

Working Document for the operationalisation of a Solid Minerals Commodity Exchange





Background

Introduction

Nigeria's vast mineral resources, including columbite, tantalum, gold, tin, limestone, bitumen, coal etc, positions the nation as a potential powerhouse in the global mineral trade. However, the downstream sector suffers several limitations that hinder its ability to reach its full potential.

DOWNSTREAM SECTORAL CHALLENGES AND INEFFICIENCIES:

- a) Fragmented Market: The sector is characterized by a multitude of small-scale miners and informal trading channels. This fragmentation makes it difficult to discover fair and transparent prices, discourages larger buyers due to a lack of standardization, and hinders access to finance for miners who struggle to prove the legitimacy and value of their offerings.
- **b) Opaque Pricing:** The absence of a centralized exchange and standardized pricing mechanisms leads to a lack of transparency in the pricing of minerals. This makes it challenging for miners to get a fair price for their resources and for buyers to accurately assess the value of their purchases.
- c) Limited Data & Information: Reliable and comprehensive data on mineral reserves, production levels, and market trends is scarce. This lack of transparency makes it difficult for investors to assess the risk-reward profile of the sector and discourages investment in exploration, mining technologies, and infrastructure development.
- d) Limited Access to Finance: Small-scale miners lack access to financing due to the informal nature of the market.
- e) Limited Investments: Uncertainties and lack of transparency discourage investment in exploration, mining technologies, and infrastructure.

THE DOWNSTREAM SECTORAL SOLUTION:

A SOLID MINERALS COMMODITY EXCHANGE

A solid minerals commodity exchange is a centralised platform for trading solid minerals. The establishment of a well-functioning solid minerals commodity exchange has the potential to be a game-changer for Nigeria's solid mineral trading sector. An exchange can address the existing challenges and unlock new opportunities in the following ways:



A centralized platform for trading minerals will foster transparency through standardized contracts, real-time price quotes, and electronic trading mechanisms. This would eliminate information asymmetry, improve price discovery, and attract larger, more reputable buyers to the market.



Standardization & Quality Control

The exchange can establish standardized contracts that define quality specifications, delivery terms, and dispute resolution mechanisms. This would ensure buyers receive minerals that meet their needs and reduce risks associated with inconsistent quality.



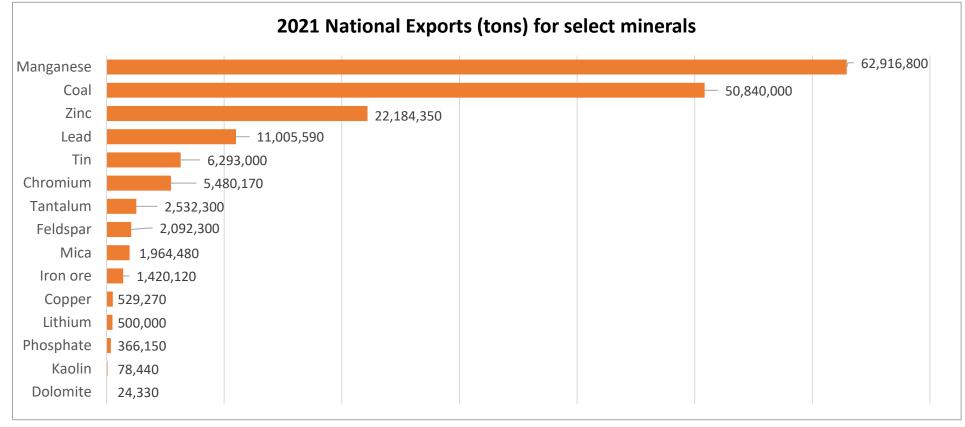
Access to Finance

The exchange can create a more secure and transparent environment for the sector, potentially attracting financial institutions to offer trade finance and other credit facilities to miners. Verified trade contracts on the exchange can serve as collateral, allowing miners to access the capital they need to invest in equipment, expand operations, and improve productivity.

Market Justification For A Solid Minerals Exchange in Nigeria

Across the country, there are significant mining and processing activities occurring at various levels, however, informal trading practices continue to hinder growth and transparency, especially as it relates to export of solid minerals. A solid minerals exchange would aim to bring these resources to a formal marketplace and ensure automated deduction of royalties and other FGN fees.

Based on research, some of the top exported minerals produced across the country totaling over 100 million tons annually can boost royalties from the recorded N3.62 Billion as at 2021 to up to nearly N19 Trillion when traded through an exchange.



Source: NEITI 2021

Estimated Transaction Volumes On a Solid Minerals Exchange in Nigeria

Based on 2021 Nigerian Customs Service report of top exported minerals, NCX has the potential to host a high volume of minerals for export annually. Since 2021, 3460 new SSMLs and 130 new MLs have been allocated, meaning that subsequent NEITI reports on production volumes will show significant increments in production volumes and royalties paid. A 45% increase was applied on the production volumes for 2024; royalty rates as published by the Ministry in 2022 was also applied

