

# CONGO DRC AND THE GLOBAL RACE FOR CRITICAL MINERALS

Dr Guy Kioni

10 December 2025

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**Dr Guy Kioni** is a recognised geoeconomic strategist, known for his ability to build bridges between business, technology, and economic diplomacy. As CEO of the London-based Missang consultancy firm, he specialises in critical mineral supply chains, economic diplomacy, organisational and digital transformation, and sustainable development. He connects Africa's resource potential with global industrial demand by fostering high-impact public-private partnerships.

He is a Critical Mineral Fellow of the [Critical Mineral Initiative](#) at Middle East and North Africa Forum (MENAF). In addition, he also serves on the Advisory Board of [Buenassa SA](#) which is a Congolese company behind one of the first copper and cobalt refinery in the country.

Dr Kioni has a BSc in Business Information Systems from De Montfort University, a Diploma in Blockchain for Business from the University of Oxford, and an Honorary Doctorate in Business from the University of Bolton. He has lived in Belgium, the DRC, Zimbabwe, and the UK.

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# Introduction

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Three converging megatrends have re-positioned the Democratic Republic of Congo at the centre of global industrial competition:

- Energy transition (EVs, battery storage)
- Growth in AI computing infrastructure
- Geopolitical rivalry over critical mineral supply chains

Semiconductor revenue: \$630B (2024) → \$1T+ by 2030

"A trillion-dollar industry depends on minerals sourced from a handful of geographies. This is where geology meets geopolitics."

Sources: [www.wsts.org](http://www.wsts.org)

## The Hidden Dependencies of the Digital Economy and defence systems

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*"No Minerals; No Rare Earth, No Chips - "Why the Future of AI and Semiconductors Begins Below the Surface."*

- DRC: around 75% of global mined cobalt in 2025 & 55% known global reserves (*cobalt institute*)
- DRC: 12–13% global copper output
- China: ~73% cobalt refining globally, 80% of demand are exported to China. (*pwc*)
- China: ~50% of global reserve and 92% of global refining and processing capacity (*iea*)

***"Semiconductors may be designed in labs, but they begin in the ground."***

# Recycling & Circularity as Strategic Levers

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"Recycling: Extending Mineral Security While Raising ESG Standards." (Urban Mining)

- **Extending supply-chain security**

Predictable secondary feedstock beyond mining

Reduces exposure to conflict or export controls

- **Shrinking emissions**

Recycled cobalt/nickel/lithium → ~80% lower emissions (*Life Cycle Assessment*)

Cobalt recycling cuts GHG by 59%, energy use by 46% (*gbc*)

- **Falling cost of recycling technologies**

AI-driven sorting, hydrometallurgy, electrochemical recovery

"Recycling is not competition to mining. It is a multiplier of security, ESG and resilience."



# Why Demand for Minerals & Semiconductors Is Exploding

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"The Triple Shock: AI, Electrification & Defence."

## a) **Artificial Intelligence & Data Centres**

AI data centres require ~ 1.8× more copper per megawatt than traditional ones.

Data Center GPU markets linked to AI are growing at a very high double digit rates year on year.

Every advanced chip uses gallium, germanium, copper, cobalt, and rare earths.

"The AI race is a materials race."

## b) **Global Electrification & Evs**

EVs use 2.5× more copper than ICE vehicles.

EV battery demand is expected to grow ~ 6+ by 2030. (mckinsey)

Cobalt demand for energy storage is rising – even as chemistries evolve.

"Copper is the metal of electrification. Cobalt is the metal of energy stability."

## c) **Defence & Strategic Industries**

Modern radar, satellites, guidance systems rely on gallium, germanium, rare earths.

The US DoD classifies 50+ minerals as essential for national security.

"Semiconductors are the backbone of 21st-century defence – and minerals are the backbone of semiconductors."

"We are not just seeing increased demand – we are seeing exponential, structural, non-reversible demand."

# US-DRC Strategic Alignment

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"The Search for Mineral Sovereignty in a China-Dominated System."

## Strategic Partnership Agreement

- **Access US Market access first**  
Priority access for US and "aligned" investors to high-potential DRC critical mineral assets.
- **Structurally limiting rivals**  
Investment rules and ownership filter make new Tier-1 projects hard to reach for Chinese and other non-aligned firms.
- **Shared management**  
Joint structures and regular briefings gives Washington influence over DRC minerals sector.

# Regional Integration as Industrial Strategy

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## "Copperbelt + Corridors: Building Africa's Critical Mineral Power Bloc."

- Global Copper demand - > Projected increased +70-100% by 2050 (*S&P Global*)
- \$ 2.1 Trillion in metal and mining investment by 2050 (*BloombergNF*)
- At least 6 Geopolitical and Economic corridors : Lobito Corridor: DRC – Angola – Atlantic Port
- **At least 7 Geopolitical and Economic Corridors:**  
(1) Lobito (Angola/Atlantic), (2) Northern Corridor (DRC – Rwanda/Uganda – Kenya), (3) Central Corridor (DRC-Burundi/Rwanda – Tanzania), (4) Walvis Bay / Ndola ( DRC-Zambia-Namibia), (5) North-South Corridor (DRC-Zambia-Zimbabwe- Botswana, South Africa), (6) Tazara (DRC Zambia – Tanzania)

"Africa is not just exporting minerals – it is forming an industrial geography."

# What Investors Need to Consider

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"From Extraction to Integrated Systems: The New African Investment Logic."

Three investor archetypes are moving capital:

- **Many major Institutional Investors** (BlackRock, Large Pension funds, sovereign wealth funds)  
Seeking stable, traceable, ESG-aligned supply chains with long-duration contracts
- **Private Equity & Venture Capital**  
High-growth opportunities in: midstream processing/refining, recycling, traceability tech, industrial parks
- **Family Offices**  
Long-horizon positions in clean energy, circular minerals, peace-through-prosperity projects

Concrete examples of capital already flowing:

- RawBank (DRC's leading bank): Helped structure and participated in a \$400 million syndicated loan for the Kamo-a-Kakula copper project. (OECD Standards)
- PE consortium Yellowstone, Standards Banks Group, AfreximBank investing \$ 600 million for a dry port in Kasumbalesa (DRC/Zambia border)
- British International Investment (BII): Committed up to \$35 million alongside DP World into the Banana deep-sea port in the DRC, positioning it as a major export gateway for bulk commodities and processed materials.

**"Capital is shifting from mines to ecosystems."**

## Stability & Supply-Chain Risk

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"Why Stability in the Great Lakes Is a Global Industrial Variable."

Regional instability and governance issues can disrupt access to key mineral zones, creating volatility for global supply chains

Cobalt prices jumped from about \$10/lb to more than \$20/lb after changes to export rules and supply expectations

"Semiconductor security increasingly depends on governance and peace in mineral-producing regions."

## Conclusion/remarks

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"Africa's Decade: From Raw Material to Supply-Chain Architect."

Close with three numbers:

- Semiconductors → \$1T by 2030
- DRC → ~55% of global cobalt reserves, 70% global production
- Recycling → up to 80% emission reduction

"Africa – and the DRC in particular – is moving from the margins of the global economy to the centre of the world's industrial future despite the political and security crisis."

# Q&A

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