



Development of Integrated Battery and EV Ecosystem

—Indonesia Battery Corporation—

April 2025

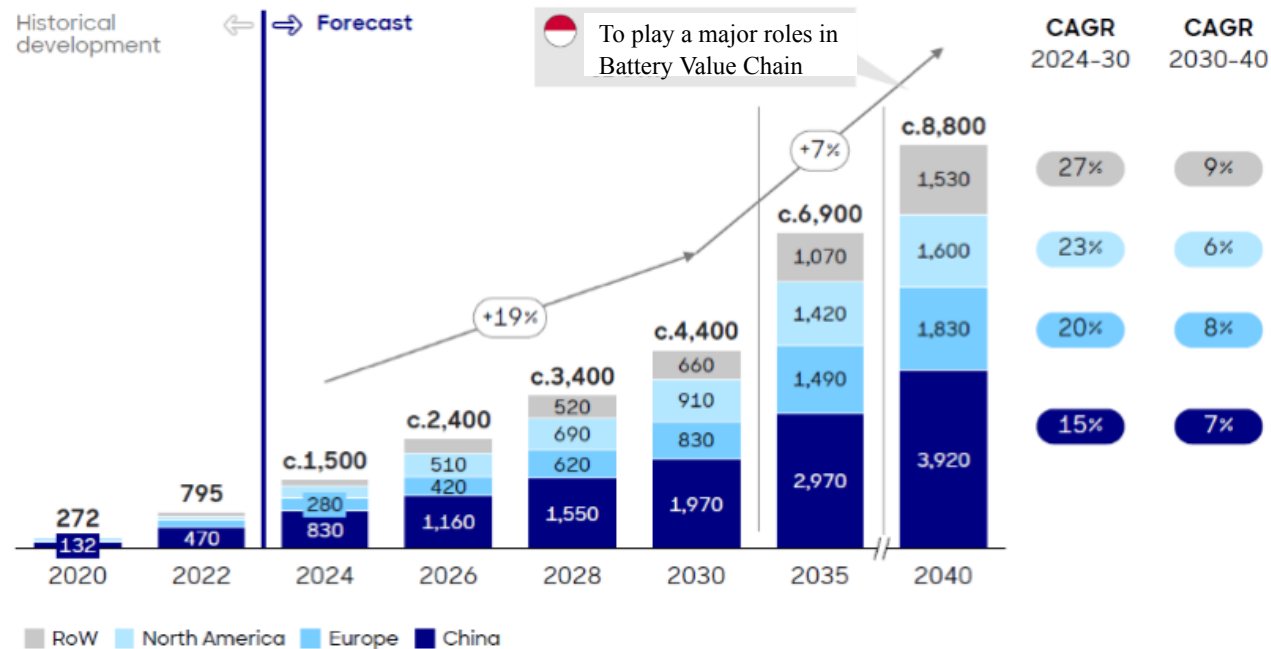
indonesiabatterycorp.com

— chandra —

Global Battery Projection

Massive demand in 2040 for batteries up to 8,8 thousand GWh whereas supply chain takes a vital roles in the fulfillment of global batteries demand

Battery market demand by region up to 2040 (GWh)



Key Take away



Securing raw material Supply



Enhancing supply chain efficiency



Strategic partnership and collaboration



Sustainability and ethical sourcing

Source: ICCSINO, SMM, reported by Roland Berger, 2024

Increase of battery demand inline with the required battery component supply, whereas whole supply chain and development need to be developed

Battery market component demand 2040 (GWh and Ton/annum)

Battery Demand in 2040 (GWh)

8,8k GWh

17.5%

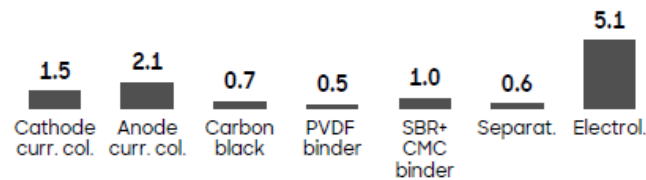
44.8%

37.7%

2040

■ LFP
■ Na-Ion
■ NMC/NCA

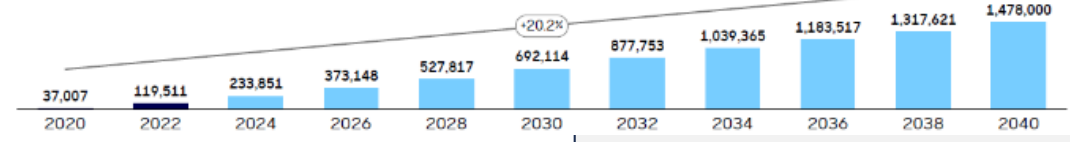
Battery Component Demand in 2040 (Ton/a)