S/N	Minerals	Mineral class	2021 Reported Exports (tons)	2024 Projected exports (tons) – 45% increment	Royalty rate N / tons	Royalty value
1	Agglomerated Iron ores and concentrates	Base metals	300,060	435,087	300	130,526,100
2	Antimony ores and concentrates	Base metals	928,040	1,345,658	3,000	4,036,974,000
3	Chromium ores and concentrates.	Base metals	5,480,170	7,946,247	5,000	39,731,232,500
4	Cobalt ores and concentrates.	Base metals	22,130	32,089	5,000	160,442,500
5	Copper ores and concentrates.	Base metals	529,270	767,442	1,800	1,381,394,700
6	Lead ores and concentrates.	Base metals	11,005,590	15,958,106	1,500	23,937,158,250
7	Manganese ores/concentrates	Base metals	62,916,800	91,229,360	350	31,930,276,000
8	Niobium, tantalum, vanadium or zirconium	Base metals	2,532,300	3,671,835	900,000	3,304,651,500,000
9	Non-agglomerated: Iron ores fines	Base metals	450,000	652,500	300	195,750,000
10	Non-agglomerated: Iron ores lumps	Base metals	670,600	972,370	300	291,711,000
11	Other ores and concentrates.	Base metals	1,000	1,450	194,555	282,104,750
12	Other ores and concentrates.	Base metals	19,863,510	28,802,090	194,555	5,603,590,522,673
13	Tin Ores	Base metals	460,940	668,363	90,000	60,152,670,000
14	Titanium ores and concentrates.	Base metals	789,950	1,145,428	30,000	34,362,825,000
15	Tungsten ores and concentrates.	Base metals	240	348	75,015	26,105,220
16	Zinc ores and concentrates	Base metals	22,184,350	32,167,308	1,500	48,250,961,250
17	Zirconium ores and concentrates	Base metals	1,323,060	1,918,437	5,000,000	9,592,185,000,000

Source: (NEITI, MID, NCS)

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S/N	Minerals	Mineral class	2021 Reported exports (tons)	2024 Projected exports (tons) – 45% increment	Royalty rate N / ton	Royalty value (N)
18	Crude mica and mica rifted into sheets or splitting	Industrial minerals	1,964,480	2,848,496	100	284,849,600
19	Crude or roughly trimmed mica	Industrial minerals	1,381,340	2,002,943	100	200,294,300
20	Dolomite, not calcined or sintered	Industrial minerals	24,430	35,424	100	3,542,350
21	Feldspar	Industrial minerals	2,092,300	3,033,835	200	606,767,000
22	Granite cut into blocks or slabs in rectangular	Industrial minerals	110,100	159,645	4,820	769,488,900
23	Gypsum; anhydrite	Industrial minerals	20	29	300	8,700
24	Kaolin and other kaolinic clays, whether or not calcined.	Industrial minerals	78,440	113,738	150	17,060,700
25	Limestone flux	Industrial minerals	55,010	79,765	75	5,982,338
26	Marble and travertine cut into blocks or slabs	Industrial minerals	1,272,250	1,844,763	3,615	6,668,816,438
27	Mica powder	Industrial minerals	201,510	292,190	100	29,218,950
28	Mica waste	Industrial minerals	33,490	48,561	100	4,856,050
29	Natural calcium phosphates	Industrial minerals	366,150	530,918	200	106,183,500
30	Natural sands of all kinds, excluding silica and quartz	Industrial minerals	1,215,080	1,761,866	50	88,093,300
31	Quartz (Industrial)	Industrial minerals	617,170	894,897	100,000	89,489,650,000
32	Quartzite	Industrial minerals	30	44	100,000	4,350,000
33	Silica sands and quartz sands	Industrial minerals	3,668,700	5,319,615	100	531,961,500
TOTA	L		142,538,510	206,680,840		18,844,108,277,568

Source: (NEITI, MID, NCS)

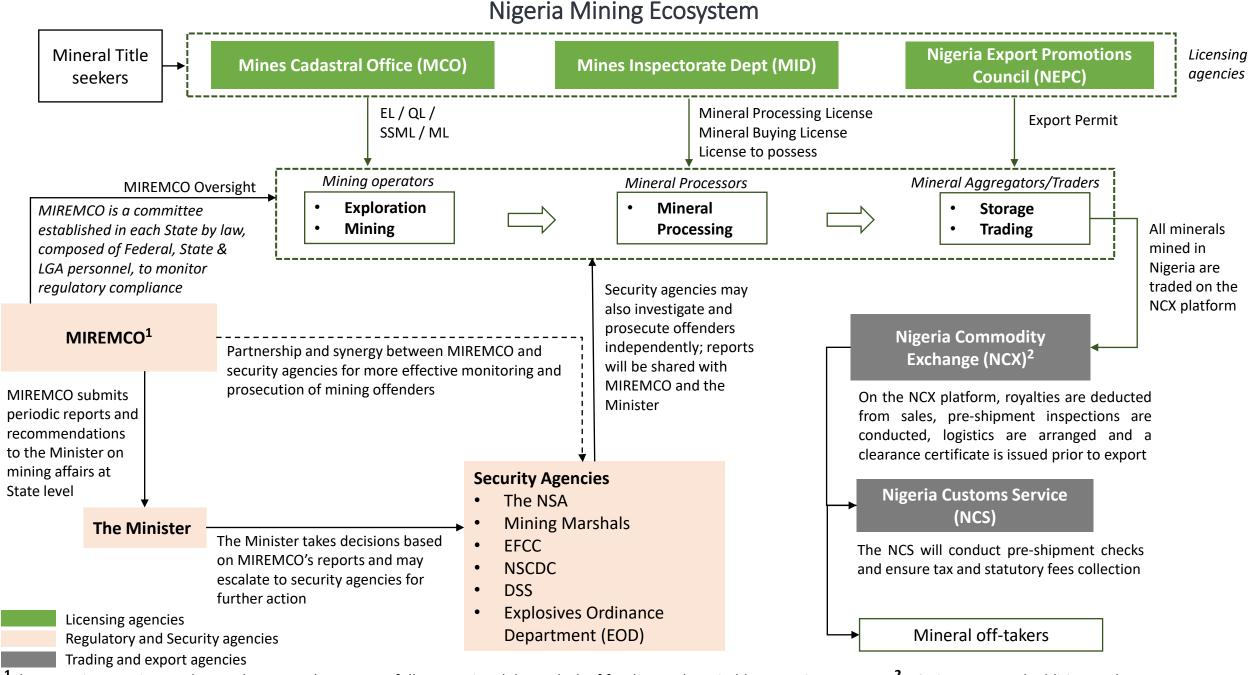


Understanding Nigeria's Mining Sector

The Value chain of Nigeria's Mining industry

The Mining value chain is divided into the Upstream, Midstream and Downstream segments, with majority of activities focused in the upstream and downstream.

