



Feasibility Study of Investing a Lead-Zinc Ore Mining & Smelting Project in Indonesia

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OBJECTIVES

- The client is a logistics company that focuses on offering solutions of supply chain to their customers based on their resources of logistics, information, finance, products and markets. The client was planning to invest a lead-zinc ore mining and smelting project with a local partner in Indonesia. Hence, the client needed to know about the lead and zinc market in Indonesia.

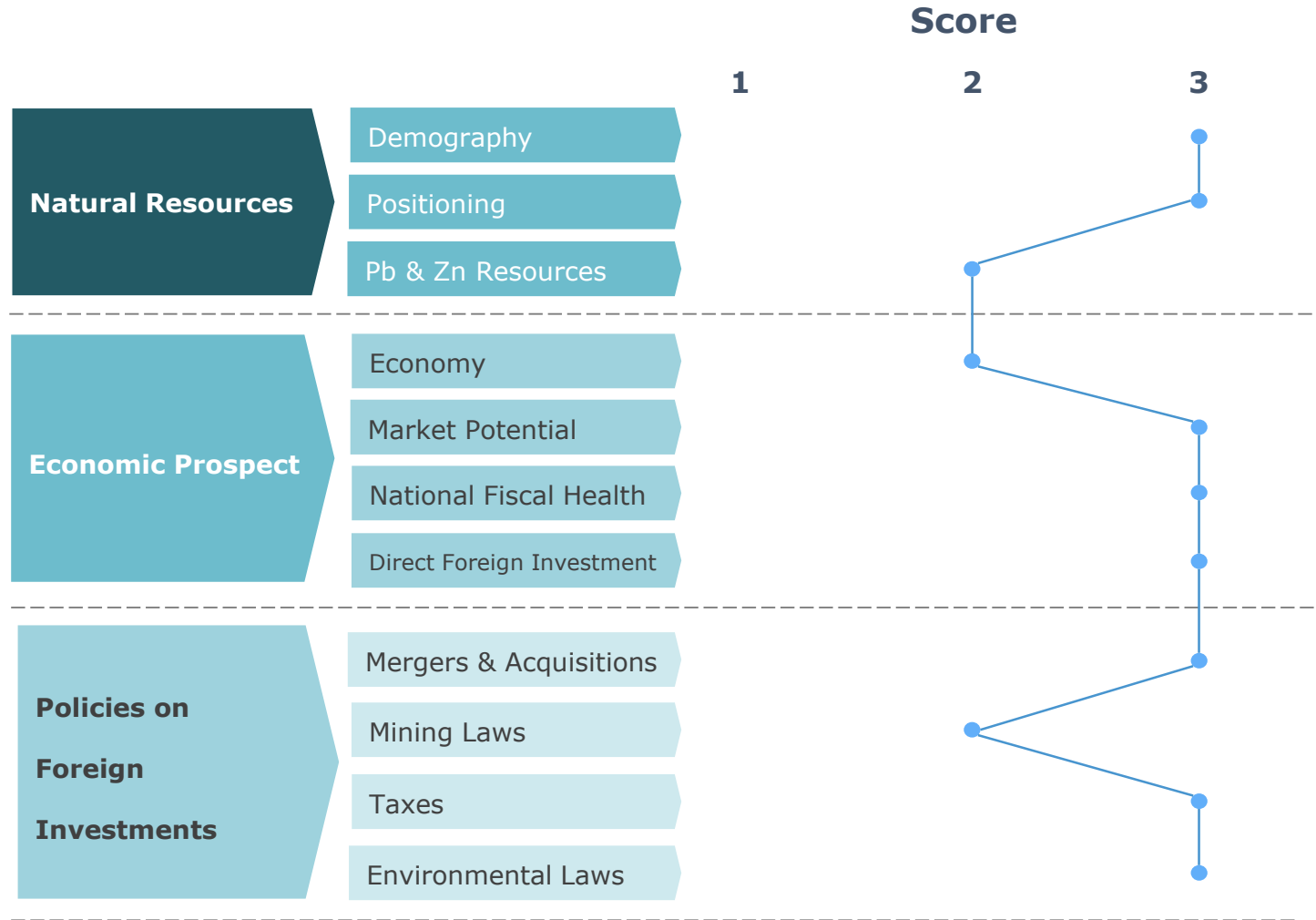
PROCESS

- Methodology
 - ▶ PEST analysis for mining & smelting industry in Indonesia
 - ▶ S&D analysis of global and Indonesia domestic lead and zinc resources
 - ▶ Benchmark studies of the major mining companies in Indonesia
 - ▶ SWOT analysis of the potential investment project
- Sample Size
 - ▶ Pb & Zn Producer(12), Fabricator (30), Trader(3), Others, e.g. Industry Associations, Government Officers (6)
- Project Time
 - ▶ 6 weeks

DELIVERABLES

- Overview of lead and zinc industry value chain in Indonesia
 - ▶ Reserves analysis for lead and zinc in Indonesia
 - ▶ Lead and zinc S&D forecast in Indonesia, 2018-2032E
 - ▶ Lead and zinc price forecast in Indonesia, 2018-2032E
- Mineral processing and smelting technology analysis and recommendation
- Detailed procedure for foreign investment and underlying risks identification
- ROI forecast and risk assessment for the project investment

