PILLARS OF THE AFRICAN GREEN MINERALS STRATEGY

JERRY AHADJIE
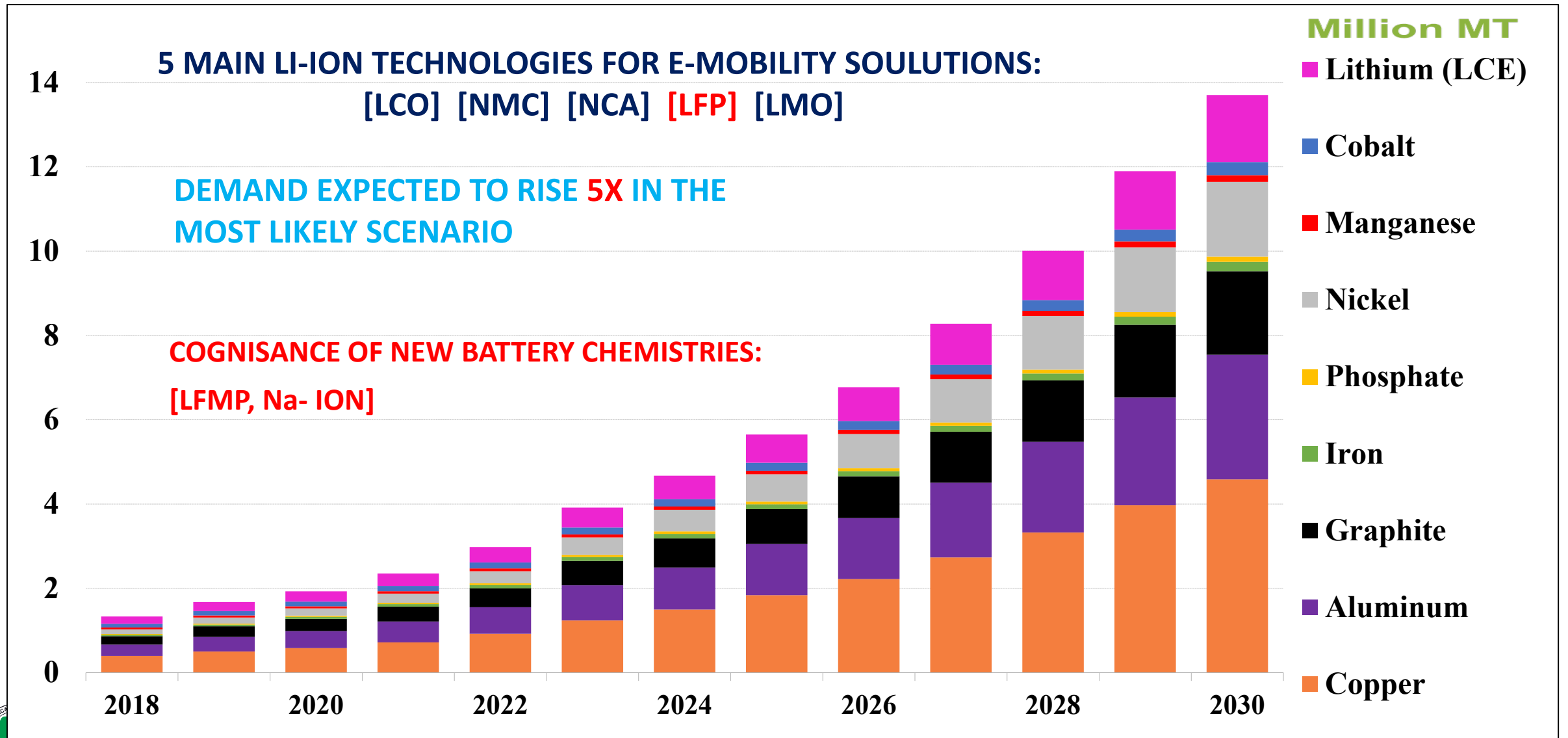
(CHIEF MINERALS OFFICER)