Segments	Activities	Players	Market structure	Challenges
Upstream Exploration and Mining	 Prospecting Geoscientific study Mining Extractive metallurgy 	 Geologists, Mining Engineers Mining Companies Mine/Artisanal workers Original Equipment Manufacturers and Equipment Leasing Companies Explosives suppliers 	Largely disorganized with more small scale and artisanal players than large scale players. It is poorly regulated by the Federal government	 High capital requirements Inconsistent exploration reporting standards Negative environmental impacts Insecurity Safety hazards
Midstream Beneficiation and Processing	 Beneficiation and processing Extractive metallurgy Transportation and storage 	 Mineral aggregators and Processors Engineering, Procurement and Construction (EPC) Companies Warehouse leasing companies 	The market is structured, as processing facilities enter specific supplier/off-taker agreements and logistics companies go into direct partnerships with miners. However, it is poorly regulated by the federal government	 High capital requirements High energy consumption Negative environmental impacts
Downstream Trading and Logistics	StorageMarketingTransport and logistics	 Off-takers (foreign and local industries and manufacturers, construction companies, factories) Haulage and logistics companies Shipping agencies Warehouse owners 	The market is somewhat structured as off-takers go into direct partnerships with miners, however the trading methods are porous. Shipments However, it is poorly regulated by the federal government	Infrastructure Deficit



¹The committees exist per the Act, however, they are not fully operational due to lack of funding and a suitable operating strategy NCX is a proposed addition to the current structure

Existing Stakeholder Mapping from the Mines to market

The table below shows the stakeholders roles in the journey of minerals from the mines to the point of trade as it currently is in Nigeria.

S/N	Proposed steps from mines to market	МСО	NEPC	Miners	FMO	NCS	NPF
1.	Miner is issued an SSML/ML and obtains exports certificate	*	*				
2.	Mineral is mined			*	*		*
3.	Mined volumes are reported to the FMO/MID in the State			*			
4.	FMO issues State Certificate of origin prior to haulage				*		
5.	Royalty is paid via remitta			*			
6.	Minerals are hauled to off-takers locally or to the ports for export			*			
7.	Mineral is cleared for export after pre-shipment inspection					*	

Optimised Stakeholder Mapping from Mines to Market – incorporating an exchange

The table below shows stakeholder roles in the journey of minerals from the mines to the point of trade on the proposed NCX platform

S/N	Proposed steps from mines to market	МСО	NEPC	Miners	NCX	MOFI	FMO (or MIREMCO)	NPF
1.	Miner is issued an SSML/ML and obtains exports certificate	×	*					
2.	Mineral is mined			*			*	*
3.	Mined volumes are reported to the FMO (or MIREMCO) in the State			*				
4.	FMO (or MIREMCO) issues State Certificate of origin prior to haulage						*	
5.	Mineral is transited to NCX accredited warehouse			*				*
6.	Minerals are verified by NCX agent (QA/QC)				*			
7.	NCX issues QA/QC Certificate				*			
8.	Mineral is recorded and traded on the platform				*			
9.	Royalties and management fees are deducted				*	*		
10.	Mineral is cleared for export				*	*		

Proposed additions from mines to market

Description of identified Stakeholders

The roles of the stakeholders identified in the previous table are outlined below:

Mines Cadastral Office (MCO):

- The key agency for mineral titles in Nigeria.
- Handles the administration of mineral titles, including:
 - Receiving applications for exploration and mining licenses
 - Processing and issuing licenses
 - Maintaining a register of all mineral titles
 - Enforcing the "first come, first served" principle for licenses

Federal Mines Officer (FMO) – activities should be subsumed within MIREMCO

- Oversees the implementation of the mining Act
- Ensures compliance with mining regulations and best practices.
- May conduct inspections of mining operations.

Mineral Resources and Environmental Committee (MIREMCO)

 A committee established in each State by law, composed of Federal, State & LGA personnel, to monitor regulatory compliance

Nigeria Exports Promotion Council (NEPC):

- Issued **Exporter Registration Certificate** which is the key requirement for exporting from Nigeria.
- Promotes the export of Nigerian minerals.
- Provides assistance to miners in identifying export markets and complying with export regulations.
- May offer incentives or programs to encourage mineral exports.

Nigeria Police Force (NPF)

- Maintains law and order in mining areas.
- Investigates and enforces laws related to illegal mining activities.
- Provides security for mining personnel and equipment.



Security
agencies in
Nigeria's mining
sector

Security Agencies

Nigeria's faces several security challenges in its mining sector, and various security agencies play a role in safeguarding it. The country's security apparatus can be broken down into **Core Agencies and Specialized Agencies**:



Core Security Agencies

Nigerian Security and Civil Defence Corps (NSCDC):

Primary Role: Leads mining security with their **Mining Marshals** unit.

Activities: Patrol sites, enforce regulations, apprehend illegal miners, secure legitimate operations.

Nigeria Police Force (NPF):

Primary Role: Maintains law and order, supporting mining security.

Activities: Responds to violence/theft, investigates crimes, works with NSCDC for community security.

Security Agencies – Cont'd



Economic and Financial Crimes Commission (EFCC):

Primary Role: Combats financial crimes related to mining.

Activities: Investigates money laundering, illegal mining revenue, corruption within the sector.

Impact: Disrupts the financial networks of illegal mining operations, potentially deterring criminal activity.

Department of State Services (DSS):

Primary Role: Gathers intelligence and safeguards national security.