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Analysis

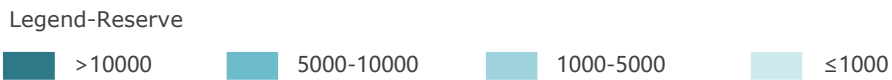
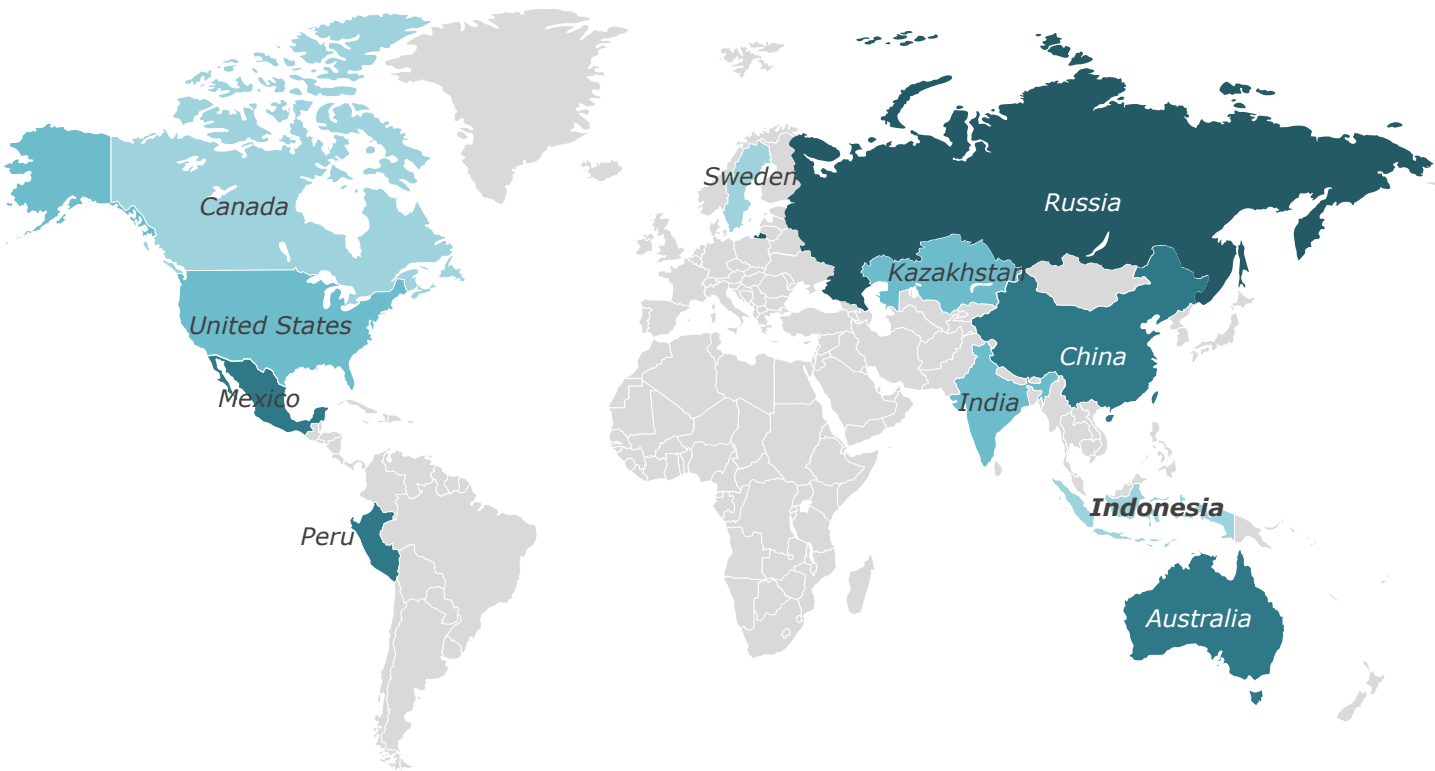
- Large population, relatively affordable workforce
- Convenient and low-cost maritime transportation
- Promising, copious of natural resources under limited development
- GDP growth rate slowing, fiscal deficit occurs
- Capital relocation plan may bring large amount of opportunities
- Reasonable deficit, beneficial for economic growth
- Strong DFI growth, positive for Indonesian economic development
- M&A policies friendly to foreign investors
- Swung policy, export banned eventually
- Friendly to foreign investors, tax preference available
- Loose law and enforcement comparing with China