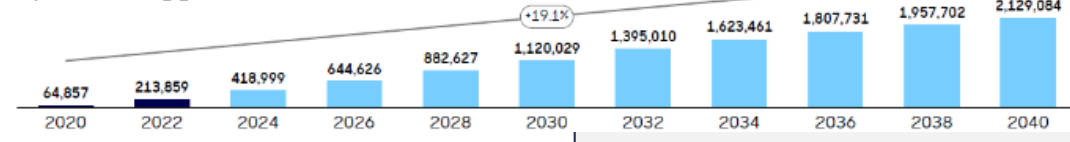
Source: Roland Berger, 2024



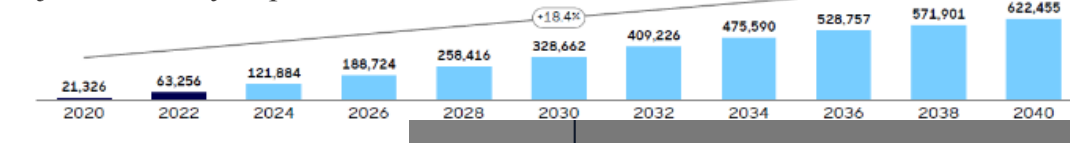
Projected Aluminum Foil



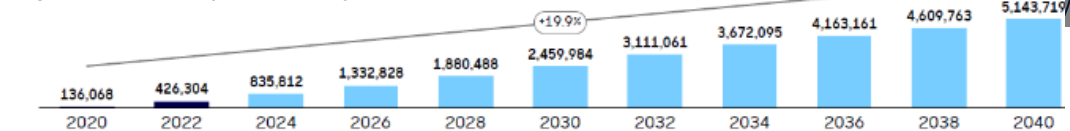
Projected Copper Foil



Projected Battery Separator

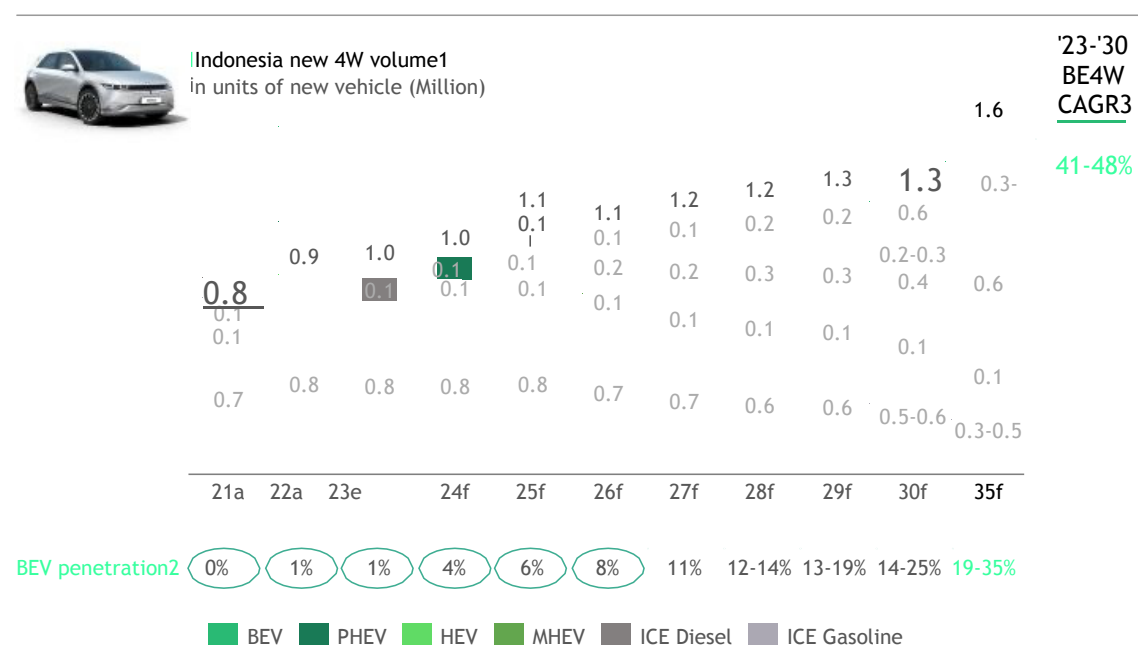


Projected Battery Electrolyte



E4W localization holds promising potential to close the gap in demand pull & ensure stable market for Nickel down-streaming

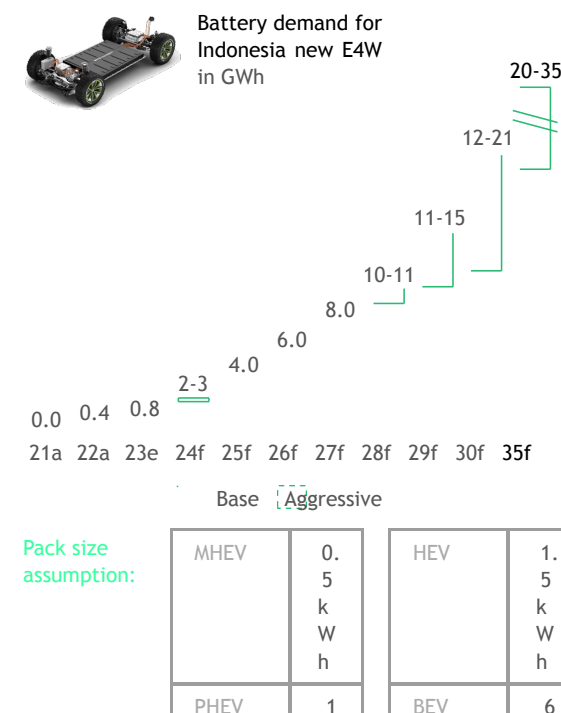
Indonesia battery E4W penetration with potential to reach 14-25% of new car sales by 2030, equivalent to ~200-300k units



Source: Source: IHS Markit Forecast; Euromonitor; Kementerian ESDM RI; BCG analysis

Includes all battery chemistry types (NMC, LFP)

