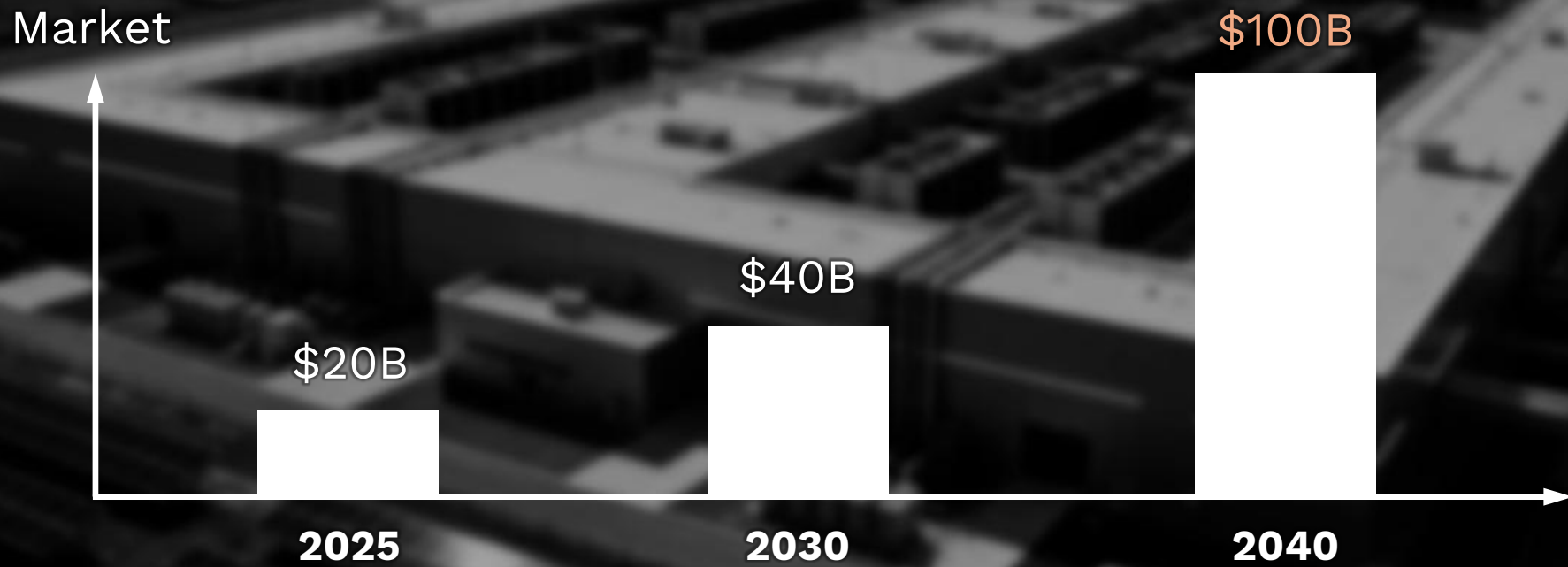
At the heart of every
lithium-ion battery is
Graphite



Graphite makes up 1/3rd of a battery



Demand for graphite set to surge **5X** by 2040



Existing graphite supply chain is expensive, unsustainable, and risky

Natural graphite



- Environment polluting (mining)
- Production and processing highly concentrated in China
- >\$7/kg, peaked at \$11/kg in 2024 [*]

Synthetic graphite



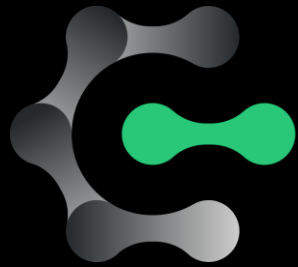
- Uses fossil fuel feedstocks
- Extremely high temperature: 3000°C
- Time-consuming: 1-2 months
- >\$8/kg, peaked at \$20/kg in 2024 [*]



95% of graphite is sourced from China and its supply chain is unsecure



Every ton of graphite produces **20** tons of CO₂



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We transform biomass into
battery-grade graphite.

Cheaper. Cleaner. Domestic.

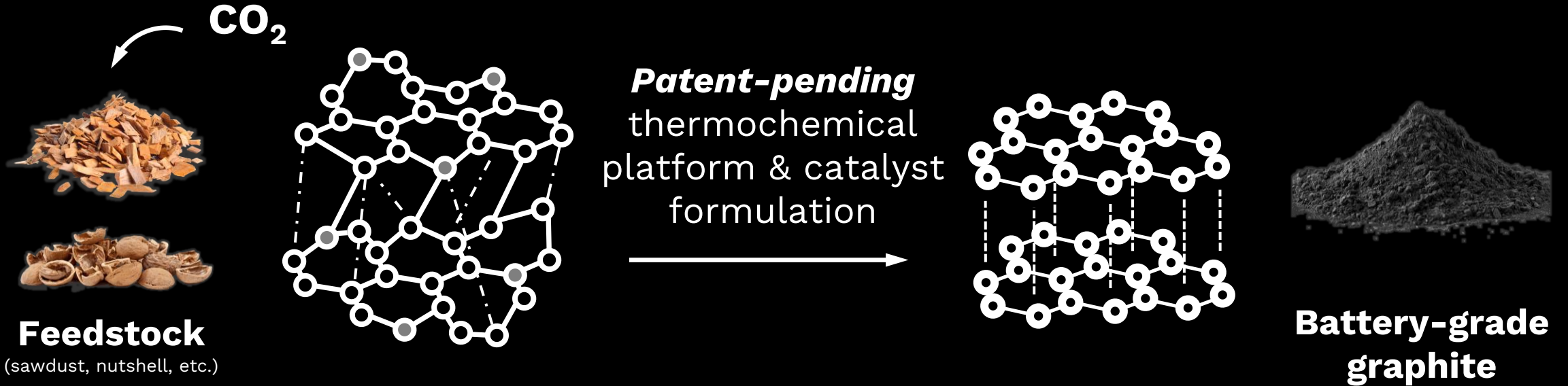
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graphitization process is **faster, lower-cost** and **fully sustainable** compared to incumbents.