African Development Bank

RESOURCE MANAGEMENT WEEK 2023
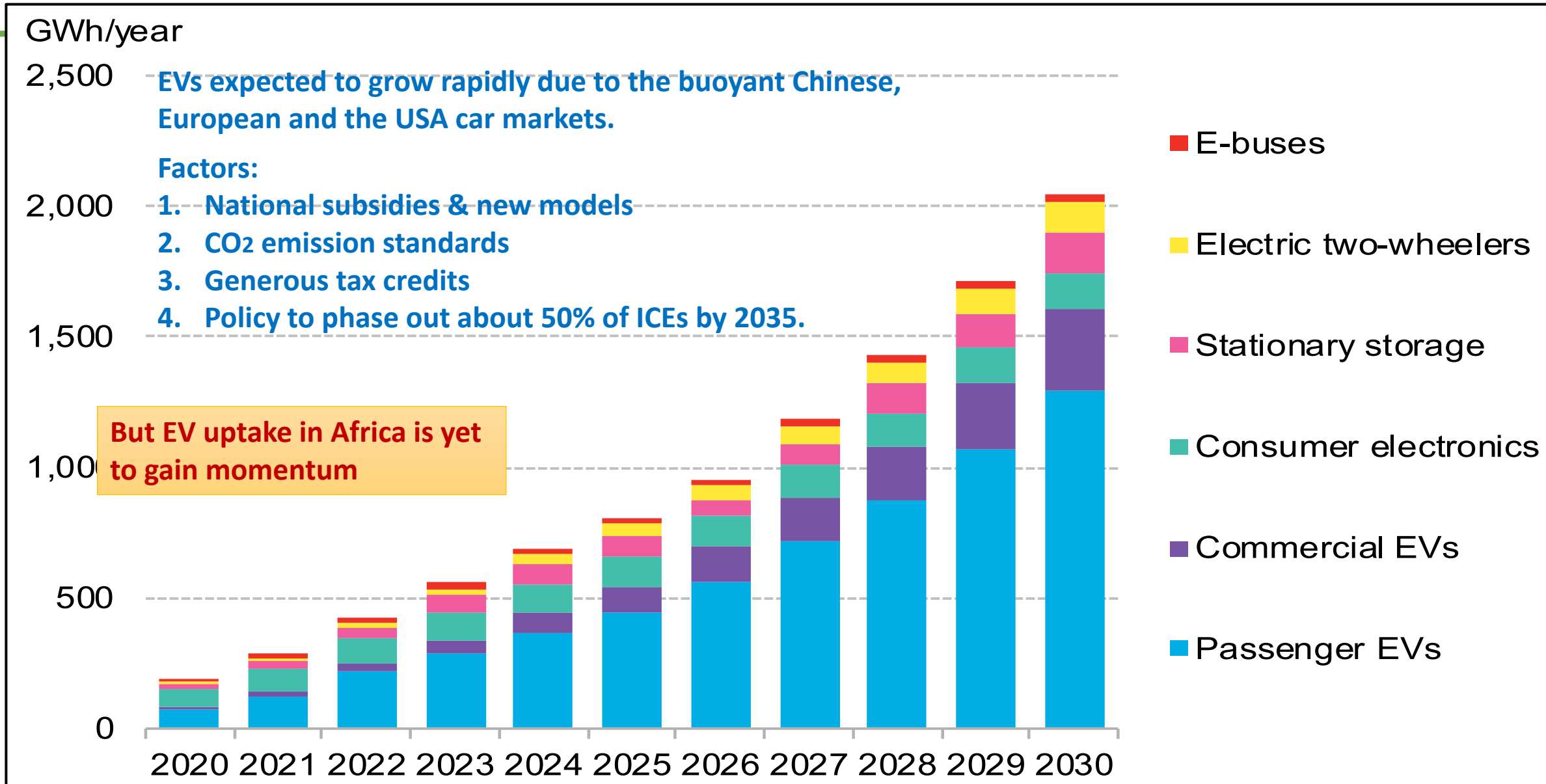
ASSURING SUSTAINABILITY IN RESOURCE MANAGEMENT

INTRODUCTION: METAL DEMAND OUTLOOK FROM LI-ON BATTERIES (2018-2030)

5 MAIN LI-ION TECHNOLOGIES FOR E-MOBILITY SOULUTIONS:
[LCO] [NMC] [NCA] [LFP] [LMO]

DEMAND EXPECTED TO RISE 5X IN THE MOST LIKELY SCENARIO

COGNISANCE OF NEW BATTERY CHEMISTRIES:
[LFMP, Na- ION]

Million MT

- Lithium (LCE)
- Cobalt
- Manganese
- Nickel
- Phosphate
- Iron
- Graphite
- Aluminum
- Copper

Source: BloombergNEF

INTRODUCTION: LITHIUM- ION BATTERY DEMAND OUTLOOK

GWh/year

EVs expected to grow rapidly due to the buoyant Chinese, European and the USA car markets.