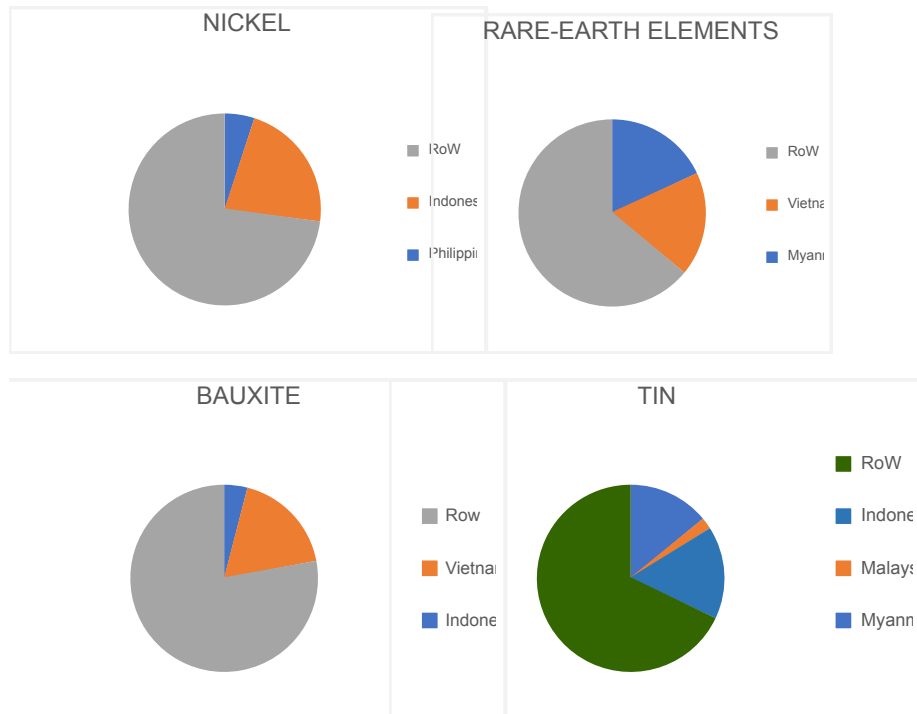
...requiring ~12-21 GWh in battery



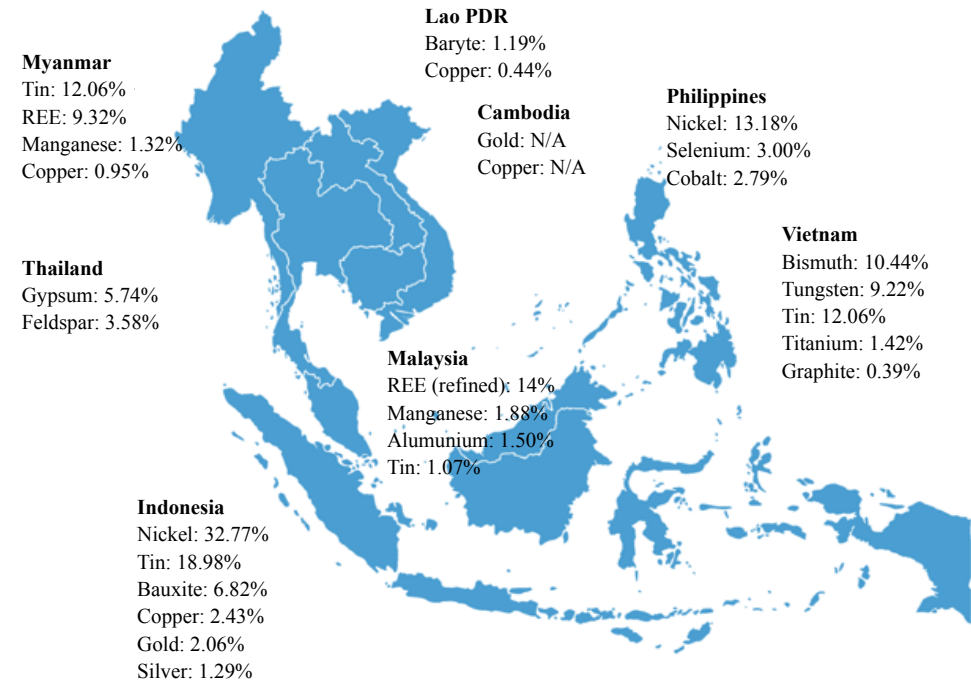
ASEAN Battery Materials Capabilities

ASEAN has a significant amount of raw battery materials that could enhance the ASEAN as global EV battery hub

The potential of battery materials across ASEAN countries



Source: US Geological Survey 2022



Envision of Indonesia

ASEAN to contribute a significant contribution and impact in battery and EV industry as a center hub of raw materials down streaming and industrialization

Commitment of ASEAN countries in the development of EV hub and its potential collaboration

ASEAN plus Three Leaders Summit, Sept 6th, 2023:

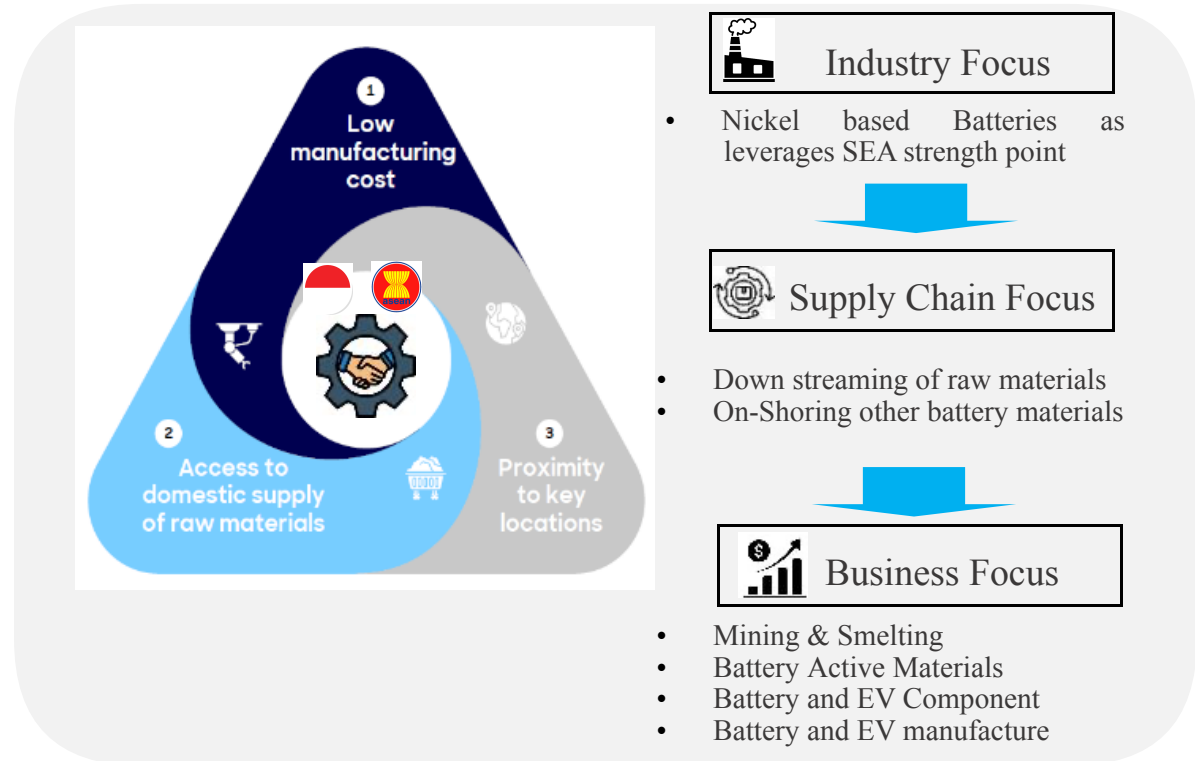


“SUPPORT ASEAN to play an important role in the global production of the electric vehicles industry including the batteries to support a robust electric vehicle Ecosystem”

President of Republic of Indonesia – Joko Widodo, Aug 10th, 2023:

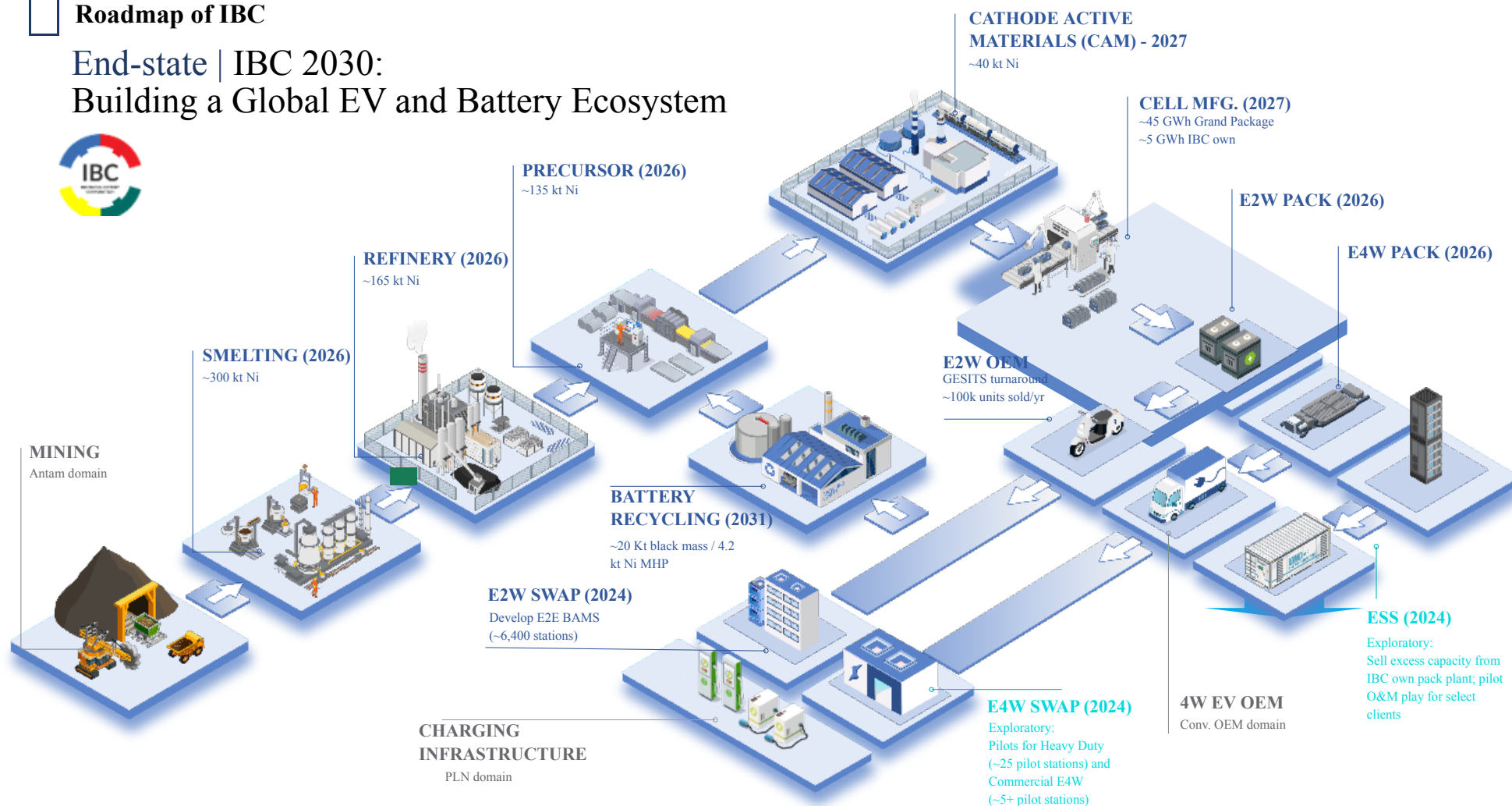


“Following nickel, we will also push other down streaming. We must build an integrated domestic industrial ecosystem that will support the development of the world's green economy.”



Roadmap of IBC

End-state | IBC 2030: Building a Global EV and Battery Ecosystem



Potential Collaboration: On Shoring Battery Materials in Indonesia

IBC open for partnership in the down streaming of battery materials as well as on shoring EV and battery component industries

ASEAN competitive landscape and its collaboration opportunities

ASEAN Competitive Landscape

- Abundant of resources
- Potential market & Industrial environment
- Competitive industrial estate land prices