Distribution of Zinc Ore Reserve in the World

Distribution of Zinc Ore Reserve in the World

Unit: kilo metal ton



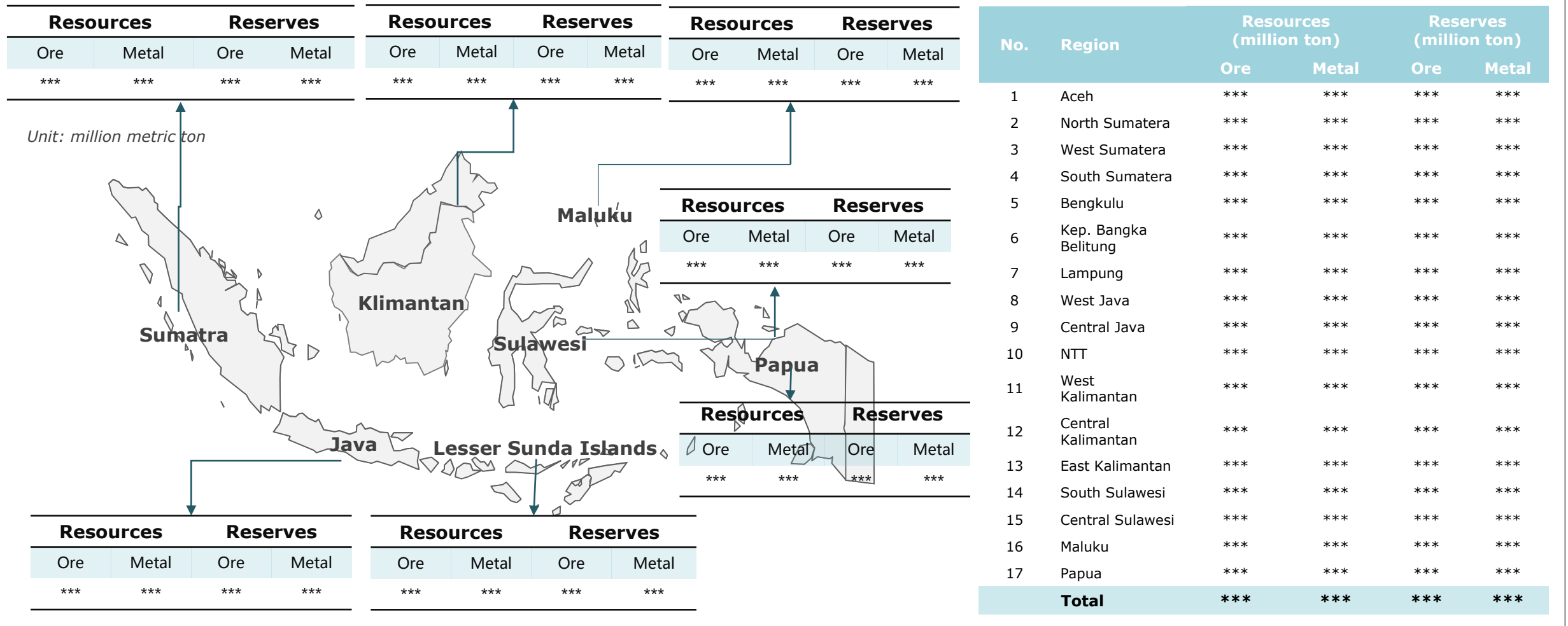
Source: SMM

Unit: kilo metal ton

Country	Reserves	Reserve Proportion
Australia	xxxx	xx%
China	xxxx	xx%
Peru	xxxx	xx%
Mexico	xxxx	xx%
India	xxxx	xx%
US	xxxx	xx%
Kazakhstan	xxxx	xx%
Canada	xxxx	xx%
Sweden	xxxx	xx%
Russia	xxxx	xx%
Indonesia	xxxxx	xx%
Others	xxxx	xx%
Global Total	XXXXXX	

