



Mining Sector as a major catalyst
for the creation of Jobs
and the
development of Industry & Infrastructure
Across the Thirty Six (36) States and FCT

Presented By

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Statement of Strategic Intent



This document contains strategic ideas and suggestions for s short, medium and long term intervention and innovative strategies, that could be adopted by the states to reposition the minerals, metals and steel sector as a key contributor to mass job creation, infrastructure development and foreign exchange earner with the full participation of the private sector.

Specifically, it is intended to assist state governments in the delivery of policy initiatives aimed at maximising the exploration and exploitation of its various potentials .

**List , Location and Industry Uses of some minerals across the States of
Nigeria**

B

S/N	Mineral	State Found	Estimated Quantity	Industrial Uses	No of plants needed to meet Local Demand	Potential Jobs
1	Coal	Enugu, Adamawa, Nasarawa, Kogi Benue, Taraba, Abia	3 Billion M/T	Power Cement, Steel, tar & Oils	6 Plants of 50,000 Mt per annum	1,000.000.00(from mines to beneficiation to marketing)
2	Iron Ore	Kogi, Benue, Enugu, Anambra, Borno, Nasarawa, sokoto, Bauchi	6 Billion M/T	Steel, Steel Manufacture	10 Plants of 40,000 Mt per annum	1,000.000.00 jobs from mines to beneficiation-marketing to end user)
3	Barites	Gombe, Nasarawa, Cross river, Taraba, Ebonyi	7.500,000 M/T	Oil Exploration	5 Plants of 20,000 Mt per annum	350,000 jobs from mines to beneficiation
4	Bentonite	Yobe, Abia, Adamawa, Borno, Anambra	900 Million M/T	Drilling mud etc	3 Plants of 15,000,000 Mt per annum	500,000 job from mines to beneficiation to utilization
5	Kaolin	Katsina, Abia, Bauchi, Ogun, Ondo	3 Billion M/T	Pharmaceutical, Plants, paper, Ceramics, Cement, Cosmetics	12, plants of 150,000Mt per annum	500,000 jobs from mines to beneficiation to marketing
6	Limestone	Cross River, Ogun, Enugu, Plateau, Benue, Edo, Bauchi, Sokoto	2.3 Trillion	Cement, Calcium, Hydrate Lime	10 Plants of 20,000Mt per annum	1,000,000.00 from mining to value chains
7	Gypsum	Yobe, Borno, Sokoto, Bauchi, Imo, Ogun, Abia	1 Billion M/T	Cement, Plants, Construction	10 Plants of 20,000Mt per annum	250,000 jobs

8	Bitumen	Ondo , Ogun	42 Billion M/T	Road Construction, Oil services	10 Companies with 40,000Mt per annum	200,000 jobs
9	Marble	Kogi, FCT, Benue, Plateau	300 Million M/T	Cement Hydrated Lime, Construction	20 plants at 100,000Mt per annum	1,000,000 jobs
10	Salt	Nasarawa, Ebonyi, Rivers, Bayelsa, Enugu	1.5 Billion	Industrial Domestic Uses	Plants to be located at salt mines	350,000 jobs
11	Lead/Zinc	Kano, Kebbi, Plateau, Ebonyi, Bauhci, Kogi, Cross-river	10 Million M/T	Battery, Roofing Sheet Pharmaceutical	Battery manufacturing industry is none performing	500, 000 jobs
12	Granite	FCT, Kogi, Cross-river, Adamawa, Oyo, Imo, Anambra, Gombe	200 Million M/T	Construction & Building	Numerous plants to meet national construction demand	1,000,000 jobs
13	Gold	FCT, Nasarawa, Gombe, Bauhci, Kaduna, Niger, Kogi	50,000 Ounces			
14	Tin Ore	Plateau, FCT, Nasarawa, Bauchi, Kaduna, Niger, Kogi	45,000 M/T	Alloys for capacitor	Technology not available	200,000 jobs
15	Phosphate	Sokoto, Ogun	4.5 Million M/T	fertilizers	1 Beneficiary plant of 3,000Mt per annum	200,000 jobs
16	Talc	Niger, Osun	100 Millon M/T	Building materials	10 tons of 5,000Mt per annum	200,000 jobs