Activities: Conducts covert investigations, gathers intelligence on threats to mining (e.g., armed groups), assesses potential national security risks.

Impact: Provides vital intelligence for proactive security measures and helps identify broader threats.

National Security Agency (NSA):

Indirect Role: Does not directly manage the sector, but their expertise can be valuable.

Activities: Collaborates with other agencies, analyzes intelligence on security threats (e.g., terrorism), advises on policy development for mining security.

Impact: Offers strategic guidance based on their broader national security perspective.

Explosives Ordinance Department (EOD):

Primary Role: Manages and regulates explosives used in mining operations.

Activities: Conducts inspections, issues permits for explosives use, investigates accidents involving explosives.

Impact: Ensures safe and responsible use of explosives, minimizing accidents and potential security risks.

By leveraging the combined expertise of these agencies, MOFI can create a more robust security framework to secure its activities. This collaborative approach will address security threats, and ultimately foster a safer environment for legitimate mining and exporting activities.



NCX Business Execution Plan

Summary of the Business Model for the NCX

Key Partners

- Ministry Of Finance Incorporated
- Nigeria Commodity Exchange
- Federal Ministry of Trade and Investments
- FG Security Agencies
- MIREMCO
- Technical partner(s) for Platform development
- Private Investors
- Logistics & haulage service providers
- Warehouse operators



Key Activities



- Beneficiation
- Assaying/Testing of Solid Minerals
- Warehousing
- Commodity Trading (Spots & Forwards)
- **Exports**
- Market Data distribution

Key Resources



- · Warehouses and infrastructure
- Mineral testing/Assay labs
- Trading Software (Settlement System)
- **Inventory Management** Systems

Value Proposition



- Significant market share for NCX being the designated trading platform for the country, by law.
- Transparent, centralized platform for efficient price discovery and risk management
- Significant revenue potential through transaction fees and other exchange services
- Recurring revenue streams through transaction fees, listing fees, data subscriptions, and valueadded services like storage or financing
- Growth potential by platform expanding offerings over time

Target markets



- Local mining companies
- Local mineral processors
- Local mineral aggregators and traders
- Local markets
- International markets

Sales/Distribution Channels

- The NCX platform
- Industry Events & Conferences
- Partnership Channels (such as Industry Associations, Broker networks etc.
- Digital marketing
- Referral Programs

Customer Relationships

- User-friendly trading platform
- Market analysis, reports, and webinars
- Clear rules, regulations, and dispute resolution mechanisms.
- Dedicated account managers
- Proactive communication
- Periodic industry events, conferences, or online forums
- Loyalty programs or industry awards



Cost Structure

- Direct Cost: Technology & Infrastructure, Operational cost, Settlement & Clearing Fees, Payment Processing Fees, Data Storage, Regional Office rental, etc.
- Indirect Costs: Marketing & Branding, Market Development & Education, Compliance & Risk Management, Business Development & Partnerships, Travel, recruitment, training, depreciation, etc.



Revenue Streams

Transaction-Based Fees

- Listing & Membership Fees
- **Data & Information Services**
- Ancillary services (like Logistics & Transportation, storage and financing, Advertising & Sponsorships, **Educational Programs**)







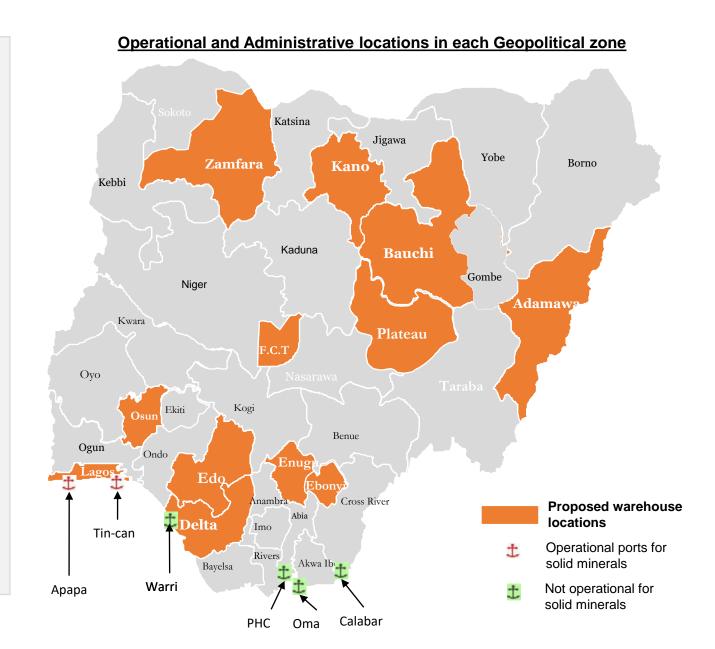
Operating Locations for the Exchange

Administrative Headquarters for the exchange:

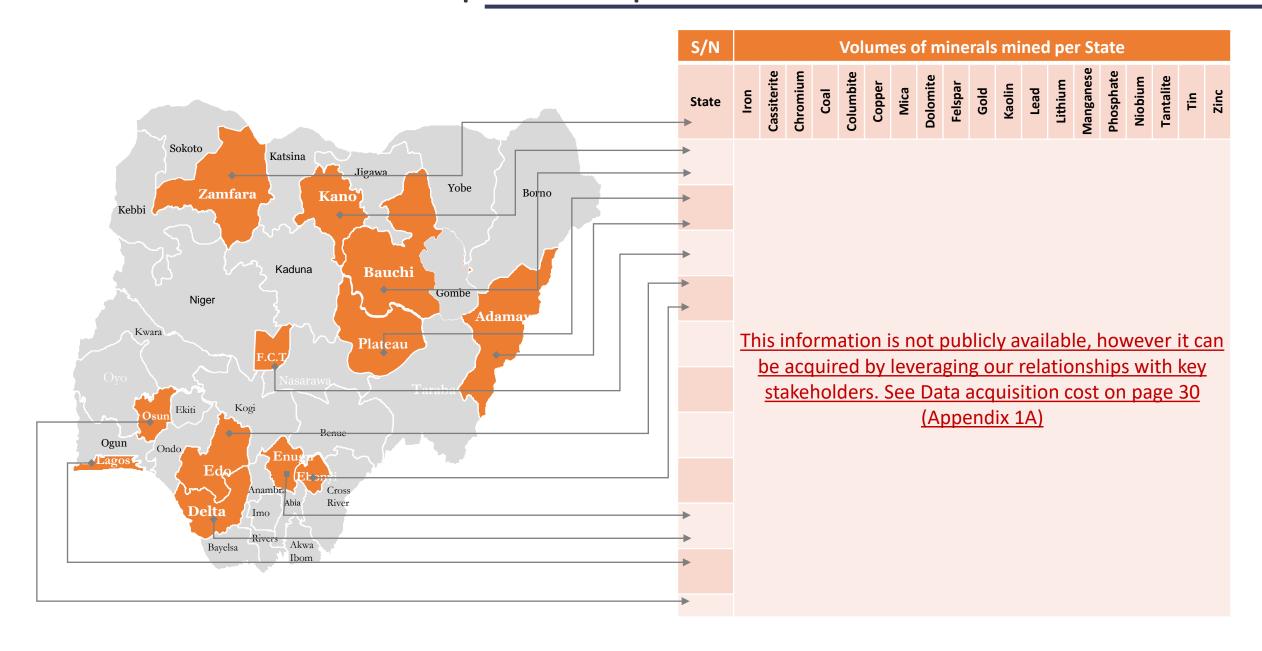
- This will be located in Abuja under the management of the Nigeria Commodity Exchange (NCX)
- There will also be a well equipped administrative office in each State where a warehouse is built.

Warehouses:

- The minerals exchange will establish 2 warehouses in each geopolitical zone in the country.
- The States in which warehouses will be established are chosen based on the volume of metallic ores produced within the State for export – <u>See volumes produced per</u> <u>state on the next page</u>
- The warehouses will be well-equipped with facilities for the safe storage and handling of mined minerals, ensuring security and preservation.
- Each warehouse will also be equipped with beneficiation facilities as well as global standard mineral testing/assay labs.



Volumes of metallic ores produced per State



24-month Execution Plan

0 - 6 months

- 6. Develop a robust trading platform, data management system, and communication infrastructure to
- 7. Identify and train a qualified team to manage and operate the exchange.

support the exchange's operations.

- 8. Conduct pilot testing of the exchange's functionalities with a limited group of participants to identify and address any operational challenges.
- 9. Officially launch the exchange with a well-coordinated media campaign to create awareness among stakeholders.
- 10. Actively onboard miners, exporters, and other relevant players to participate in the exchange.

6 – **12** months

12 - 24 months

>24 months

- Conduct a comprehensive study to assess the viability of the exchange, considering factors like market demand, existing infrastructure, operational costs, and potential benefits.
- Determine states with the highest production of metallic ores to inform locations for the establishment of NCX's warehouses.
- 3. Determine infrastructural needs that ensure minerals can be transported conveniently.
- 4. Select two strategic states and set up one warehouse (complete with beneficiation and assaying facilities) in each state.
- 5. Draft policy and secure approval mandating the trade of solid minerals on the exchange, showing the exchange's short long term targets, starting with 'minerals for export' in the first 24 months and all other minerals after 24 months.

- 11. Enter partnerships with other regional or international commodity exchanges to facilitate trade and improve access to global markets.
- 12. Commence value-added services through the exchange, such as market research data, logistics support, and financial instruments like hedging options.
- 13. Develop an optimal strategy that ensures trading of precious metals and gemstones on the exchange including an effective security architecture.

- 14. Expand warehouses to other strategic states
- Expand the exchange to include trading of additional solid minerals beyond just 'minerals for export'.
- 16. Implement strategy for ensuring transparent trading of precious metals and gemstones on the exchange.

Policy changes or reforms that need to be made to achieve objectives

- a) Introduce to the Minerals and Mines Act, 2007 a law that all mineral trade be conducted on the Nigeria Commodity Exchange, where defaulters will attract sanctions (fines / imprisonment).
- b) Develop a National mineral trading policy/regulation guiding the use of the NCX for mineral trading activities.
- c) Review of FGN royalty rates card on solid mineral to reflect global standards.

These will be reviewed based on MOFI's planned approach for implementation.



Pre-Development and Set-up Cost

Cost of Set up of Exchange

The funding requirement for the setup of the Solid Minerals Commodity Exchange in Nigeria is NGN (59,362,244,458).

This is broken down into the total Capital expenditure and the budgeted Operating cost for the first 12 months.

CAPITAL EXPENDITURE	OPERATING EXPENDITURE	TOTAL
N 38,767,244,458	N 20,515,000,000	N 59,362,244,458

Key Capital Expenditure:

Construction of Warehouses	Dev. of ICT Infrastructure	Establishment of Assay Labs	Purchase of Vehicles	Monitoring & enforcement (MIREMCO)	National Security Optimisation

N 7.72 BN N 523.6 MN

N 4.45 BN

N 7.14 BN

N 8.92 BN

N 10 BN

Pre-Development Activities

The cost of Pre-development work is an additional <u>5% of the setup cost</u>. These activities should be concluded within the first 6 months of project commencement. See pre-development work breakdown below:

S/N	Tasks	Responsible party	Timelines						
Pre-D	Pre-Development Activities								
1.	Establish a solid minerals trading department in the NCX, conduct business strategy workshops and conduct capacity building programs	Consultants	3 weeks						
2.	Conduct further market research and feasibility studies to refine the business model and financial projections.	Consultants	5 weeks						
3.	Secure regulatory approval and establish a clear legal framework.	Consultants	3 weeks						
4.	Obtain necessary licenses and regulatory approvals.	Consultants	3 weeks						
5.	Secure funding from potential investors and partners.	Consultants	12 weeks						
6.	Partner with key stakeholders like industry associations, logistics providers, and financial institutions.	Consultants	4 weeks						
7.	Provide sector training for security agencies.	Consultants	4 weeks						
8.	Create and execute operating strategy for MIREMCO across pilot states	Consultants	6 weeks						



NCX's 5-Year Revenue Projections based on a 5% Transaction Fees

	Breakdown ref.	Year 1	Year 2	Year 3	Year 4	Year 5	
Revenue	Breakdown ren.	rear r	10%	50%	10%	15%	<< Revenue
Income - Management Fees			1070	3370	1070	1070	growth rate
Base metals – NGN	Next page	439,660,355,505,168	483,626,391,055,684	725,439,586,583,526	797,983,545,241,879	917,681,077,028,161	J
Industrial minerals – NGN	Next page	3,324,128,180,140	3,656,540,998,154	5,484,811,497,231	6,033,292,646,954	6,938,286,543,997	
Energy minerals – NGN	Next page	146,165,000,000	160,781,500,000	241,172,250,000	265,289,475,000	305,082,896,250	
Precious metals - NGN	Next page	42,000,000,000	46,200,000,000	69,300,000,000	76,230,000,000	87,664,500,000	
Compliance rate %	1 3	30%	40%	50%	60%	70%	
Total transactions		132,951,794,605,592	194,995,965,421,535	365,617,435,165,379	482,615,014,418,300	647,508,477,677,886	
Management fees		5%	5%	5%	5%	5%	
Total		6,647,589,730,280	9,749,798,271,077	18,280,871,758,269	24,130,750,720,915	32,375,423,883,894	
Cost of sales							
Payment Processing cost		(132,951,794,606)	(146,246,974,066)	(219,370,461,099)	(241,307,507,209)	(277,503,633,291)	
Market Intelligence consultancy		(120,000,000)	(132,000,000)	(198,000,000)	(217,800,000)	(250,470,000)	
Marketing & promotion		(350,000,000)	(385,000,000)	(577,500,000)	(635,250,000)	(730,537,500)	
Regulatory/compliance		(50,000,000)	(55,000,000)	(82,500,000)	(90,750,000)	(104,362,500)	
Third party service integrations		600,000,000	660,000,000	990,000,000	1,089,000,000	1,252,350,000	
Total		(132,951,794,606)	(146,246,974,066)	(219,370,461,099)	(241,307,507,209)	(277,503,633,291)	
Other income - Lab and Warehouse service fees							
Lab assay services		264,000,000	290,400,000	319,440,000	351,384,000	386,522,400	
Warehousing services		862,617,798,750	948,879,578,625	1,043,767,536,488	1,148,144,290,136	1,262,958,719,150	
Total		862,881,798,750	949,169,978,625	1,044,086,976,488	1,148,495,674,136	1,263,345,241,550	
Other income - Premium services fees							
No. of Premium users		100	110	165	182	209	
No. of months		12	12	12	12	12	
Monthly fee		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	
Total		2,400,000,000	2,640,000,000	3,960,000,000	4,356,000,000	5,009,400,000	
Gross Revenue		7,379,919,734,424	9,603,551,297,011	18,061,501,297,170	23,889,443,213,706	32,097,920,250,604	
Expenses							
Operating expenses			10%	10%	10%	10%	<< inflationary
Admin cost		(1,755,000,000)	(1,930,500,000)	(2,123,550,000)	(2,335,905,000)	(2,569,495,500)	•
Infrastructure maintenance cost		(10,440,000,000)	(11,484,000,000)	(12,632,400,000)	(13,895,640,000)	(15,285,204,000)	_
Salaries & wages		(1,600,000,000)	(1,760,000,000)	(1,936,000,000)	(2,129,600,000)	(2,342,560,000)	
Research and Development		(600,000,000)	(660,000,000)	(726,000,000)	(798,600,000)	(878,460,000)	
Legal and Professional fees		(60,000,000)	(66,000,000)	(72,600,000)	(79,860,000)	(87,846,000)	
Miscellaneous Expenses		(5,000,000,000)	(5,500,000,000)	(6,050,000,000)	(6,655,000,000)	(7,320,500,000)	
Total		(19,455,000,000)	(21,400,500,000)	(23,540,550,000)	(25,894,605,000)	(28,484,065,500)	
EBITDA		7,362,864,734,424	9,584,790,797,011	18,041,920,747,170	23,867,904,608,706	32,074,445,585,104	
		7,302,004,734,424	9,304,790,797,011	10,041,920,747,170	25,007,904,000,700	32,074,44 3,363,104	