Distribution Map of Main Zinc Mines in Indonesia

Distribution Map of Main Zinc Mines in Indonesia



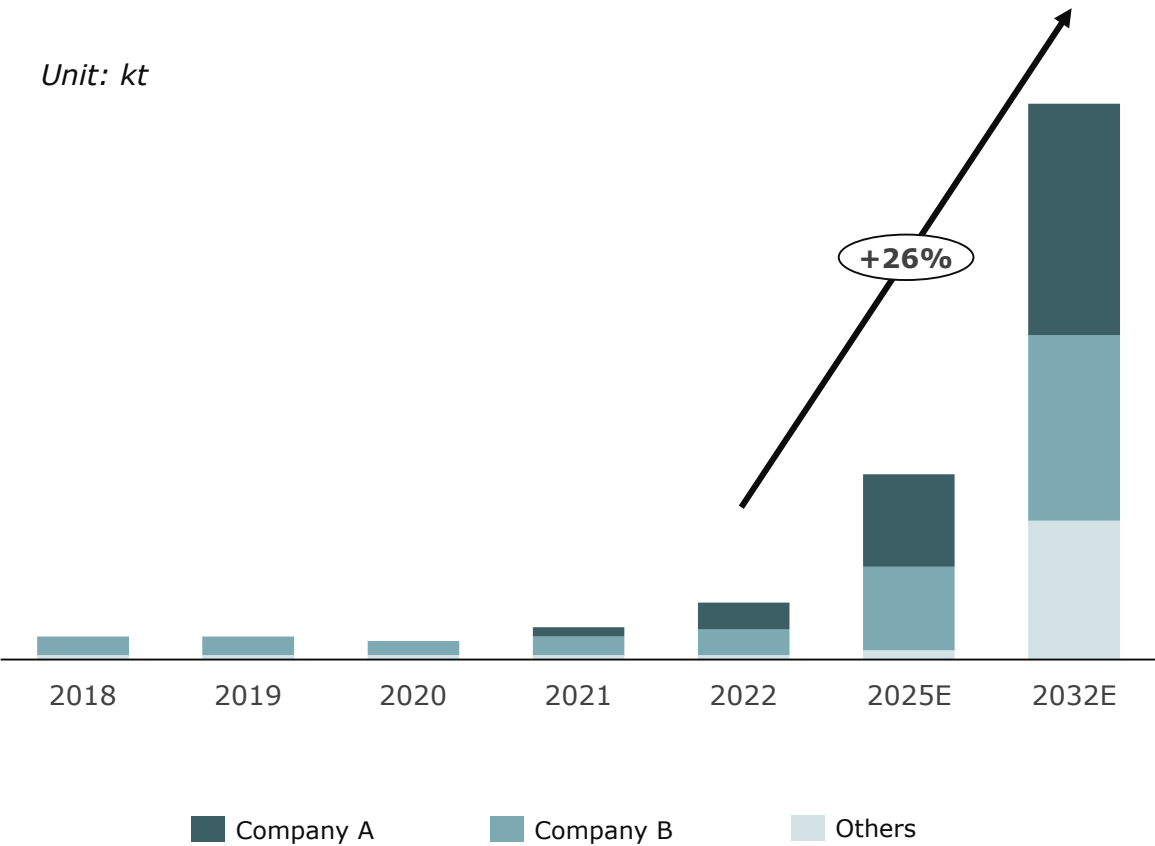
Source: SMM



Refined Lead & Zinc Supply in Indonesia

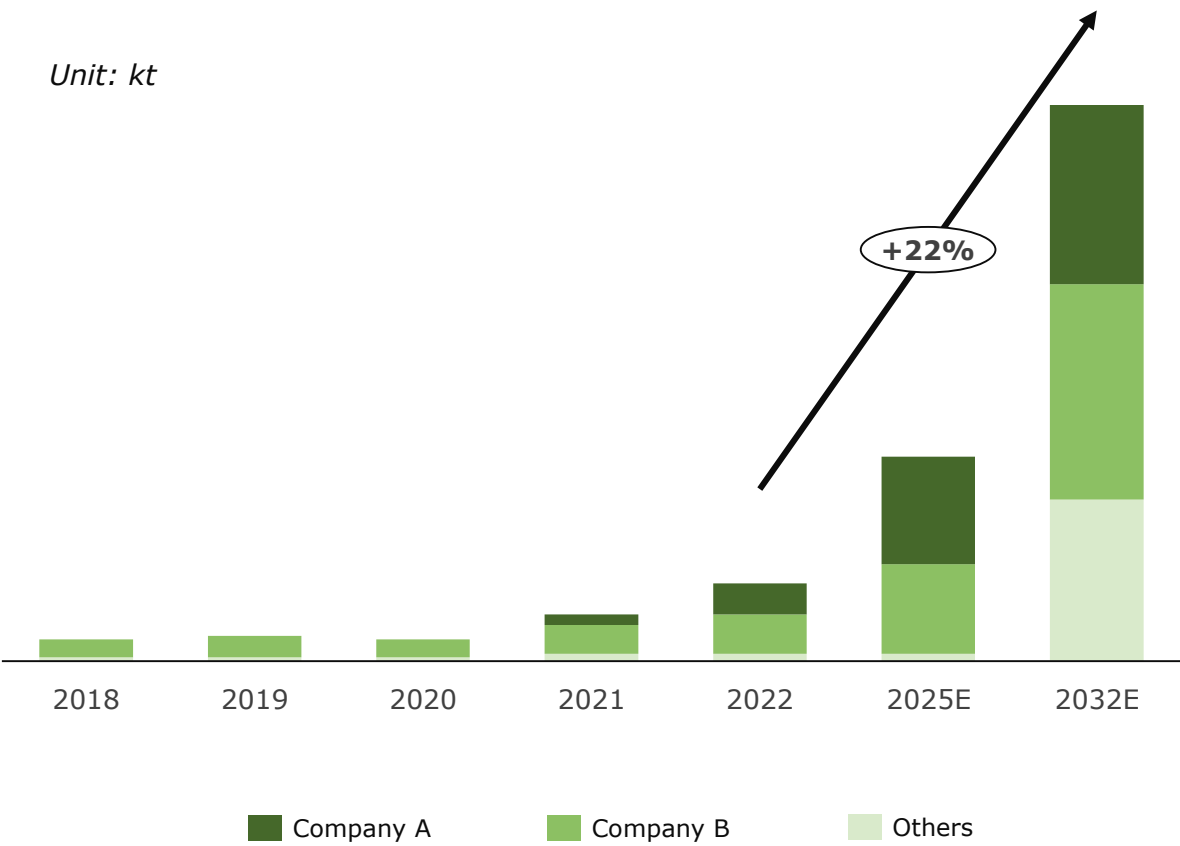
Production of Refined Lead in Indonesia (2018-2032E)

