



Bringing **True Circularity** to the Battery Industry.



Rising Demand, Diminishing Resources:

The Lithium Challenge

1 Battery Demand Projection

Battery demand will triple by 2030.

2 Supply-Demand Discrepancy

Increased battery demand will lead to a supply shortage for critical materials like Lithium by 2030.¹

3 Environmental Impacts

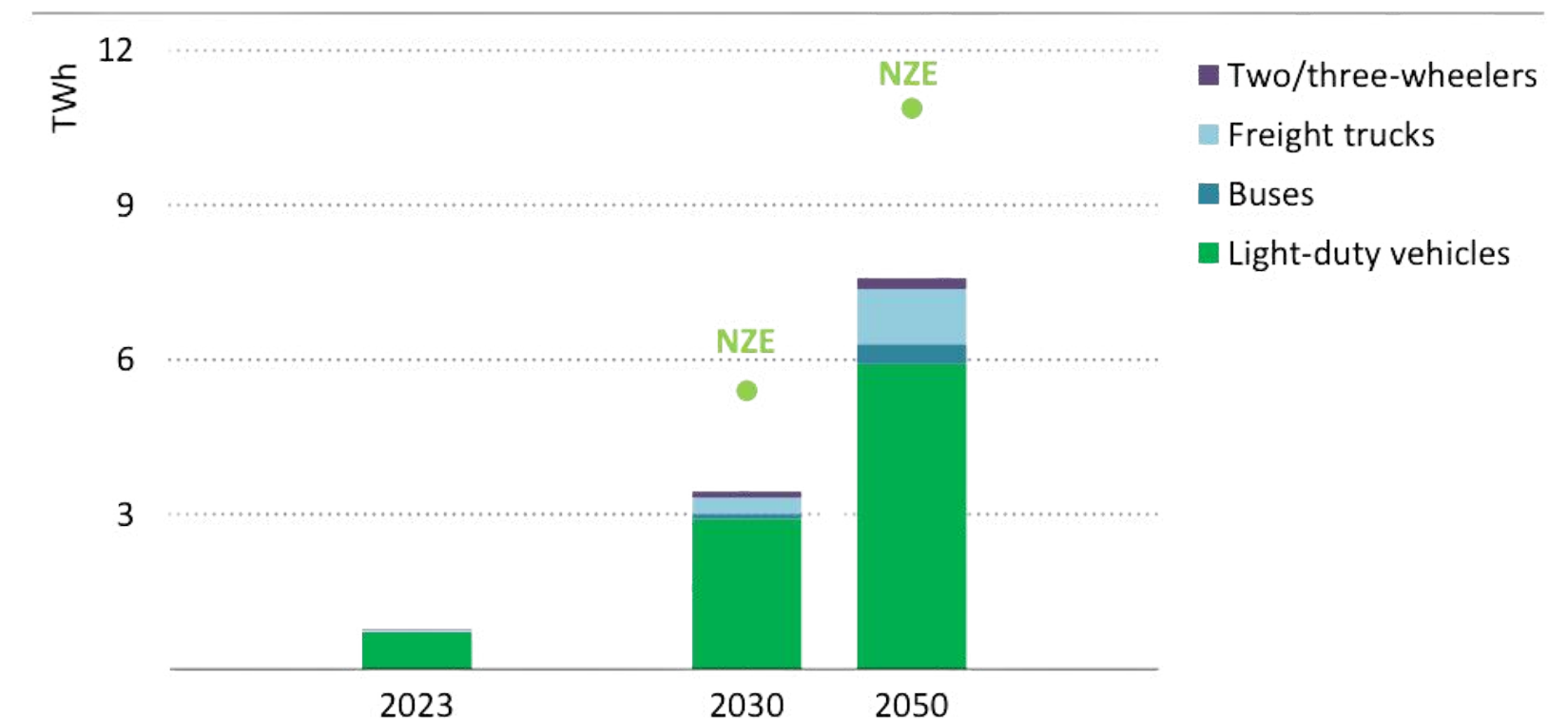
The production and end-of-life disposal of batteries is harmful to the environment.

4 Governmental Regulations

EU's targets in new EU Battery regulation necessitate improved battery recycling and processing.

¹ Center on Global Energy Policy, 2023

Figure 2.6 ▶ EV annual battery demand by vehicle type in the STEPS and gap to the NZE Scenario, 2023, 2030 and 2050



IEA. CC BY 4.0.

By 2050, annual battery volumes in the road sector increase about ten-fold in the STEPS and fourteen-fold in the NZE Scenario

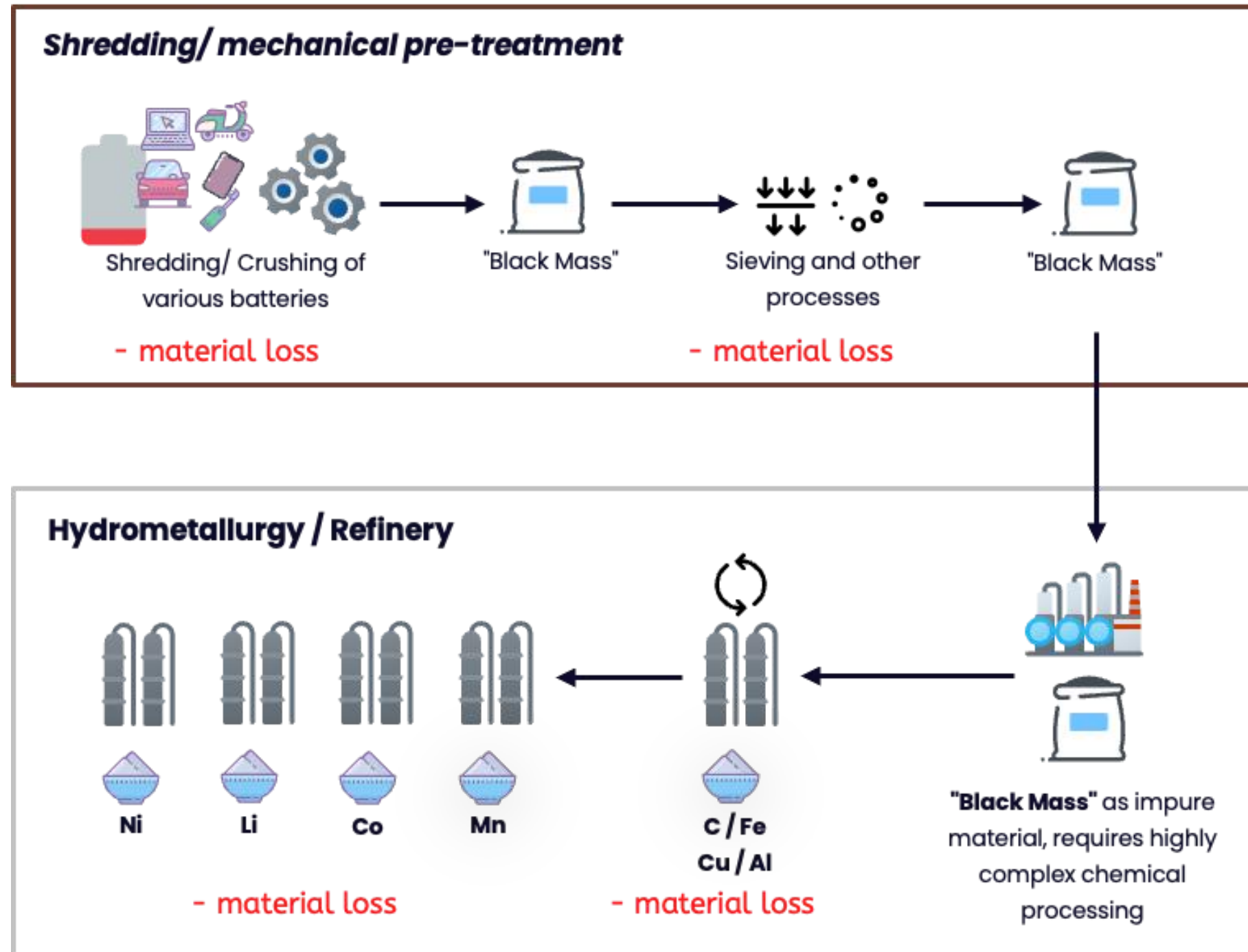
Notes: TWh = terawatt-hours. Light-duty vehicles include passenger cars and light commercial vehicles. Freight trucks include medium freight and heavy freight trucks.