Breakdown of minerals in Revenue projections

S/N	Minerals	Mineral class	2021 Exports (tons)	2024 estimated exports (tons) – 45% increment	2025 estimated exports (tons) - 15% increment	Market price (N/ton)	Transaction amount (N)	Royalty rate (N/ton)	Royalty value (N)
1	Agglomerated Iron ores and concentrates	Base metals	1,420,660	2,059,957	2,368,951	649,600	1,538,870,277,280	300	710,685,165
2	Antimony ores and concentrates	Base metals	928,040	1,345,658	1,547,507	100,000	154,750,670,000	3,000	4,642,520,100
3	Chromium ores and concentrates.	Base metals	5,480,170	7,946,247	9,138,183	100,000	913,818,347,500	5,000	45,690,917,375
4	Cobalt ores and concentrates.	Base metals	22,130	32,089	36,902	100,000	3,690,177,500	5,000	184,508,875
5	Columbite ore	Base metals		1,849,250	2,126,638	3,000,000	6,379,912,500,000	150,000	318,995,625,000
6	Copper ores and concentrates.	Base metals	529,270	767,442	882,558	60,000	52,953,463,500	1,800	1,588,603,905
7	Lead ores and concentrates.	Base metals	11,005,590	15,958,106	18,351,821	50,000	917,591,066,250	1,500	27,527,731,988
8	Manganese ores/concentrates	Base metals	62,916,800	91,229,360	104,913,764	884,000	92,743,767,376,000	350	36,719,817,400
9	Niobium, tantalum, vanadium or zirconium	Base metals	2,532,300	3,671,835	4,222,610	27,000,000	114,010,476,750,000	900,000	3,800,349,225,000
10	Tin Ores	Base metals	460,940	668,363	768,617	56,061	43,089,386,003	90,000	69,175,570,500
11	Titanium ores and concentrates.	Base metals	789,950	1,145,428	1,317,242	4,563	6,010,573,535	30,000	39,517,248,750
12	Tungsten ores and concentrates.	Base metals	240	348	400	2,500,500	1,000,700,100	75,015	30,021,003
13	Zinc ores and concentrates	Base metals	22,184,350	32,167,308	36,992,404	60,000	2,219,544,217,500	1,500	55,488,605,438
14	Zirconium ores and concentrates	Base metals	1,323,060	1,918,437	2,206,203	100,000,000	220,620,255,000,000	5,000,000	11,031,012,750,000
15	Lithium	Base metals	-	500,000	575,000	95,000	54,625,000,000	4,750	2,731,250,000
16	Gold	Precious metals	-	-	0.6	70,000,000,000	42,000,000,000	518,976,000	311,385,600
17	Coal	Energy minerals	-	25,420,000	29,233,000	5,000	146,165,000,000	150	4,384,950,000
18	Mica	Industrial	3,580,820	5,192,189	5,971,017	351,400	2,098,215,496,790	100	597,101,735
19	Dolomite	Industrial	24,430	35,424	40,737	90,000	3,666,332,250	100	4,073,703
20	Feldspar	Industrial	2,092,300	3,033,835	3,488,910	270,300	943,052,440,575	200	697,782,050
21	Granite blocks	Industrial	110,100	159,645	183,592	113,200	20,782,586,100	4,820	884,912,235
22	Gypsum; anhydrite	Industrial	20	29	33	6,000	200,100	300	10,005
23	Kaolin and other kaolinic clays	Industrial	78,440	113,738	130,799	45,000	5,885,941,500	150	19,619,805
24	Limestone flux	Industrial	55,010	79,765	91,729	1,500	137,593,763	75	6,879,688
25	Marble and blocks	Industrial	1,272,250	1,844,763	2,121,477	84,900	180,113,386,688	3,615	7,669,138,903
26	Natural calcium phosphates	Industrial	366,150	530,918	610,555	75,000	45,791,634,375	200	122,111,025
27	Natural sands	Industrial	1,215,080	1,761,866	2,026,146	5,000	10,130,729,500	50	101,307,295
28	Quartz (Industrial)	Industrial	617,170	894,897	1,029,131	4,000	4,116,523,900	100,000	102,913,097,500
29	Quartzite	Industrial	30	44	50	4,000	200,100	100,000	5,002,500
30	Silica sands and quartz sands	Industrial	3,668,700	5,319,615	6,117,557	2,000	12,235,114,500	100	611,755,725
31	Other ores and concentrates.	Others	19,864,510	28,803,540	33,124,070				_
TOTAL	· /Customs 2024 romant via NEITI Cou		142,538,510	234,450,090	269,617,604		443,172,648,685,308		15,552,694,208,267

Source: (Customs 2021 report via NEITI; SoundCore's 2024 & 2025 projections)

Appendix 1

- A. Data acquisition cost
- B. Soundcore's role as proposed consultants

Cost of Data acquisition and Strategy formulation

S/N	Required Data	Cost
1.	<u>Production volumes per state</u> : This information will be obtained from the Mines Inspectorate and the Federal Mines Officers in each state. We will further perform reconciliations on the numbers as disparities will be significant.	
2.	Exported volumes per State: This will be collected from the Nigerian Customs services and reconciliations will be performed against the Ministry's records as disparities will be significant.	N20 million
3.	Quantity of explosives purchased per company: This information will be used to further reconcile and estimate the correct production volume by each mining company, using the powder-factor method	
	Other vital documents	
4.	An effective strategy that ensures trading of Precious metals (eg. Gold) and Gemstones are conducted on the Exchange: This will significantly increase the revenues earned on the exchange as well as royalties to the FGN. We will develop this strategy in collaboration with 3 rd party experts.	N10m
	Total	N30 m

SoundCore's role as proposed consultant

S/N	Services	Type of compensation to SoundCore
1.	Strategy Consultancy to develop a Business Plan for NCX (including market research, feasibility studies, marketing and onboarding strategy, a financial model, etc);	Professional Fees
2.	Strategy Consultancy to perform a Business Valuation for NCX to determine the present value of its future cashflows for the purpose of raising equity finance	Professional Fees
3.	Strategy Consultancy to develop a 5-year Business Strategy for NCX, covering short, mid and long term objectives and initiatives for the solid minerals sector;	Professional Fees
4.	Regulatory Compliance and Advocacy Consultancy to advise on navigating regulatory requirements and obtaining necessary licenses for the exchange, as well as work with stakeholders to develop and advocate for policies that support the growth of the exchange and ensures that it operates within legal and regulatory frameworks.	Professional Fees
5.	<u>Training and Capacity Building</u> to develop training programs for stakeholders on using the exchange platform and best practices for mineral trading	Professional Fees
6.	Strategy consultancy to create and deploy operating strategy for MIREMCO	Professional Fees
7.	<u>Transaction Advisers</u> on the selection of technical partners associated with the operations of the exchange, such as: The building, design and operationalisation of the exchange platform, Logistics & haulage service providers, certified contractors for the construction and equipping of Mineral Assay Labs and Warehouses, Security Agencies, etc;	Professional Fees
8.	Transaction Arrangers for additional capital injection after kick-off of operations	% of capital raised (1% - 3%)