Unit: kt

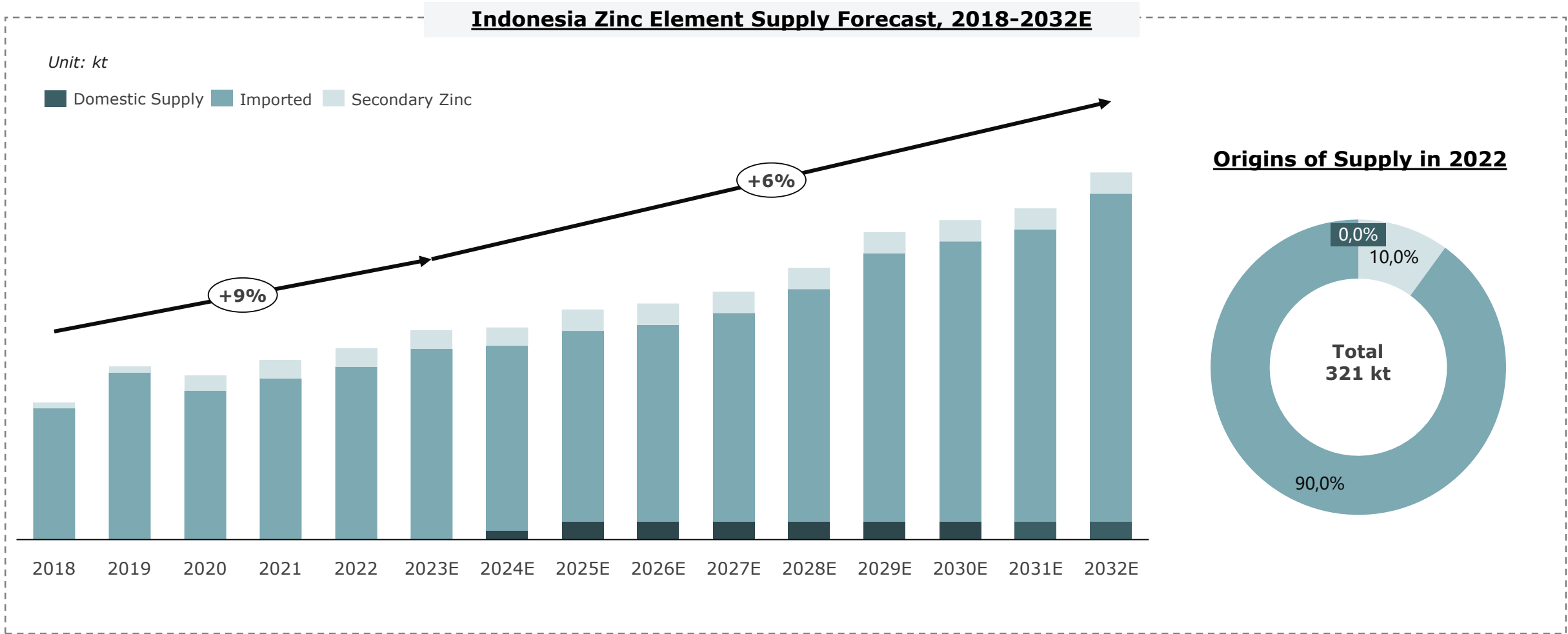


Production of Refined Zinc in Indonesia (2018-2032E)

Unit: kt



Zinc Element Supply in Indonesia



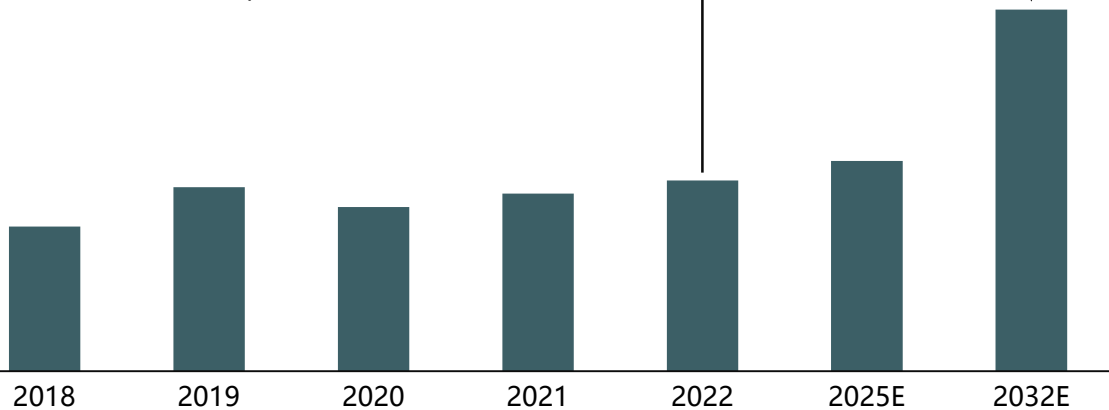
Zinc & Lead Import Forecast in Indonesia