Source: [IAE, Batteries & Secure Energy Transition Report](#)



The Truth about Traditional Battery Recycling

Lack of transparency & misleading efficiency claims



- Material Loss from Battery to Black Mass (up to 40%)
- Non-homogeneous inputs lead to difficulties in defined chemical processing
- Complex chemical recycling process due to high levels of impurities in Black Mass
- Centralized recycling approach increases carbon footprint mainly through transportation
- Missing economical feasibility (Processing cost from Battery to Active Materials >8.00\$ per kg).



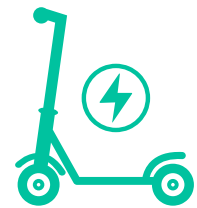
Battery Recycling Today

The Paths for Black Mass

EV Battery
NMC 811



Scooter Battery
NCA



Laptop Battery
LCO



ESS Battery
LFP



Black Mass A



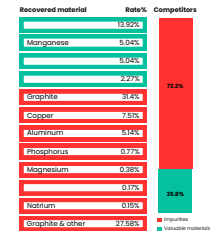
Black Mass B



Black Mass C



Sell as Commodity
Low Commodity Value



**Hydrometallurgical
Process**
**Optimized & scaled
for Black Mass A**

*Different Black Masses
need to be blended to fit
into hydromet.*

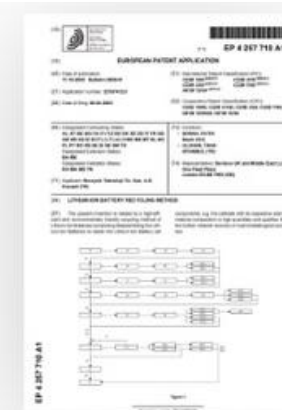


**Novocycle is on the mission
to solve this!**

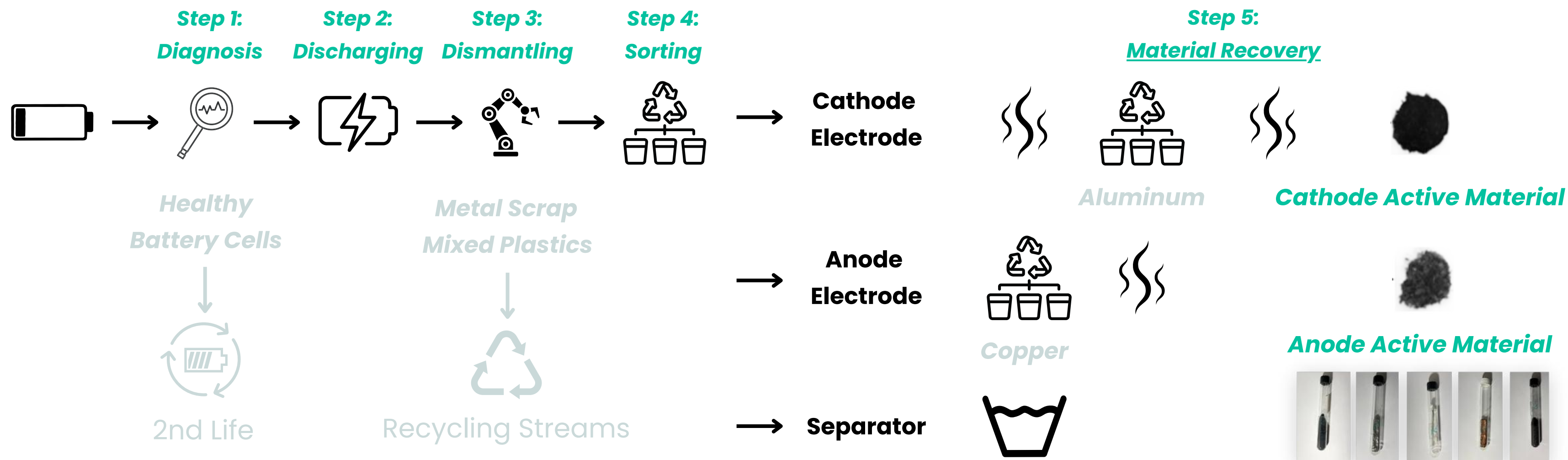


Novocycle's Approach

Decentralized Dry Direct Recycling



Patents published at
EPO & WIPO



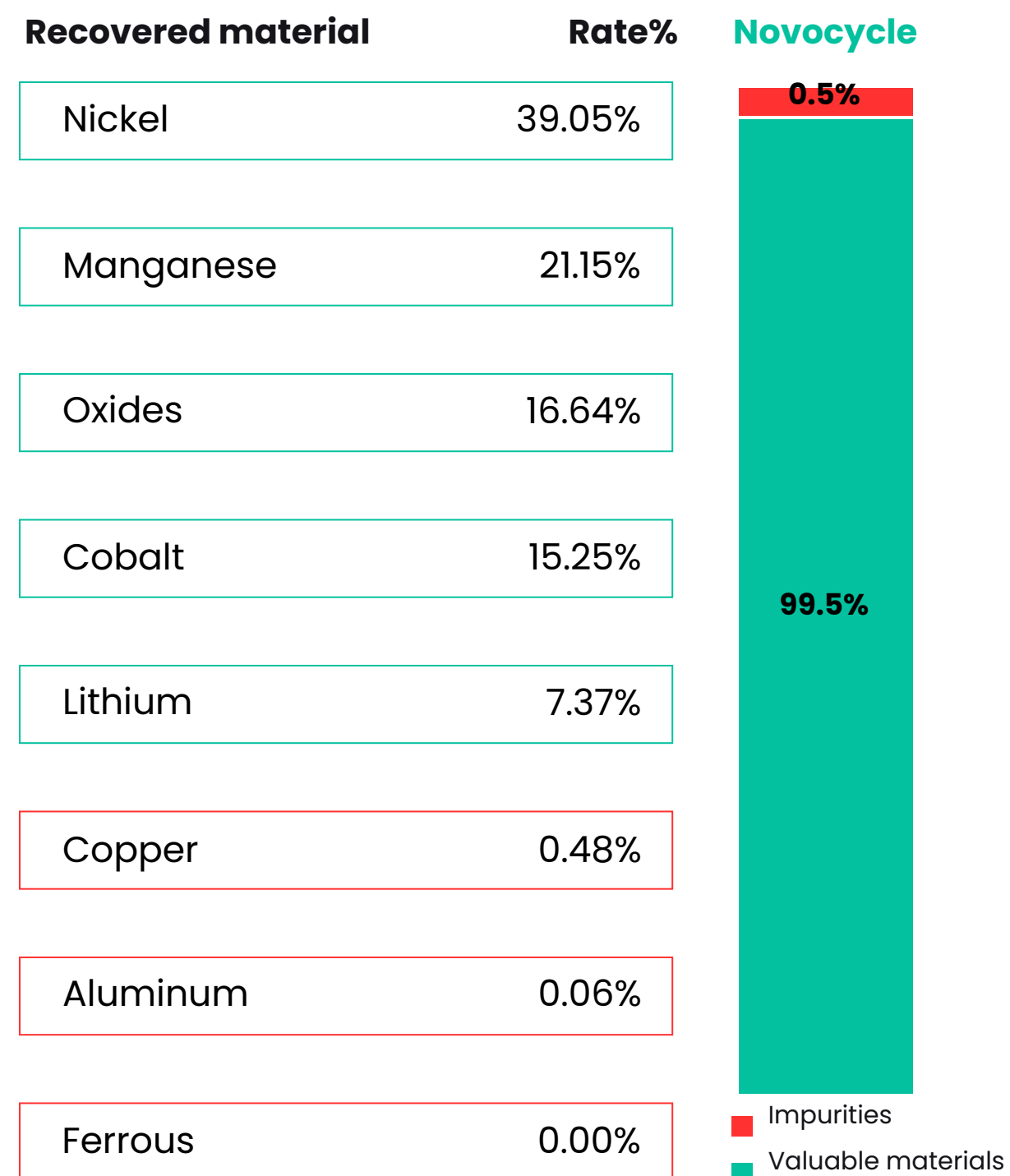
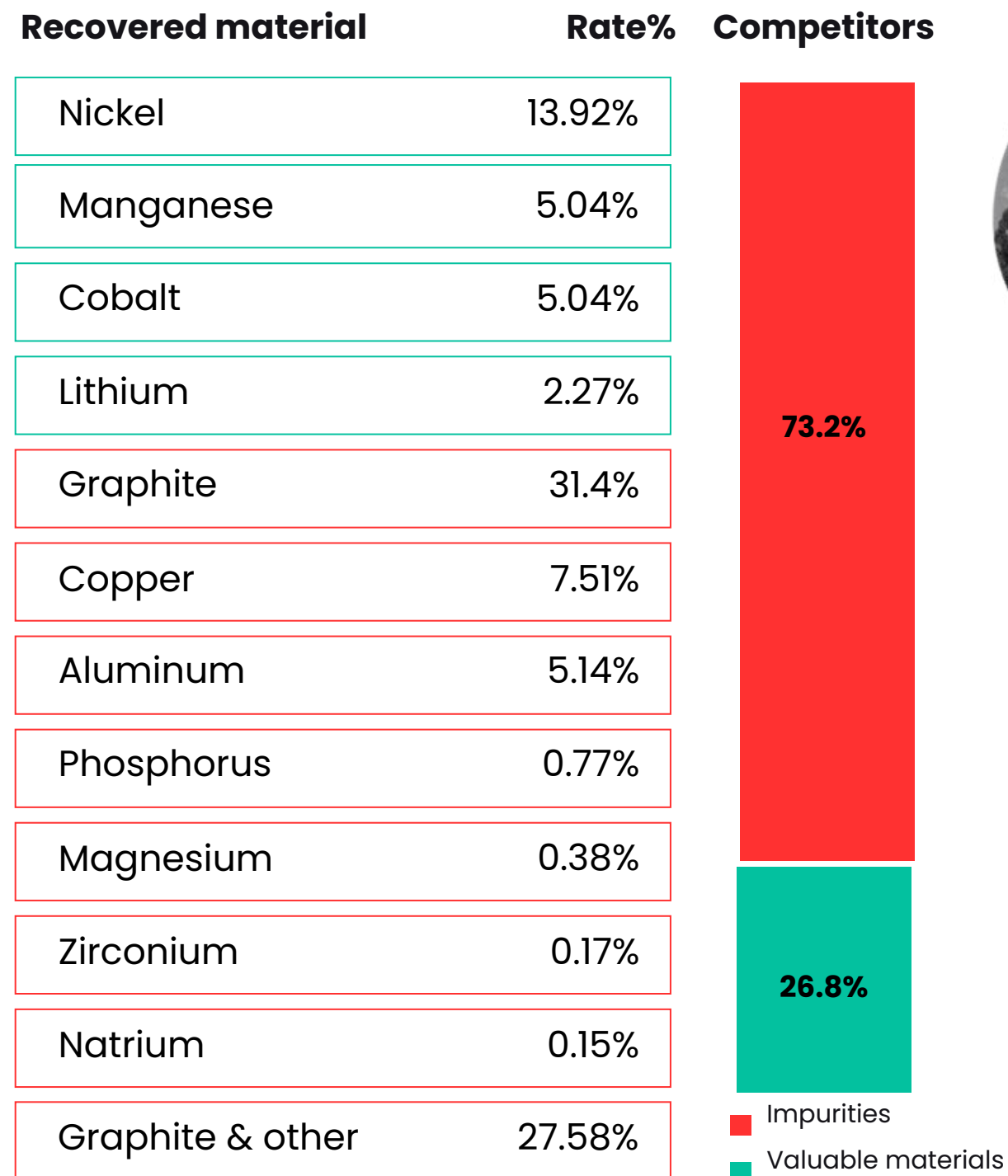
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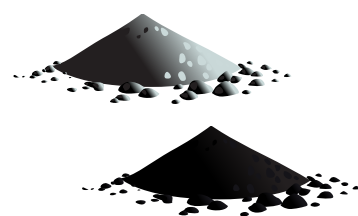


Bringing Material Quality

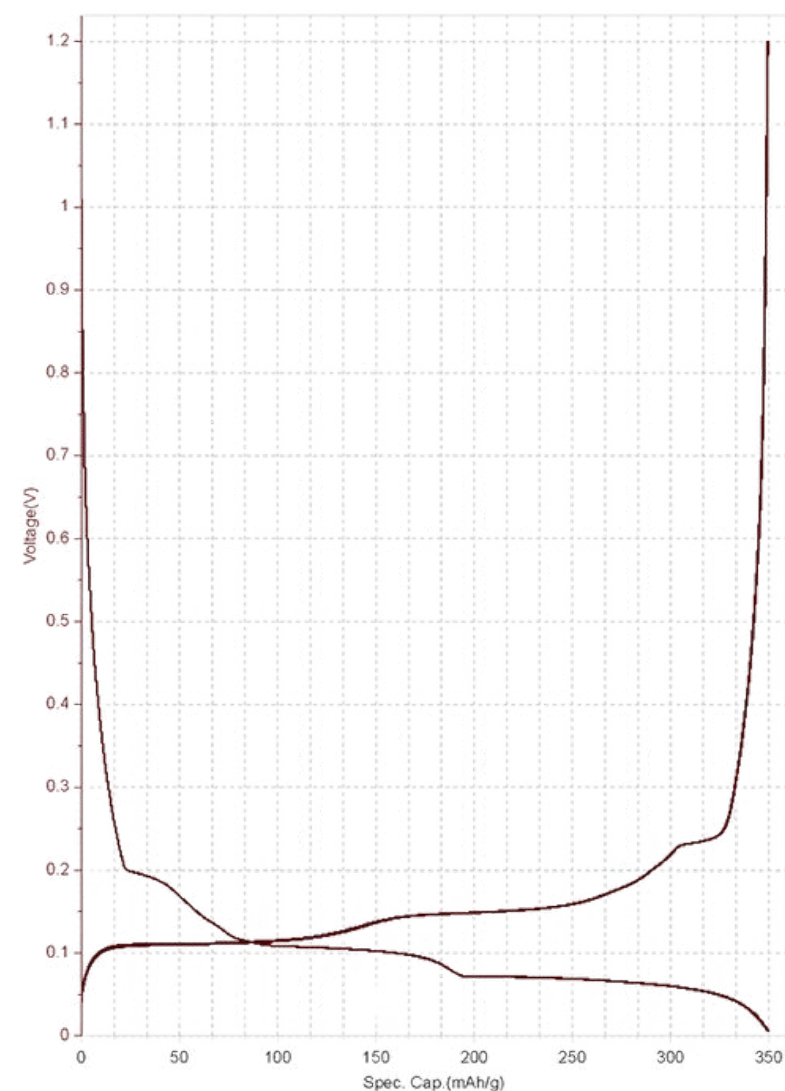
from ...

to ...