Some Myths Militating Against States Participation in the Nigerian Mining Sector



Some Myths about Mining

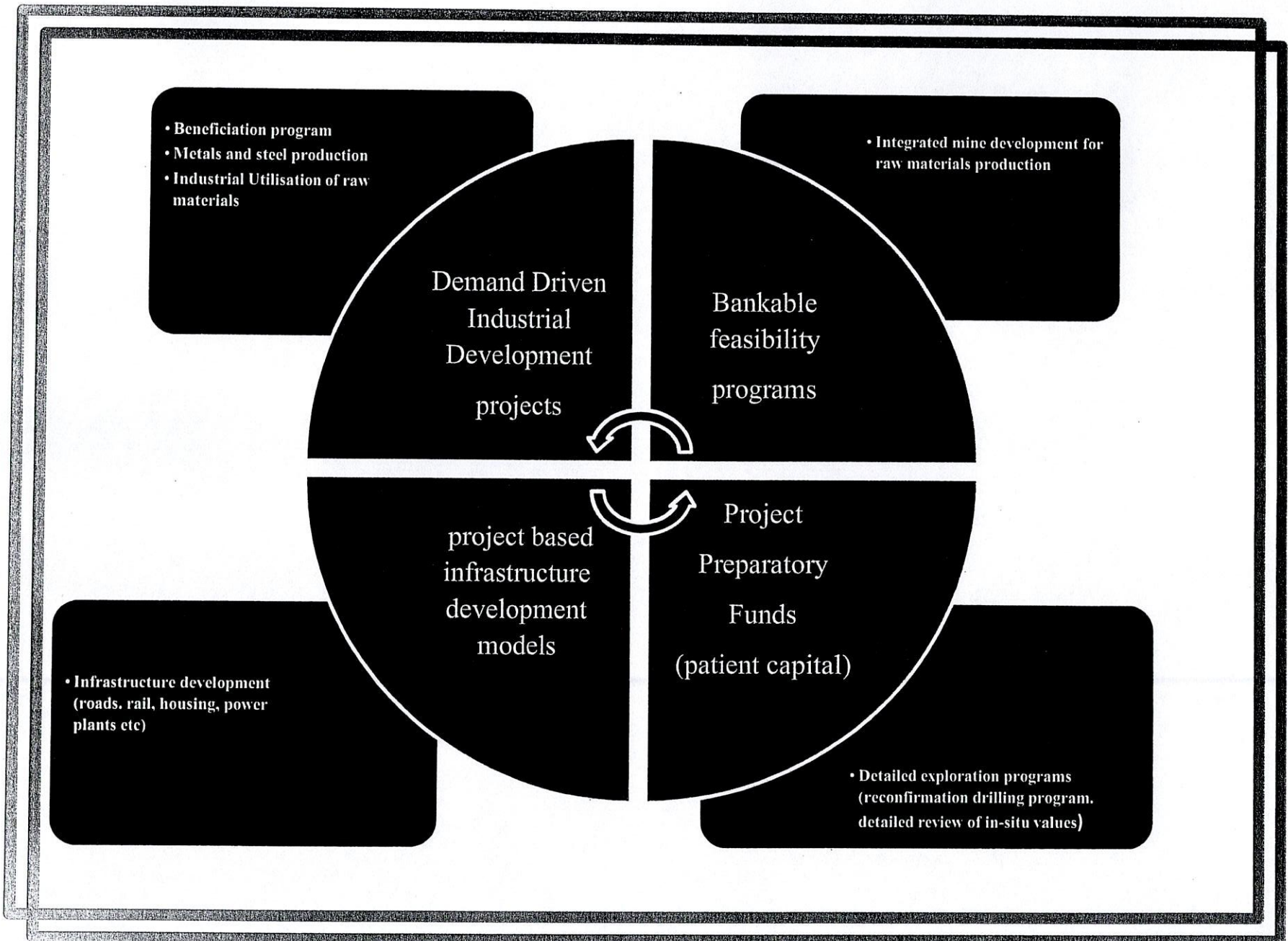
1. States cannot participate in the Exploration and Exploitation of their Mineral Resources Endowments
2. The Mining Sector is so Capital Intensive that no state in Nigeria can afford the Resources required for its operations
3. Return on Investments from the Mining is limited and takes for ever