Zinc Element Import in Indonesia, 2018-2032E

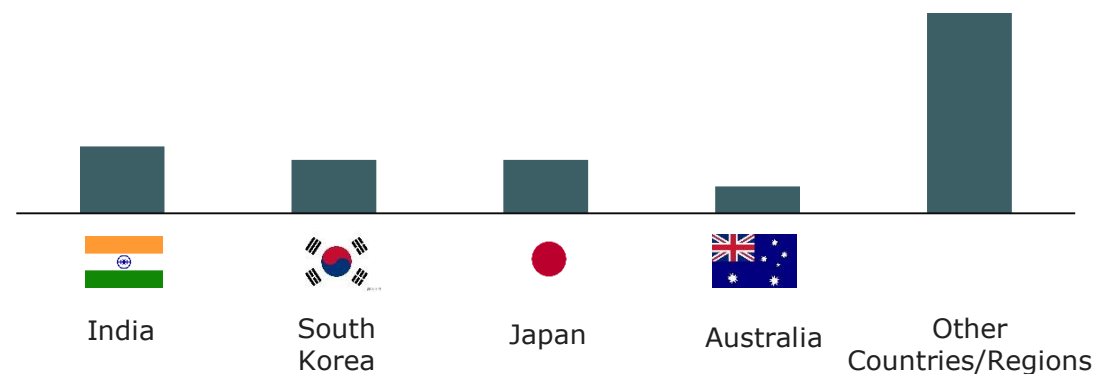
Unit: kt

Refined Zinc Import

+89.7%



Countries of Origin on Zinc Imports 2022

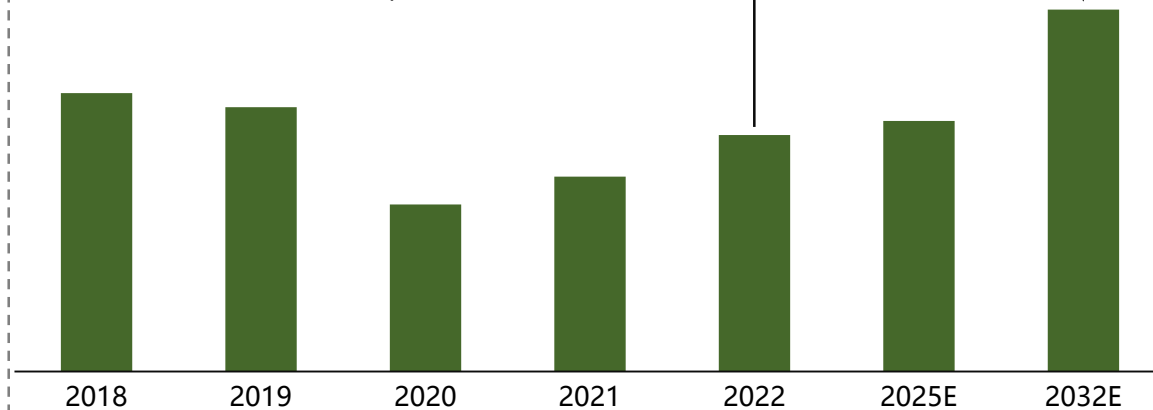


Lead Element Import in Indonesia, 2018-2032E

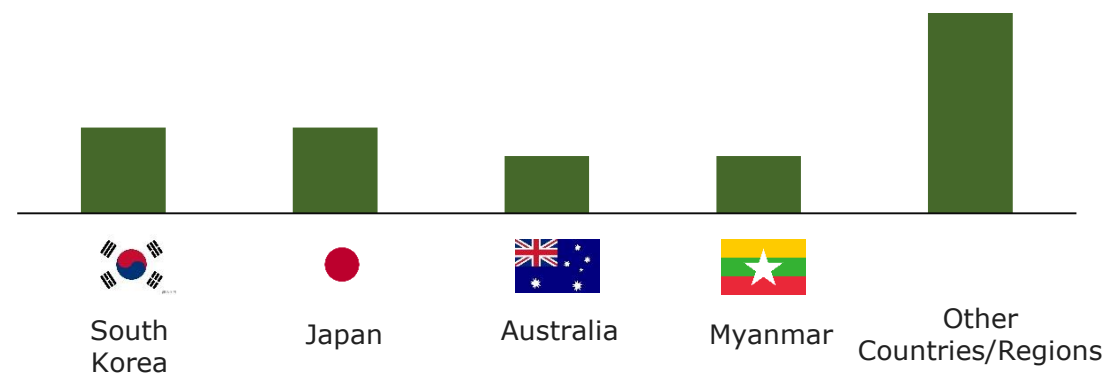
Unit: kt

Refined Lead Import

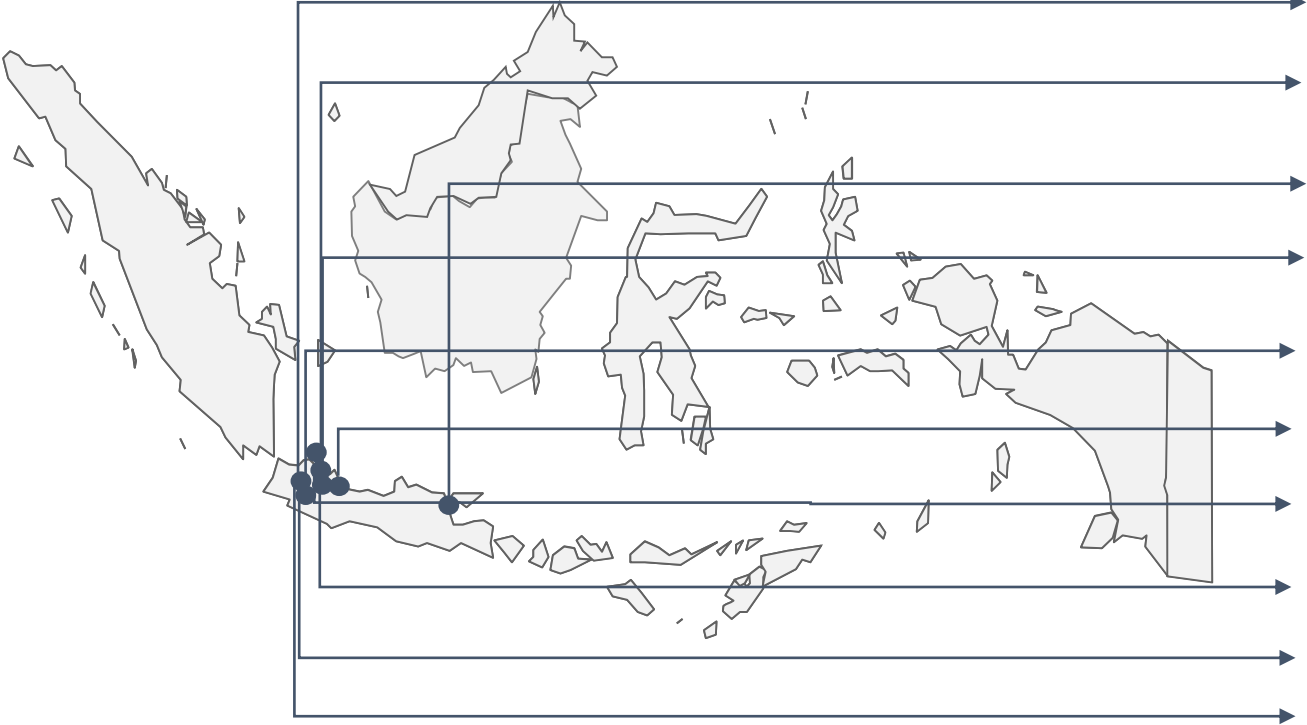
+52.9%



Countries of Origin on Lead Imports 2022



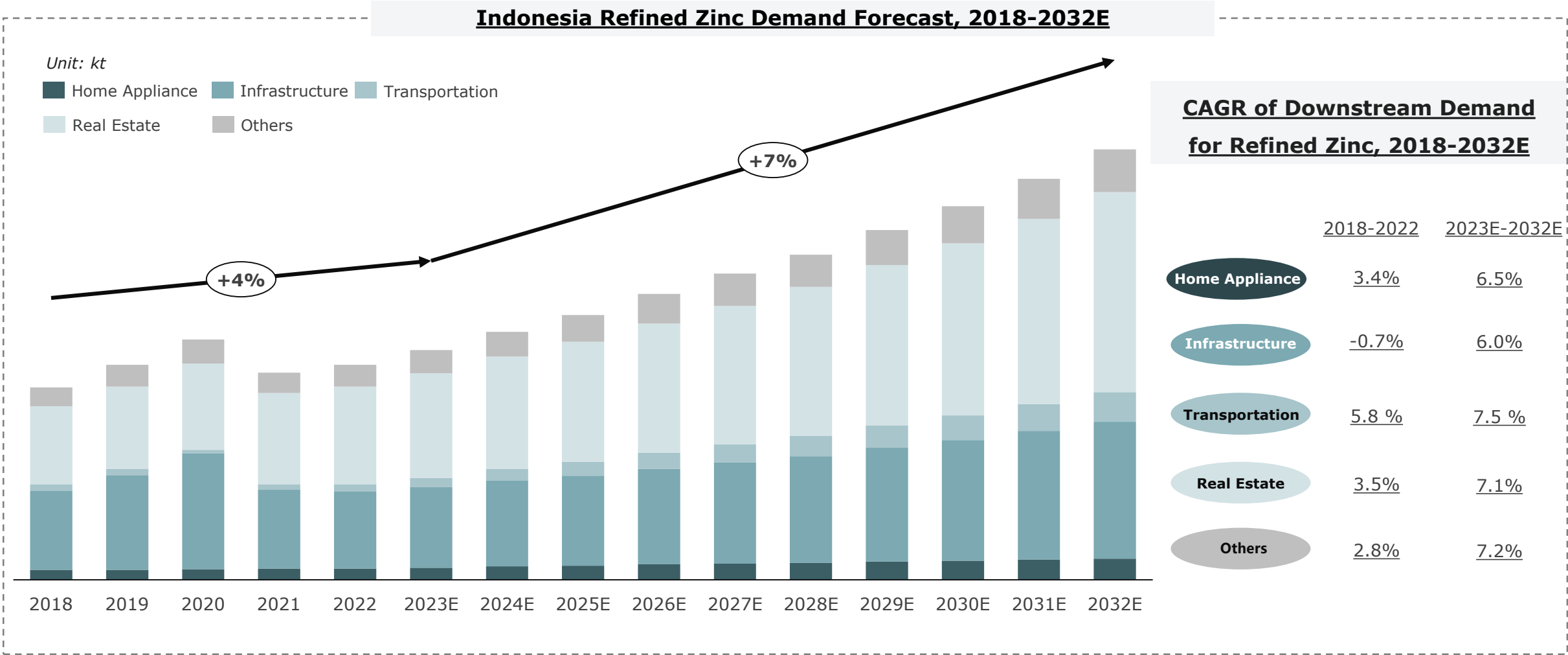
Zinc Fabrication in Indonesia

Distribution of Zinc Fabrication Plants in Indonesia	Company Name	Fabrication Type	Capability (kt)	Zinc Demand (kt)