1. Half the temperature

→ Lower energy cost, lower CapEx and OpEx

2. 10x faster than

incumbent technologies
→ higher throughput

3. Carbon neutral

using abundant, renewable carbon-sink feedstocks



IP No. 63/795,742 filed: "Systems and methods for producing graphite"





technology can reduce **costs, risks** and **emissions** for U.S. and European battery manufacturers.

30%

lower costs than overseas imports (without tariffs)

0

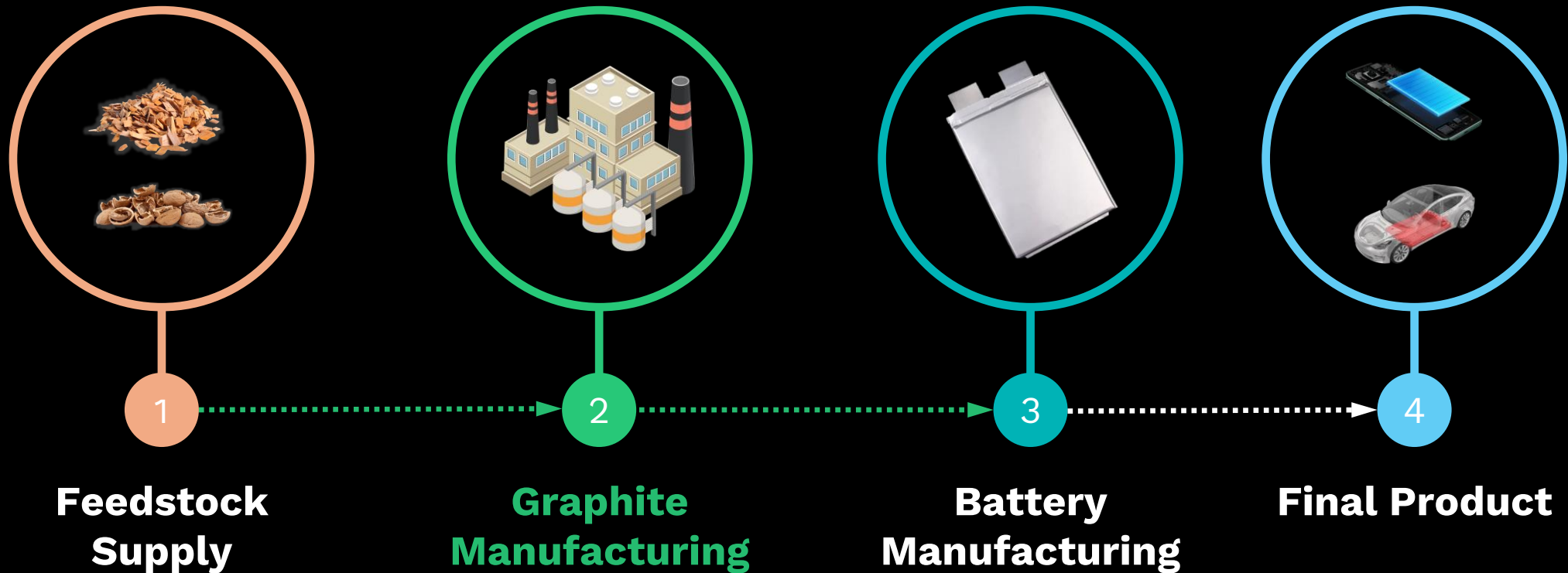
geopolitical risk & tariff uncertainty (100% domestic)

20%

less carbon emissions for battery manufacturing



forges **a new value chain** by converting **biomass** into **graphite** for battery manufacturers.



Primary processing facilities:
Sawmill, shelling facilities, etc.

Product Line



3 KG/BATCH

Execute LOIs
Early Revenue
Tier 1 Qualification



Pilot Demo



**30 TONS/YR
- 30 MWh -**

Pilot Agreement
Recurring Revenue
Pre-Offtake MOUs

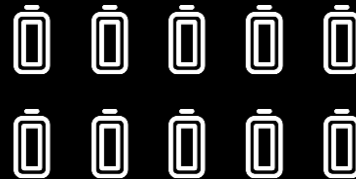


FOAK Commercial Unit



**3,000 TONS/YR
- 3 GWh -**

Offtake Agreement
(cash-flow positive, self-sustaining & bankable thereafter)

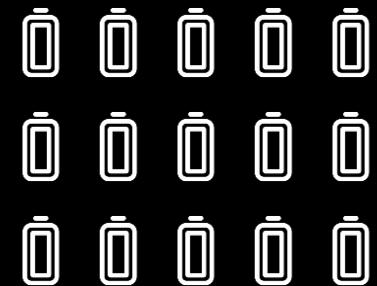


Full Commercial Plant



**30,000 TONS/YR
- 30 GWh -**

Gigafactory Full Supply



Now

2027

2028

2030