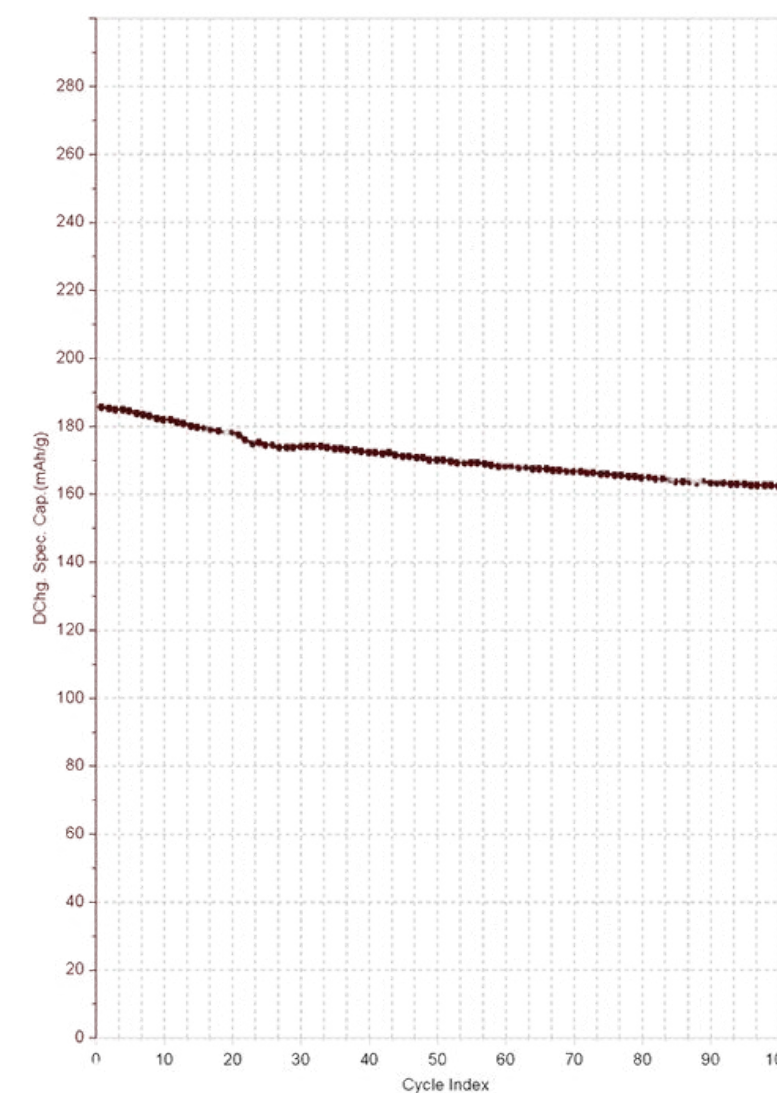
Case Study: **Active Material Reintegration**



**Half-Cell on C/10 reaches about
350 mAh/g**



***99% Performance reached with
Novocycle Recycled Materials***

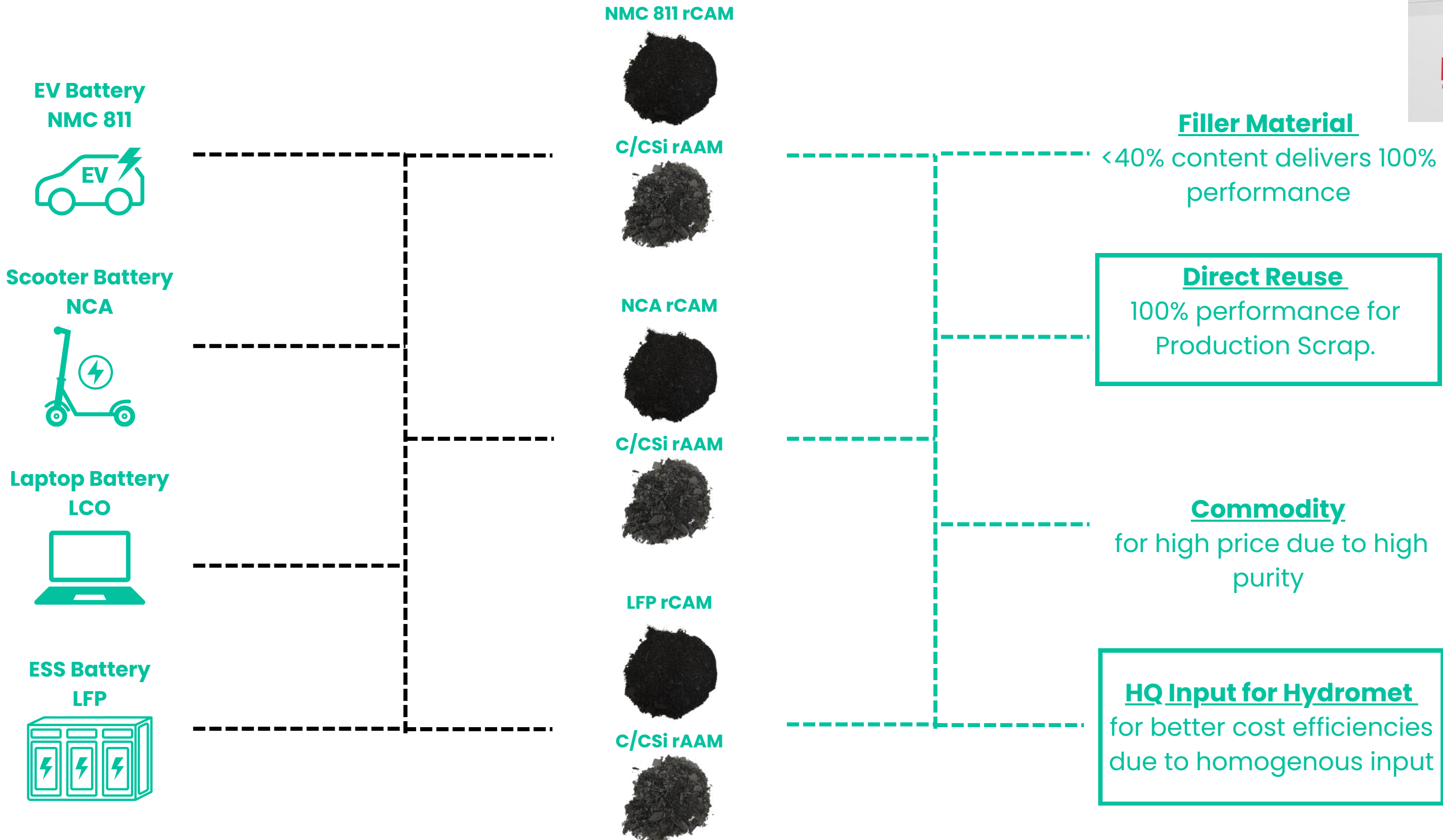
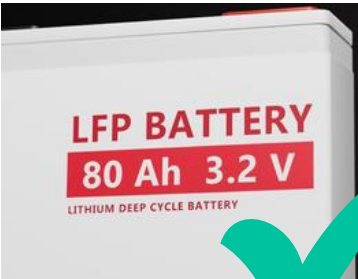