Appendix 2

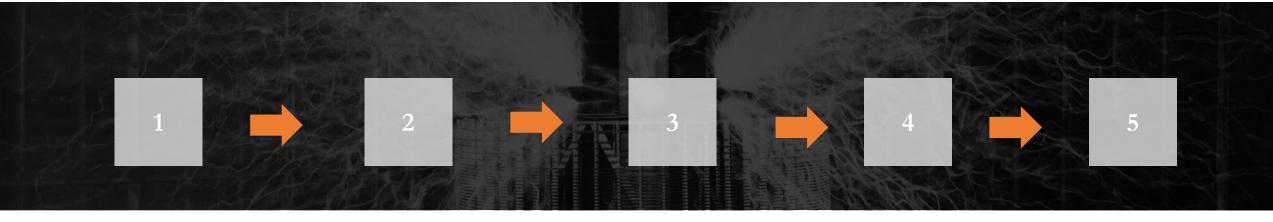
Mineral Resources and Environmental Management Committee (MIREMCO)

Appendix 2

SoundCore's operationalization of MIREMCO will include the following:

S/N	Areas of Focus	Details	
1.	MIREMCO's Operating Procedures	Standard Operating Procedures: SoundCore has articulated standard operating procedures for MIREMCO including an implementation plan to achieve the intended strategy in each State. Resource Persons: SoundCore will provide back-end technical field operational services to MIREMCO to enable it provide vital information to the Minister regarding stakeholder issues at state and community level.	
2.	Utilisation of IT infrastructure	IT Infrastructure: SoundCore has designed a digital IT platform dedicated to MIREMCO's functionalities across each state for the collation and verification of compliance of all mineral title holders across the country. Integration of government stakeholders: Within the digital platform, SoundCore will integrate functionalities for monitoring and fee collection for all other agencies of government associated with mining and movement of minerals across the country and overseas.	
3.	MIREMCO's Funding Surface rents regime: After the first time injection of kick off capital, SoundCore has developed strategy that enables MIREMCO sustain its funding through surface rents collected at State level SoundCore has received the buy-in of several State governors for a surface rent collection regin fund community social interventions as well as MIREMCO's operations. Alternatively and preferably, MIREMCO should be a budget item funded via royalties collected.		

MIREMCO - Road to Operationalisation



In collaboration with State Governments, inaugurate all State MIREMCOs with strict adherence to the provisions of the Act

Deploy
communication
strategy and
commence structured
sensitisation
programs across the
country.

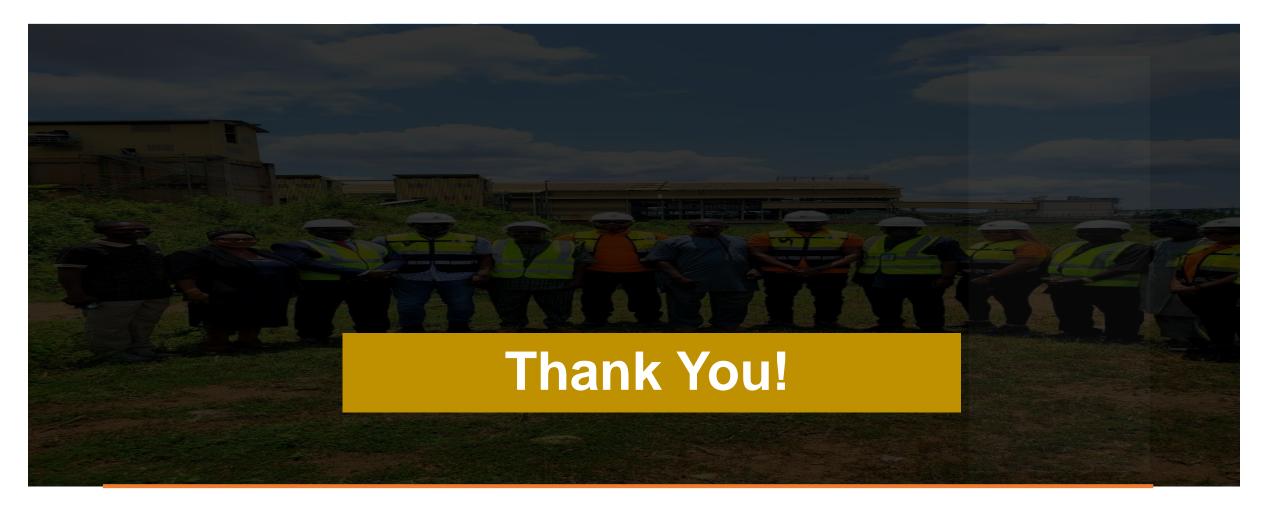
Launch digital platform for monitoring and reporting; create linkages to other government administrative and security agencies for effective monitoring and revenue collection Recruit and deploy administrative and technical resource personels from especially COMEG to each state's MIREMCO for onsite and remote monitoring and reporting

MIREMCO
commences
operation in full
swing across the
nation, sending
quarterly reports to
the Minister and
ensuring compliance
by all players in
every State in the
Nation

MIREMCO – Deployment Budget

CAPITAL EXPENDITURE	OPERATING EXPENDITURE	TOTAL
N 344,635,000	N 399,322,580	N 743,957,580

MIREMCO's complete strategy document and budget available upon request







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