	XXXX	Galvanizing	***	***
	XXXX	Galvanizing	***	***
	XXXX	Galvanizing	***	***
	XXXX	Galvanizing	***	***
	XXXX	Galvanizing	***	***
	XXXX	Galvanizing	***	***
	XXXX	Galvanizing	***	***
	XXXX	Galvanizing	***	***
	XXXX	Galvanizing	***	***
	XXXX	Die Casting	***	***

Source: SMM



Refined Zinc Demand in Indonesia



Source: SMM

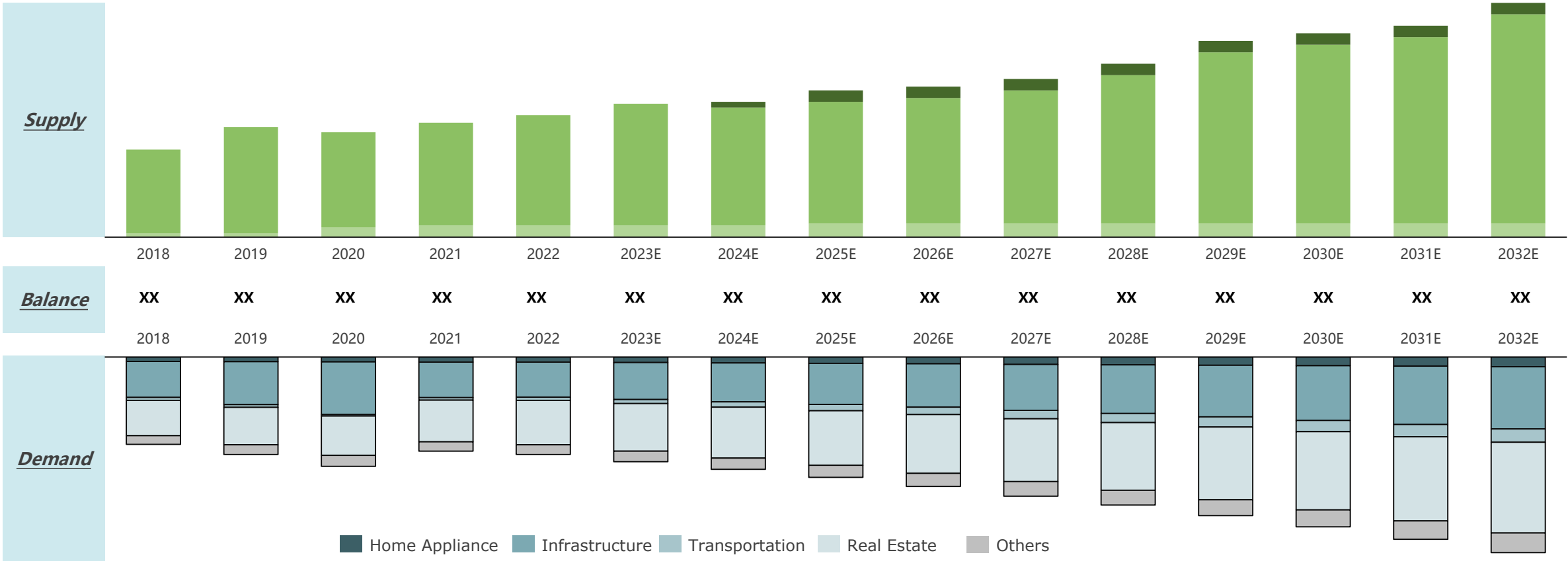


Supply & Demand of Zinc Element in Indonesia

Indonesia Zinc Element Supply & Demand, 2018-2032E

Unit: kt

Domestic Supply Importing Supply Recovery Supply



Source: SMM

SWOT Analysis of Lead-Zinc Project Investment Partnered with Company K in Indonesia

S



1-Rich Natural Resources

2-Low-Cost Due to the Partnership

3-Good Performance of the Partner

4-Partner's Investment Plans on Downstream Applications

W



1-Limited Development of the Lead & Zinc Value Chain

A-Some of the Consumables Need to Be Imported

B-Lack of Local Sophisticated Smelting Engineers and Workers

O



1-Tax Rates & Preferences
2-Policies

A-Government Willing to Develop Lead & Zinc Value Chain

B-Dominance during Negotiations

3-Industrial Agglomeration

4-Possible Cooperation with a Chinese Company

T



1-Risk of Policy Change

2-Risk from the Partner