Factors:
1. **National subsidies & new models**
2. **CO_2 emission standards**
3. **Generous tax credits**
4. **Policy to phase out about 50% of ICEs by 2035.**

But EV uptake in Africa is yet to gain momentum

Legend:
- E-buses
- Electric two-wheelers
- Stationary storage
- Consumer electronics
- Commercial EVs
- Passenger EVs

X-axis: 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

Y-axis: 0, 500, 1,000, 1,500, 2,000, 2,500

AFRICA'S SIGNIFICANT GREEN MINERALS IS AN ADVANTAGE

Mineral / Country	Percentage of some selected world proven RESERVES											Global Projections
	DR Congo	Gabon	Ghana	Guinea	Madagascar	Morocco	Mozambique	South Africa	Tanzania	Zambia	Zimbabwe	2050 projected global annual DD from energy technologies as % of 2018 global annual production
Bauxite				25								9%
Chromium								35				1%
Cobalt	51				1.4	0.2		0.5				460%
Copper	2.2								2.4			7%
Graphite					8.1		7.8		5.3			494%
Iron ore							0.1					1%
Lithium											1	488%
Manganese		4.7	1					40				4%
Titanium					3.1		3.5	5.6				0%
Vanadium								16				189%

Source: World Bank data on 2050 projected annual demand for 17 critical minerals & USGS data on global reserves

VISION AND INTER-CONNECTED FACTORS

Vision: Guide Africa to strategically harness the continent's green mineral resources for industrialization and to create an African presence in emerging green technologies.

Five inter-connected factors unfolding across Africa:

- Growth and demand for green minerals for future low carbon pathways and green energy;

- Africa's strength in mineral resources - basis for green energy demand and transition;

- Imperative of reorienting economic growth to a low carbon future;

- Drive industrialization and economic diversification taking advantage of the emergence of new industries: **BEV value chains**; and

- Leveraging **AfCFTA** to deepen market integration: Thus, provide scale economies for investment projects along the BEV value-chains.

STRATEGY PILLARS

Four Pillars support the strategy to deliver the VISION:

- **Advancing Mineral Development**:
  - increasing geological knowledge & information, conducting feasibility studies to attract investment, establishing infrastructure for an enabling environment and aligning mineral resource management with the AMV.
  - **AfDB is a key implementing Partner of AMDC on AMV and AMREC**

- **Developing People and Technological Capability:**
  - identifying skills needed to capitalise on opportunities and building institutions to generate them.
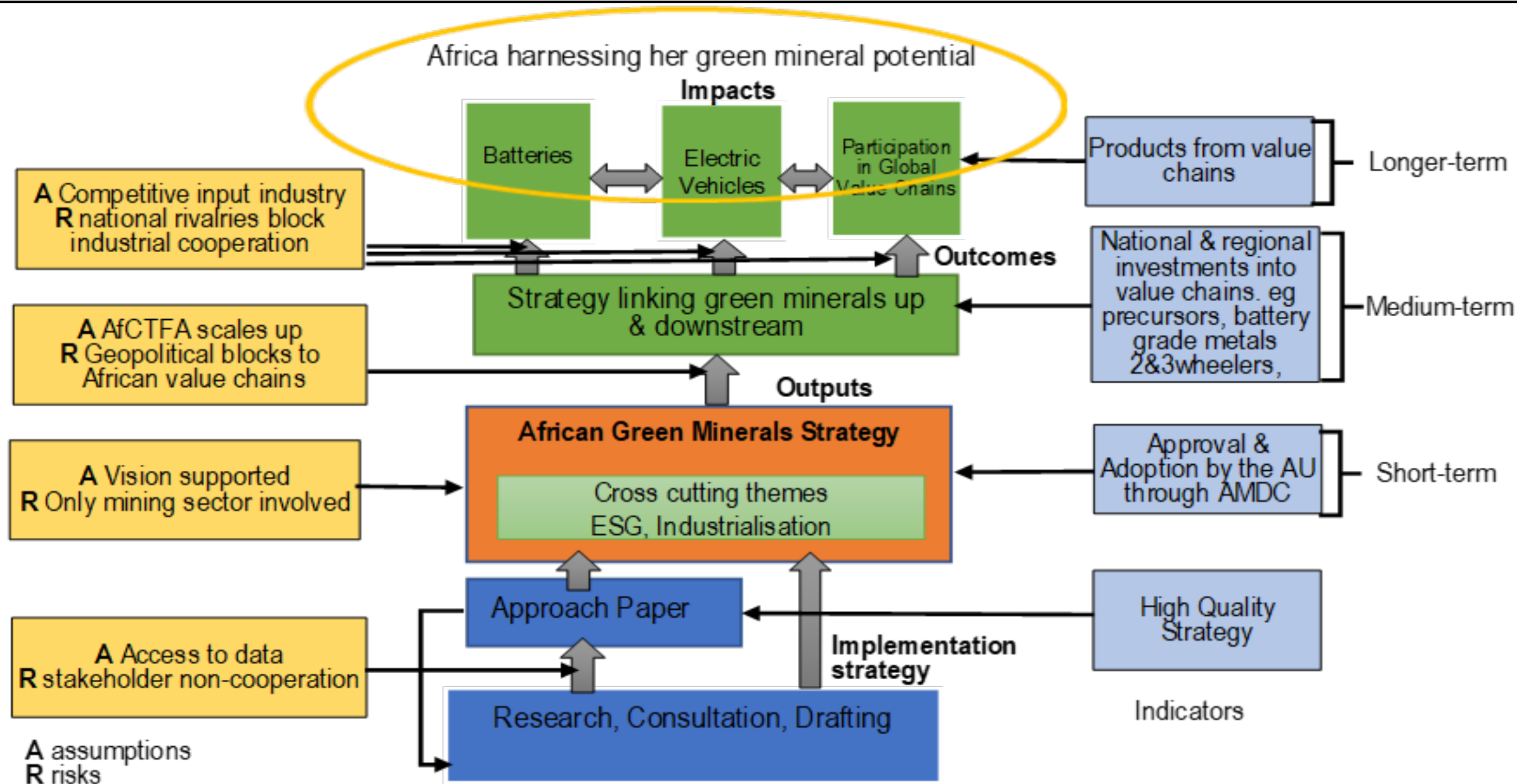
- **Building Key Value-Chains towards RBI & access wider regional and continental markets through AfCFTA:**
  - e.g.; Establish BEV value chains, starting with precursor production, 2&3 wheeled vehicles and commuter buses.