**Full-Cell on C/3 with NMC811
reaches about 186 mAh/g**



The paths for rCAM & rAAM

Reduced complexity, improved quality



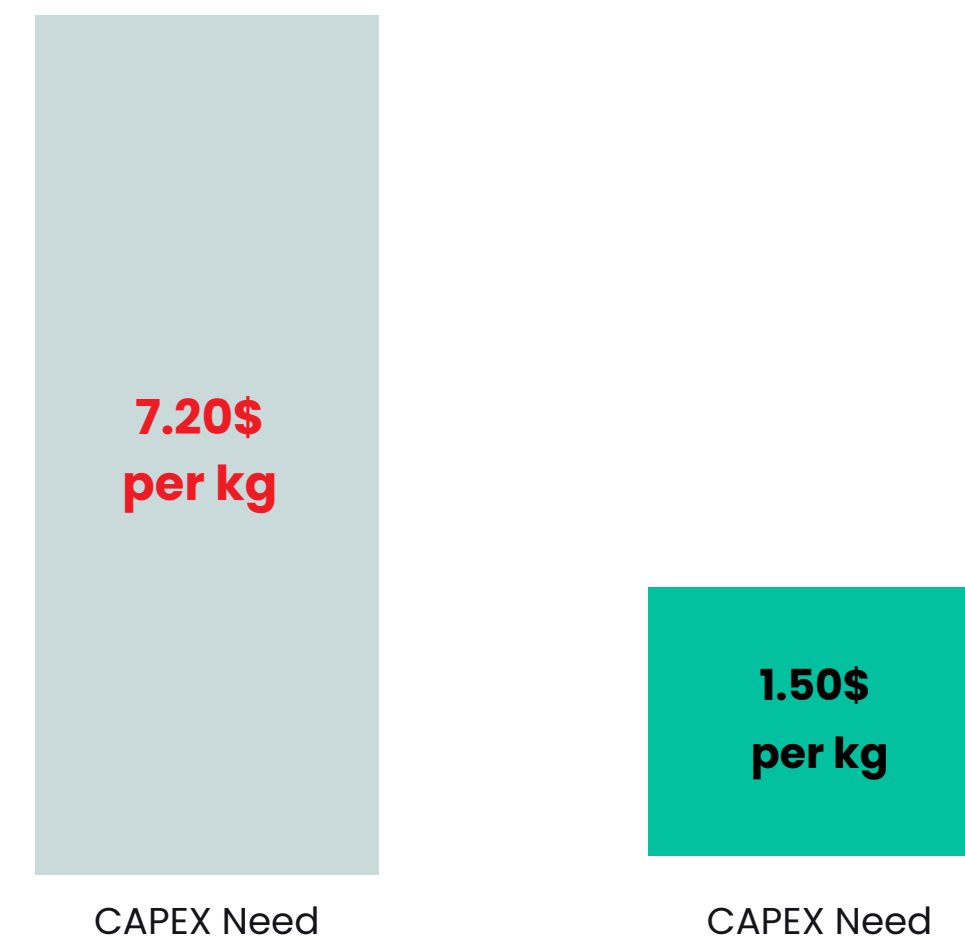
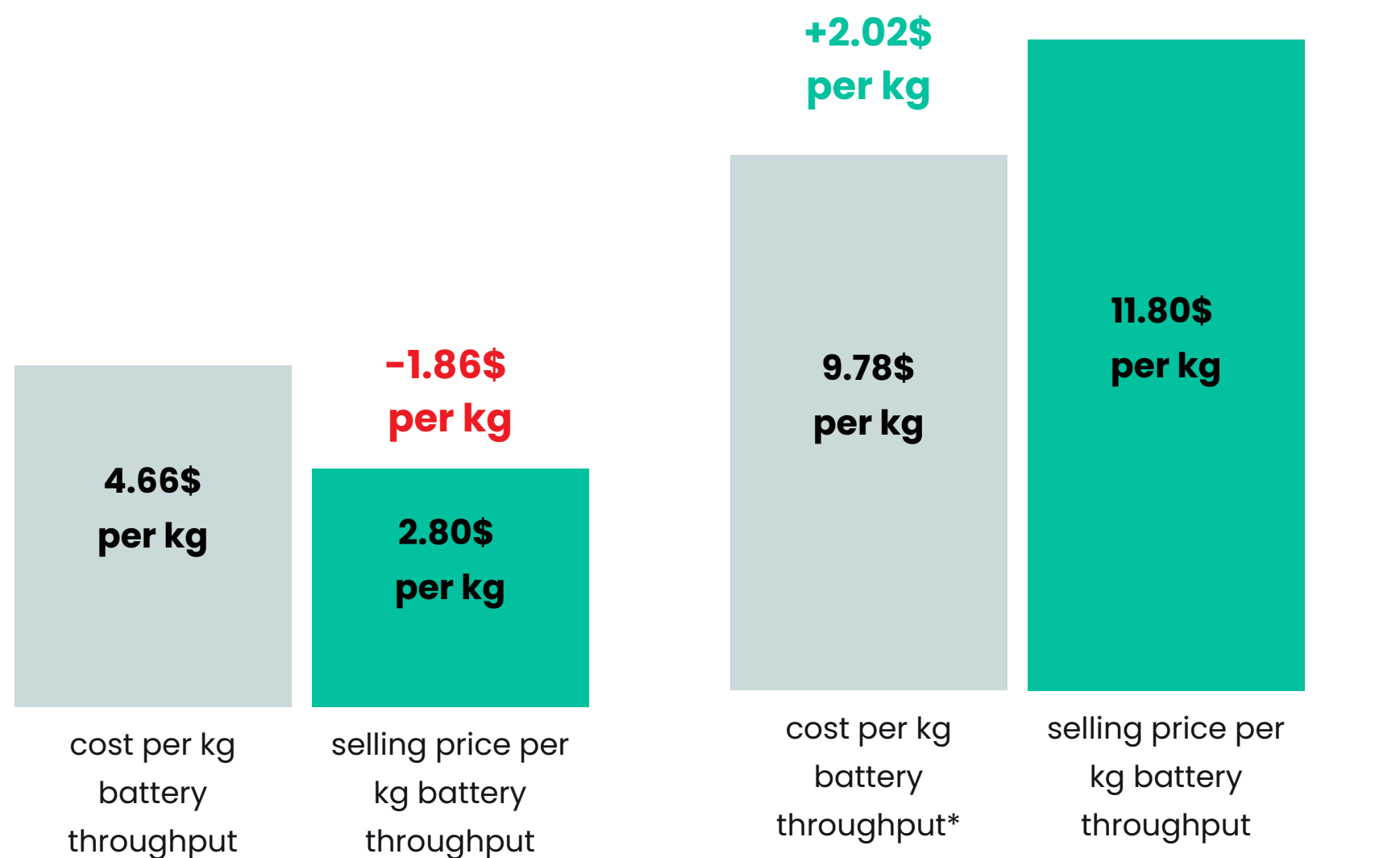