The Truth about Mining

- Mining project development actually commences with the states as they must issue “a consent” before beacons are erected
- The capital intensiveness of the mining sector is mostly at the exploration stage where equity more than debt is required, once completed the mine development process runs on clear project based finance models
- Once in-situ resources are determined there are returns on investments on all the value chain of the mining sector(mine in production, beneficiation, metals and steel)

Summary of Presentation





Overview of the Nigerian Mining Sector



The Nigerian Mining Sector can be broken into three major segments and two broad groupings, namely, minerals metals and steel, and exploration and exploitation respectively.

In general terms the mineral segment represents the raw material base of the industry, the metals segment has to do with the beneficiation or smelting of the minerals, while the steel segment represents the aggregation of the minerals and metals in the production of materials used in the development of infrastructure.

The present underdeveloped state of the Nigerian mining sector was occasioned by two broad factors (specific and systemic)

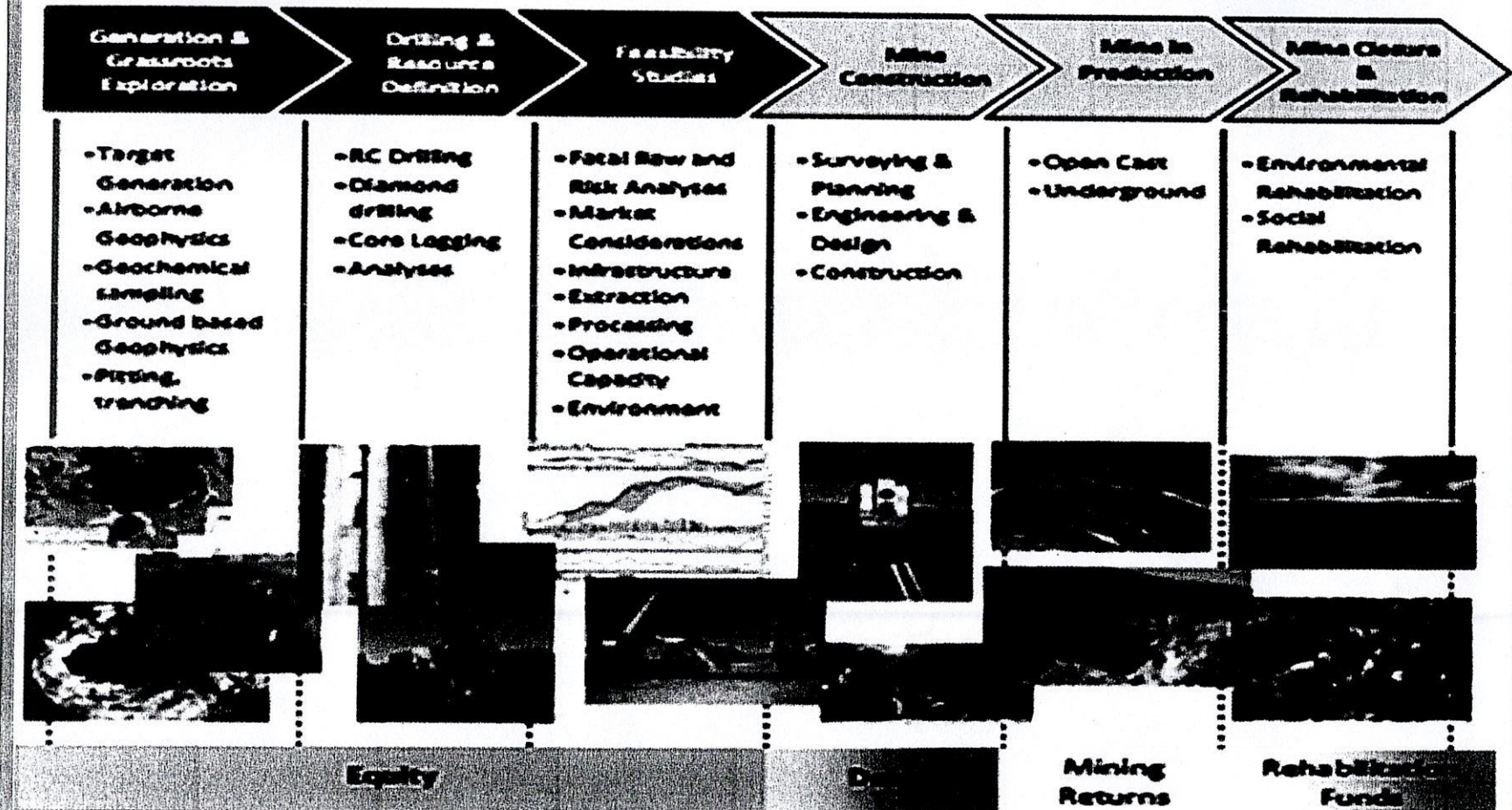
This situation is illustrated by the drastic reduction in the sector's contribution to GDP from 12% between 1965-1975, 5.62% in 1980 and 0.03% in 2013. Currently apart from quarry activities, there are no medium or large scale mining operations in Nigeria.