  - **Mineral Stewardship:**
  - responsibly guide ESG aspects of green minerals together with material reuse and recycling.

SIMPLIFIED THEORY OF CHANGE

Africa harnessing her green mineral potential

Impacts

Batteries ⟷ Electric Vehicles ⟷ Participation in Global Value Chains

A Competitive input industry
R national rivalries block industrial cooperation

Products from value chains — Longer-term

Outcomes

Strategy linking green minerals up & downstream

National & regional investments into value chains. eg precursors, battery grade metals 2&3wheelers, — Medium-term

A AfCTFA scales up
R Geopolitical blocks to African value chains

Outputs

African Green Minerals Strategy

Cross cutting themes
ESG, Industrialisation

Approval & Adoption by the AU through AMDC — Short-term

A Vision supported
R Only mining sector involved

Approach Paper

Implementation strategy

High Quality Strategy

A Access to data
R stakeholder non-cooperation

Research, Consultation, Drafting

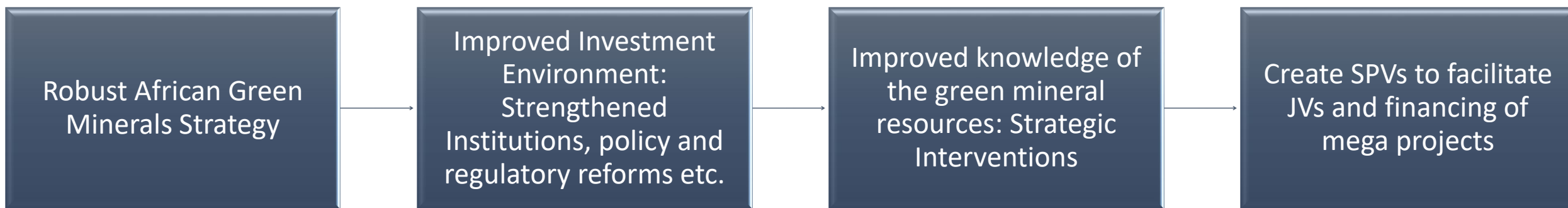Indicators

A assumptions
R risks

COMPETITIVENESS AND SOME SUCCESS FACTORS

Green Minerals – significant volumes. Business case for Precursor production in DRC.
AfCFTA: 1.39 billion pop. with a combined GDP valued at US$3.4 trillion.
2/3 Wheelers: Africa imports about 4 million with value 2.8 billion annually

Robust African Green Minerals Strategy	Improved Investment Environment: Strengthened Institutions, policy and regulatory reforms etc.	Improved knowledge of the green mineral resources: Strategic Interventions	Create SPVs to facilitate JVs and financing of mega projects

Scale up infrastructure investments (clustered around Special Economic Zones) and implement smart LC policies.	Foster the development of mineral-based industrialization and RMV chains within the context of the AfCFTA	Establish Centres of Excellence on battery development: • develop skills and competencies, increase domestic R&D and STI capabilities etc.	ESG Issues: Central to project development.

Thank you!

Further Information, Contact:
African Development Bank
African Natural Resources Centre
j.ahadjie@afdb.org
www.afdb.org/anrc

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