Bringing Economical Feasibility



OPEX

CAPEX



Competitors

 novocycle *today*



Competitors

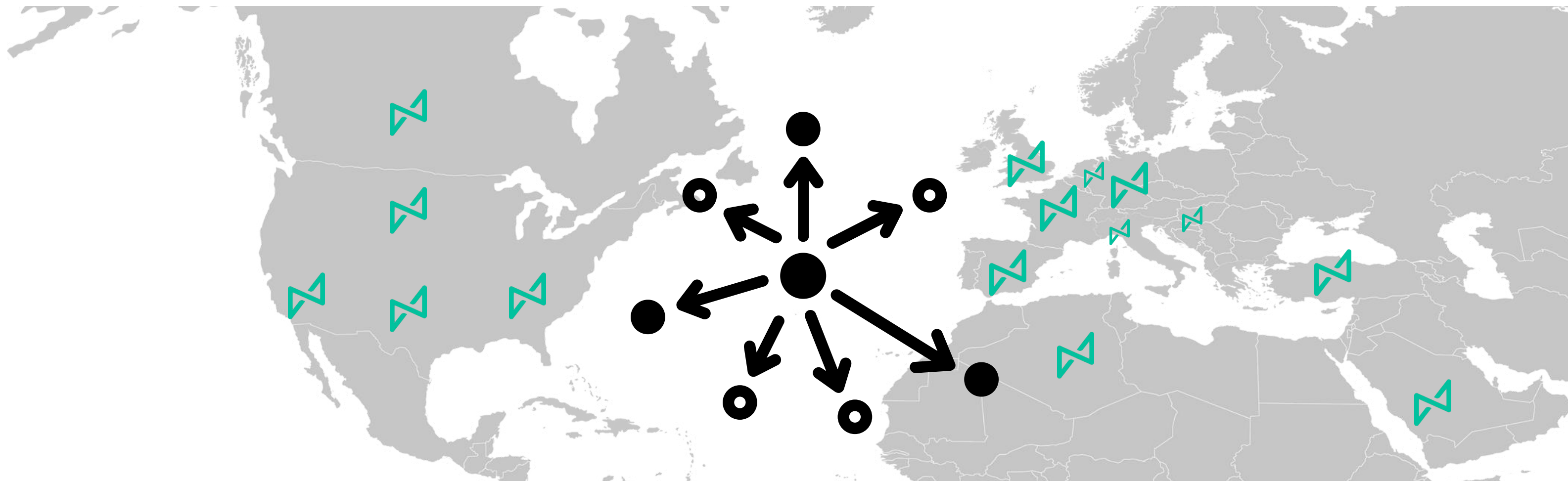


novocycle

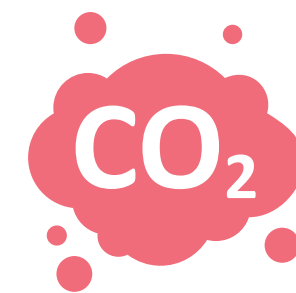


Scale via Duplication!

Decentral Recycling Corridor



Reduce Transportation Distances

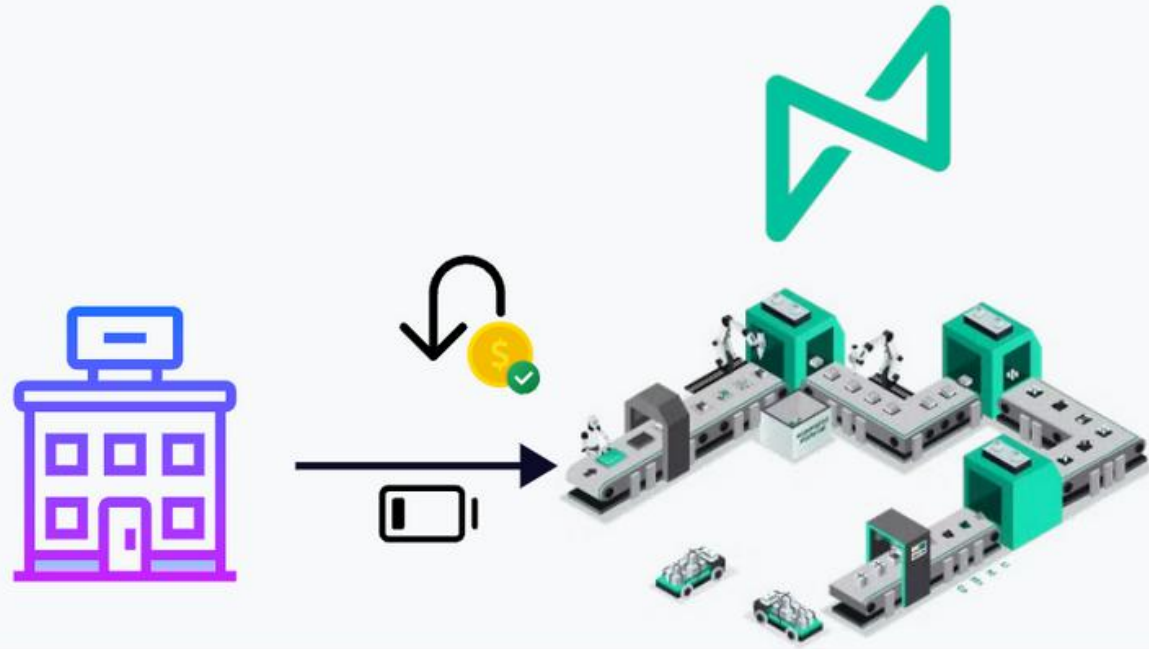


Cut CO2 Emissions by 50%



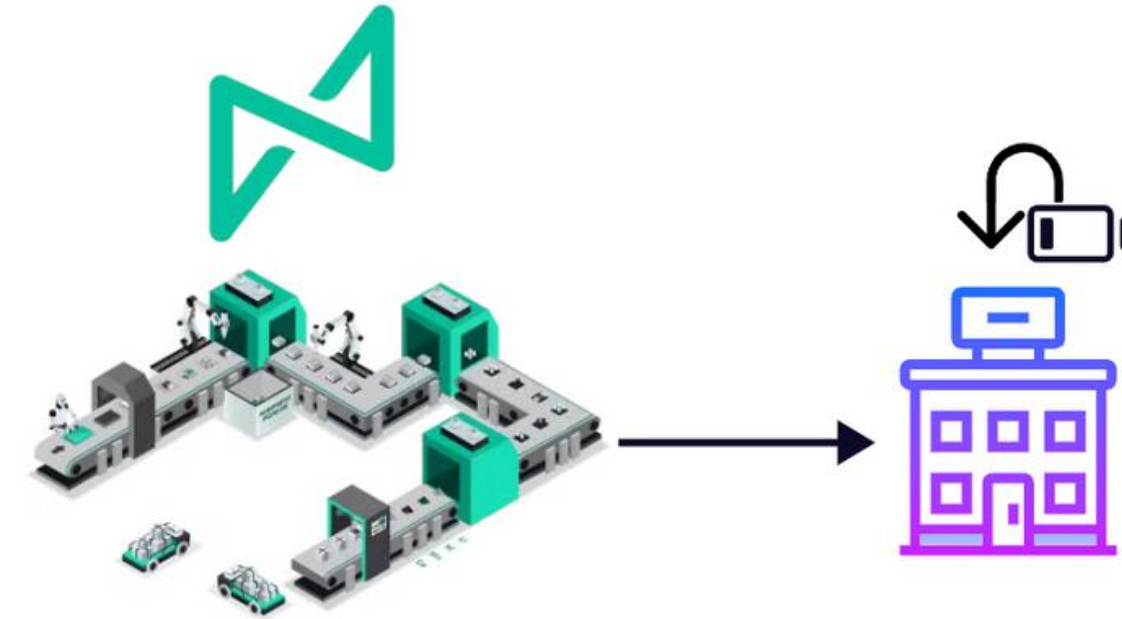
Business Models of Novocycle

Changing the Game!



Model 1:
Recycling-as-a-Service
("RaaS")

Today















Model 2:
Technology-as-a-Service
("TaaS")

In Future

Current Traction

Secured Feedstock within 3 Months of Sales Work

Customers		Location	Types	Battery Chemistry	Battery Weight (kg)	Potential Revenue (USD k)
	BinBin	Türkiye	E-Scooter	NMC	10,000	110
	GEZ	Türkiye	E-Scooter	NMC	1,500	16
	HOP	Türkiye	E-Scooter	NMC	3,000	33
	Roqu Mobility	Türkiye	E-Scooter	NCA	100	1
	OEM	Türkiye	E-Busses	NMC/LFP	50,000	550
	OEM	Türkiye	E-Busses	LFP	5,000	25
	OEM	Türkiye	E-Vehicles	NMC	40,000	440
	Go Sharing	Netherlands	Micro Mobility	NMC/NCA	10,000	110
	Rhyde	Spain	E-Scooter	NMC/NCA	500	6
	OEM	Netherlands	E-Busses	LFP	800,000	4,000
	Garage	France	Mixed	NMC/LFP/NCA	500,000	4,000
	eScooter	Türkiye	E-Scooter	NMC	50,000	55
					1,470,100 kg	USD 9,346 k



The Team

Novocycles' most valuable asset is the team that brings essential expertise from various sectors together to collaborate on achieving one common goal: **A *truly circular* supply chain for the battery industry**