**The Challenges Militating against the States from
reaping these enormous resources are - Specific and
Systemic**



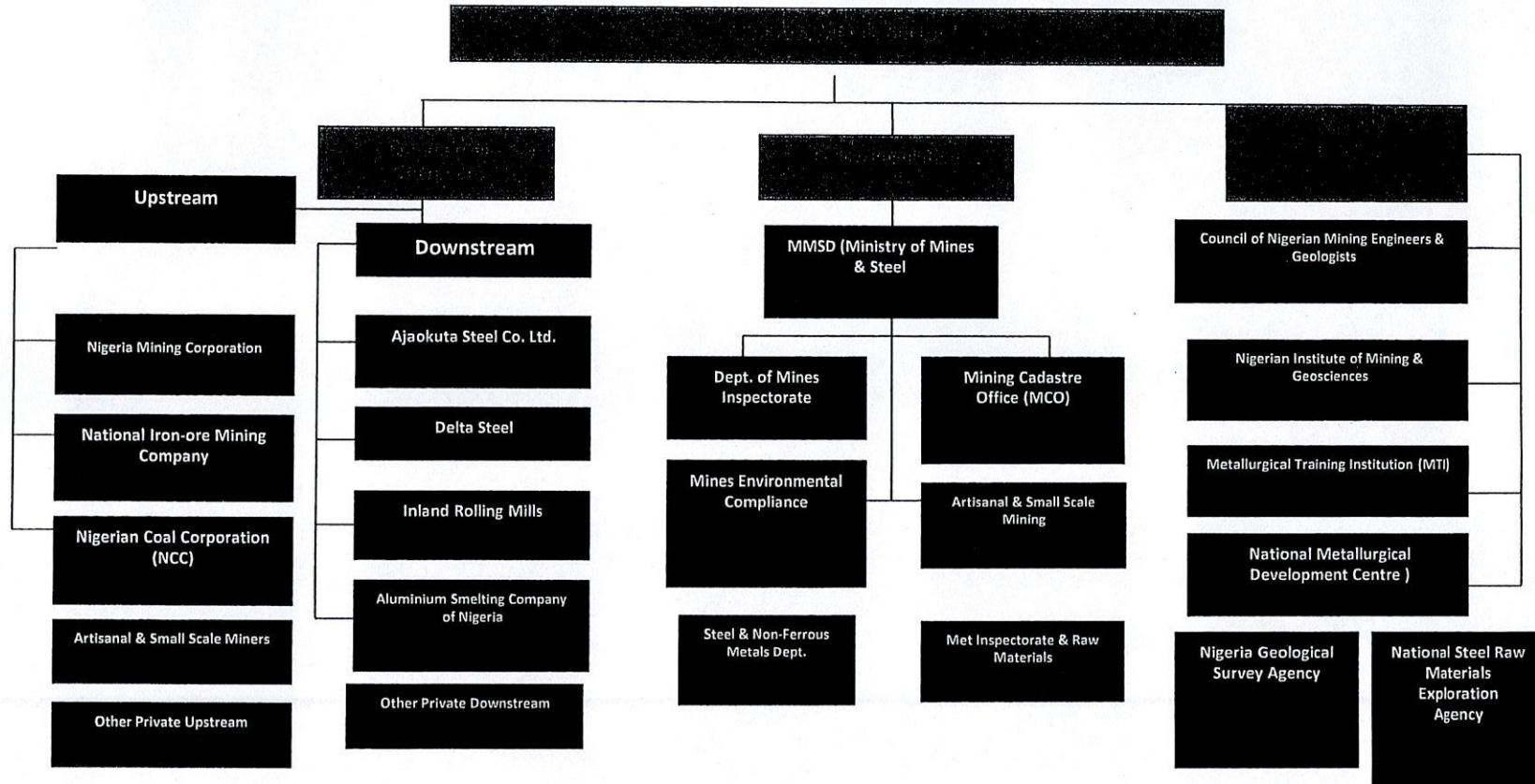
Sector Challenges – Specific

Low understanding of the value chain of the mining sector:



most of the activities within the Nigerian mining sector since the exit of the major mining companies and collapse of the Nigerian Mining Corporation is still within stage one:-generation and grassroots exploration)

Sector Challenges – Systemic



Apart from the artisanal mining component all the commercial component facilities are either sold or are dysfunctional

How the Systemic & Specific and Cumulative Challenges has impacted on the Metals and Steel Sector and by extension development at the States and LGAs across the country