- Competitive electricity price
- Competitive labor cost

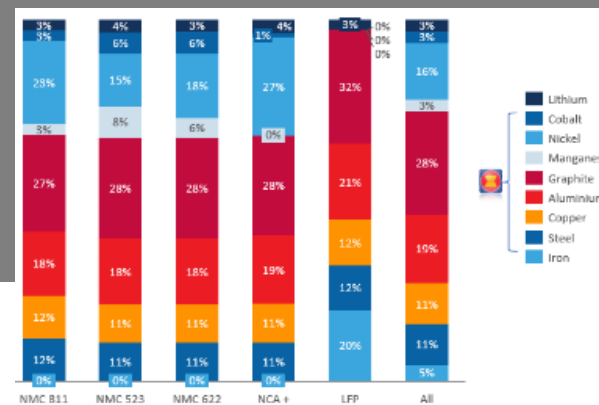
Challenge

- Technology capabilities

Value Chain Activity: Down Streaming of Raw Material



SEA Raw Materials Capabilities



- Mining
- Refining/ processing
- CAM/ AAM manufacturing

Key Take aways:

“IBC has started to do the down streaming of nickel, and open for partnership in other down streaming of mineral resources into battery materials in Indonesia”



MIND ID Raw Materials Capabilities



BAUXIT

587.4 M wmt

107.2 M

Resources
Reserves

1,408 M wmt

381.9 M wmt

919 KTon Sn

300 KTon Sn



COPPER

42.846 M. Lbs Cu

32.214 M. Lbs Cu

ALUMINIUM

Plant Capacity
250.000 MT/a

Thank You