Taha Uluhan
CEO & Co-Founder



Fatih Bosna
Co-Founder
Research & Innovation



Özge Ece
Legal & Compliance



Ali Mourad
Business



Yeter Uluhan
People & Culture



Ahmet Kılıç
Automation & Industrialization



Erdiñ Koçak
Digitalization



Nurbol Ibadulla
Battery Materials



Ting-Wei Weng
Battery Materials



Huriye Percin
Finance



Nader El Zeenni
Operations



Pablo Rojas
Business Development



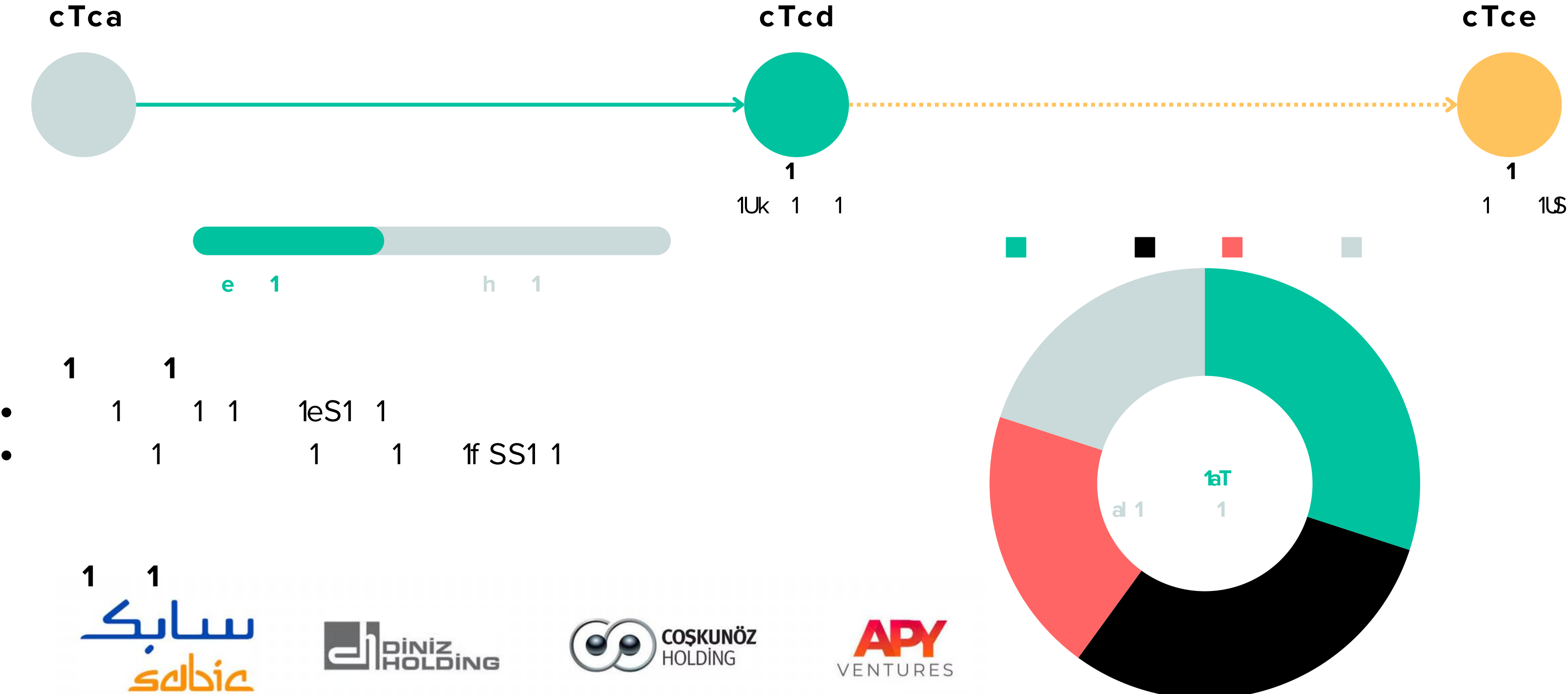
Alejandra Duenas
Marketing & Sustainability

Total number of employees: 30



Investment Need

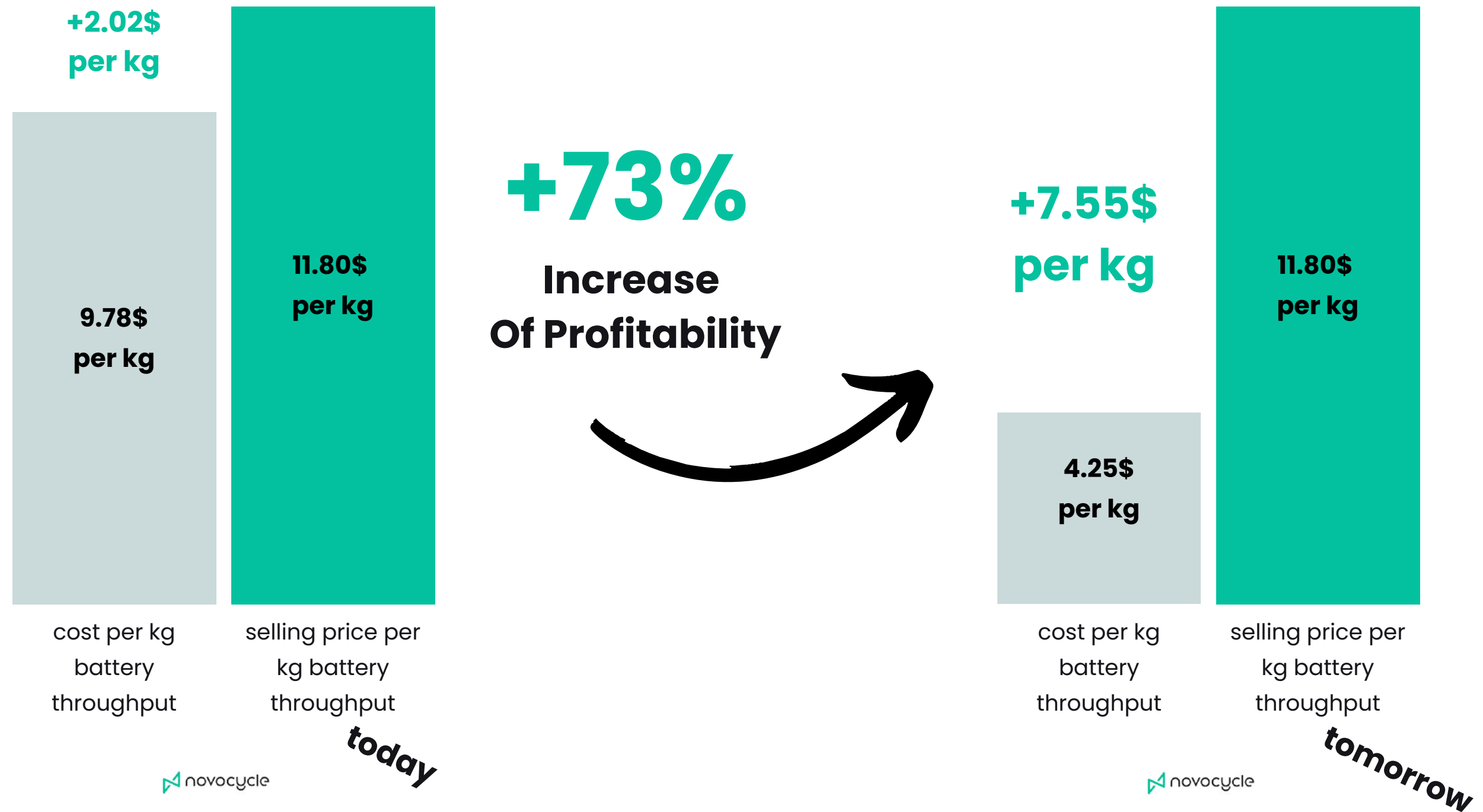
Novocycle is seeking to raise 10 Million \$ in total to realize the throughput optimization via automation of the current bottlenecks. This will lead to a transformation of the secured feedstock value of 9 Million\$ into commodities.