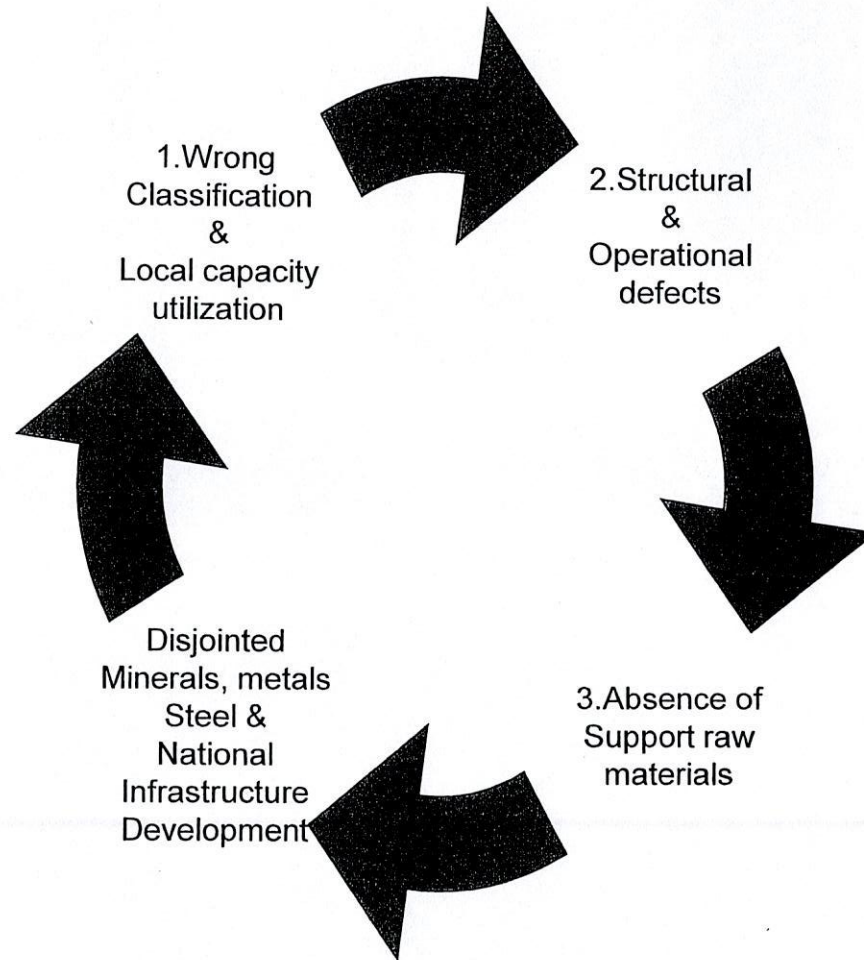
- Our nations steel production in spite of its huge capacity is placed at a negligible 100,000 MT per annum while Egypt and South Africa with Similar Technologies and smaller population figures are producing 6.7 and 7.6 million tonnes respectively; *source :World Steel 2011*
- To this end, Nigeria imports averagely 17 million tons of steel and allied products per annum. To this end, the country has imported over N23 Trillion worth of steel products between 2001-2010 : *Source: NBS 2011 (this is one major factor that complicates our present foreign exchange challenges and instability)*
- This anomaly is supported by the mixed overviews and positions the of the collateral issues of steel production and the crucial role of the Ajaokuta steel complex in our national development

Overview of the carrying capacities of ASCI

The ASCL is based on the Blast Furnace/Basic Oxygen Furnace process which was commenced in 1979. The plant sits on an area of about 800 hectares of land comprising of the project, and 3,904 housing units. It is believed that the FGN has expended over \$10 billion USD in the establishment of the plant and its requisite infrastructure

Upstream Plants	The raw materials preparing/sintering is equivalent to the entire structures, inclusive of plant & machinery in Delta Steel (DSCL)
Rolling Mills	The 4 rolling mills are greater in scope than the 3 inland rolling mills in Jos, Katsina and Oshogbo put together.
Auxiliary Units	The auxiliary units of the Lime Plant and the 2 refractory plants are technically equivalent to 3 cement plants
Engineering Complex	The engineering complex, though similar, is greater in scope than Nigerian Machine Tools, Oshogbo
Utilities Section	The utilities section comprising the power plants, industrial gases, water, etc are more sophisticated than any utility facility in the country

Ajaokuta Steel Plant



Inappropriate back-end programs for raw materials due to the lack of defined exploration and project development programs (risk, exploration and venture funds) occasioned by low understanding of the synergy between the (exploration and exploitation of key minerals:-Dolomite, Manganese, Lime stone and other potentials of Iron ore) in the value chain (minerals, metals and steel development)