Targeting Unit Economics in 2025

After current financing round.





Financial Projection

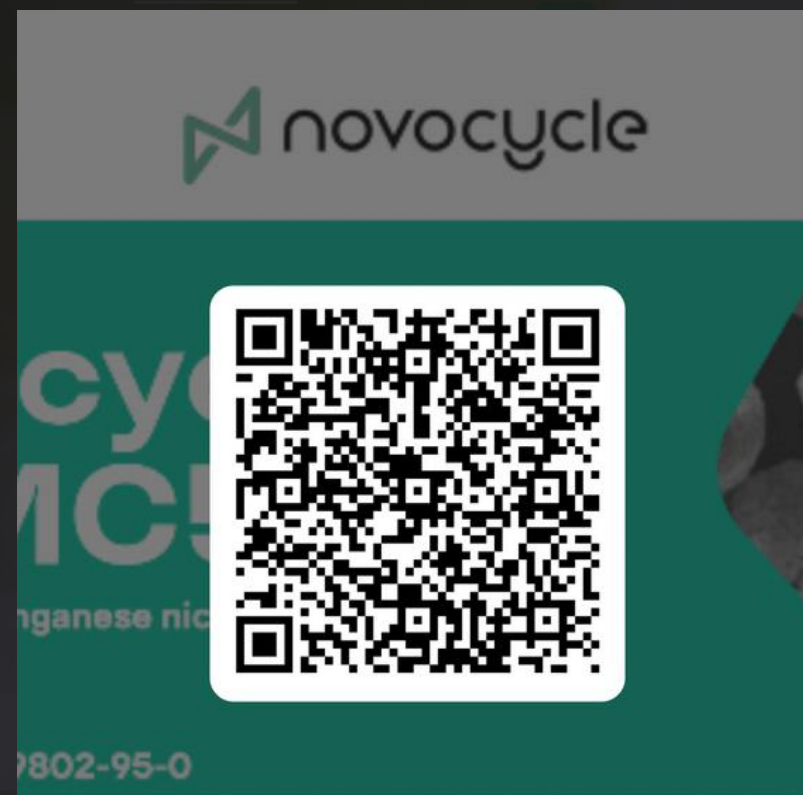
In the upcoming years, Novocycle will focus on automating and standardizing the facility processes, validate the costs and profits and prepare for a calculated scaling via multiplication of the decentralized facilities.

INCOME STATEMENT	2025	2026	2027	2028	2029
Revenues	2,088,902	13,127,183	22,746,718	32,000,859	42,909,361
Cost of Sales	(353,640)	(2,152,124)	(3,694,061)	(5,232,287)	(7,026,866)
Gross Profit	1,735,261	10,975,059	19,052,657	26,768,572	35,882,495
General & Administration Expenses	(558,771)	(2,728,802)	(4,460,752)	(6,395,267)	(8,765,479)
EBITDA	1,176,490	8,246,257	14,591,905	20,373,305	27,117,017
Depreciation	(83,400)	(156,510)	(889,199)	(560,579)	(732,092)
Pre-Operating Expenses	(50,000)	-	-	-	-
EBIT	1,043,090	8,089,747	13,702,707	19,812,726	26,384,925
Interest Payments	-	-	-	-	-
EBT	1,043,090	8,089,747	13,702,707	19,812,726	26,384,925
Corporate Tax	(208,618)	(1,617,949)	(2,740,541)	(3,962,545)	(5,276,985)
Net Profit	834,472	6,471,798	10,962,165	15,850,181	21,107,940

Any Questions?

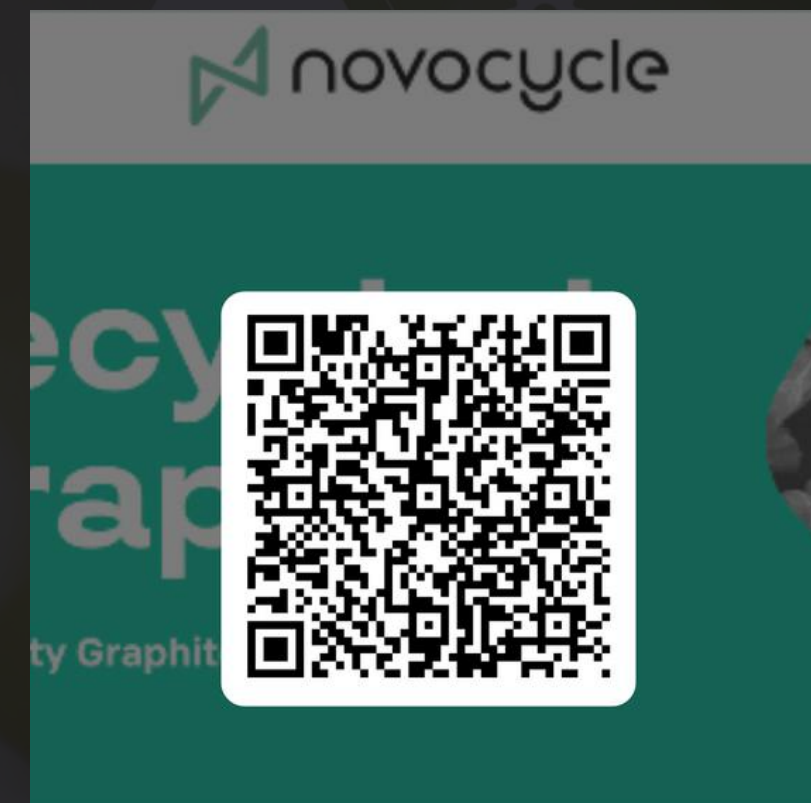
**Novocycle
recovered Cathode**

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**Novocycle
recovered Anode**

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Benchmark conducted by Circular Materials (ITA)

		%w/w													
	Cliente	Li	Ni	Mn	Co	Fe	Al	Cu		TARGET	IMPURITY	NMC			
avg	Provider 1 End of Life	5,44	21,77	9,19	8,30	0,27	0,61	3,65		44,70	4,53	55,46%	23,41%	21,14%	BM
min		4,14	11,20	8,79	7,67	0,20	0,25	0,67		31,80	1,13				
max		6,75	32,34	9,59	8,93	0,34	0,97	6,63		57,61	7,94				
avg	Provider 2 End of Life	4,68	9,90	6,90	25,64	0,97	5,10	2,14		47,12	8,21	23,33%	16,26%	60,41%	BM
min		3,50	6,73	3,18	13,26	0,41	1,36	0,78		26,67	2,54				
max		5,87	16,45	11,06	33,70	1,69	15,64	5,15		67,09	22,48				
avg	Provider 3 Prod. Scrap	2,76	12,36	10,07	4,70	0,79	3,78	1,83		29,89	6,40	45,55%	37,11%	17,34%	NMC532 low
min		1,76	6,75	5,71	3,31	0,29	2,85	1,13		17,54	4,27				
max		3,42	19,87	12,78	6,74	1,45	5,34	2,33		42,80	9,12				
avg	Provider 4 Prod. Scrap	3,66	17,70	5,93	5,85	0,05	1,34	3,04		33,13	4,43	60,05%	20,11%	19,84%	NMC622
min		2,76	13,44	4,56	4,43	0,02	0,91	2,36		25,19	3,28				
max		5,00	23,86	7,81	7,82	0,22	2,01	4,07		44,49	6,29				
	Provider 5 Prod. Scrap	3,48	16,66	7,23	5,67	7,77	2,00	0,77		33,03	10,53	56,36%	24,47%	19,17%	NMC532
	Novocycle Technologies Corp	7,50	36,25	18,14	13,34	0,02	0,27	0,34		75,24	0,64	53,52%	26,79%	19,70%	NMC532