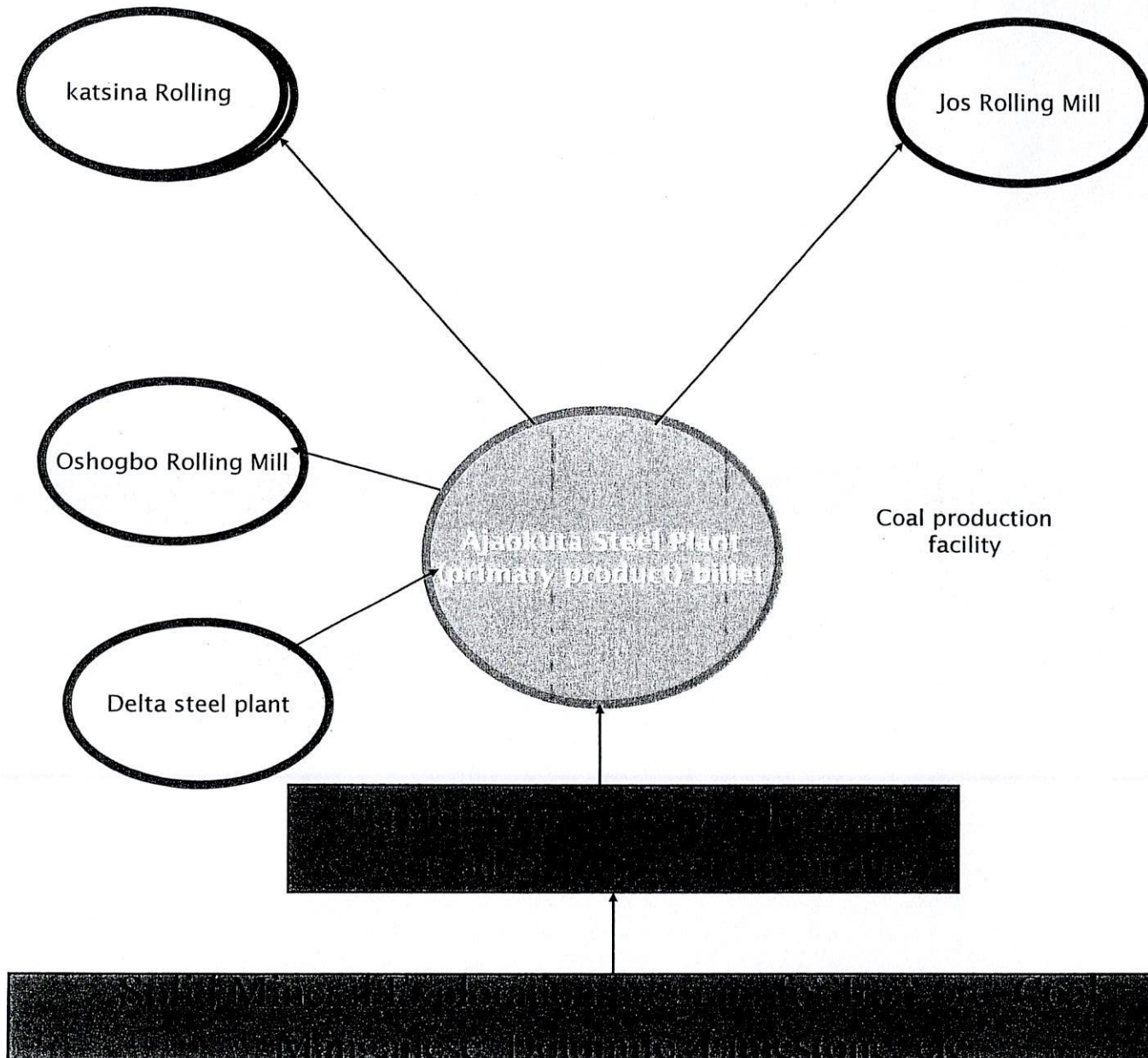
Sector Challenges – Cumulative

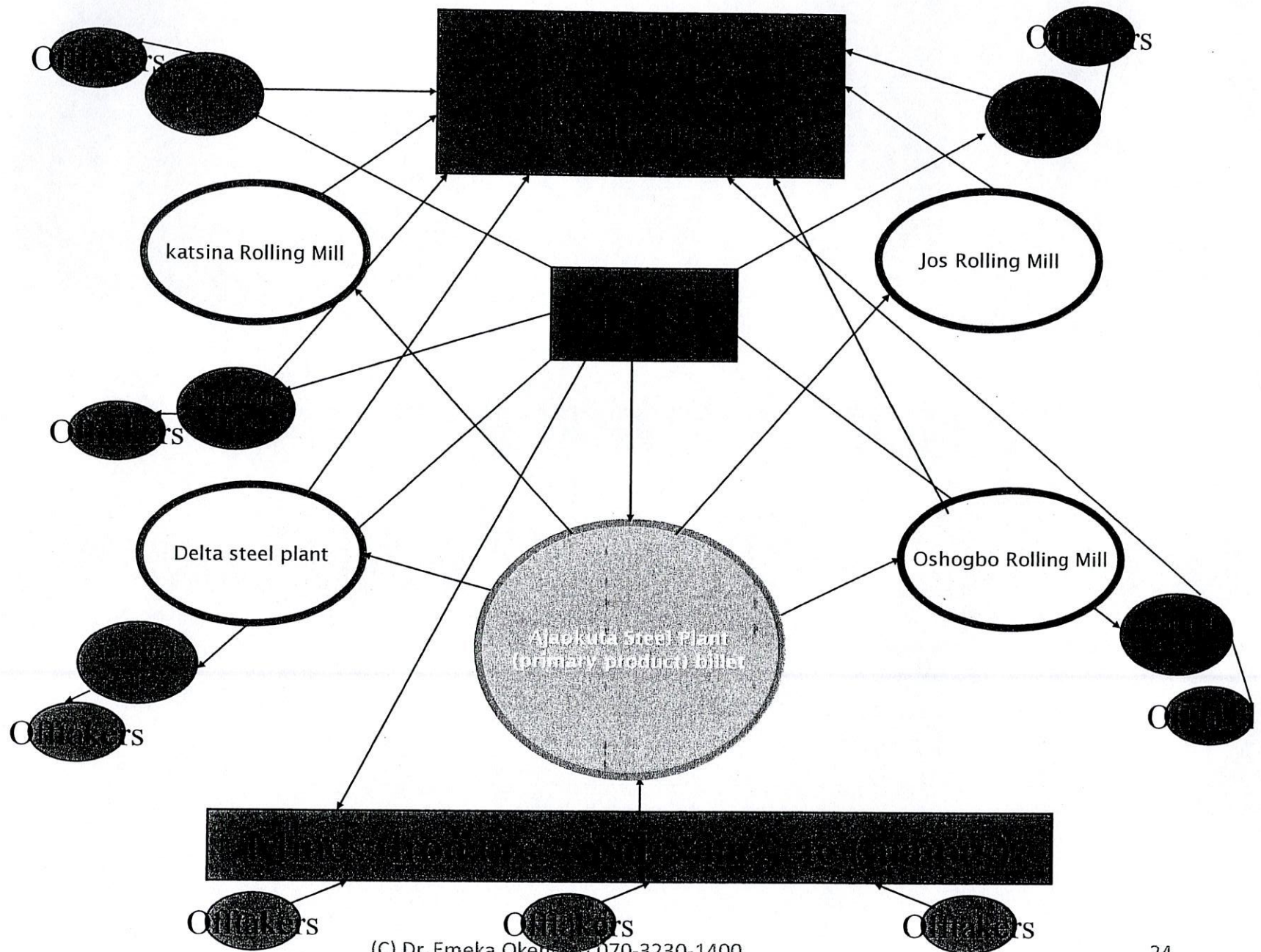
Cumulatively, these systemic and sector specific challenges have occasioned:

- Inadequate capital investments for private sector investors to participate in mining operations.
- Low level or inadequate human capital and manpower
- Lack of in-depth technological knowledge to develop a value chain for minerals production and utilization.
- Perennial ecological challenges arising from mining activities.
- Non performance of virtually all the existing mining and mineral beneficiation facilities in the country

**Understanding the Synergy between Minerals, Metals and Steel
and the creation of jobs and development of industry and
infrastructure across the States and LGAs in Nigeria**

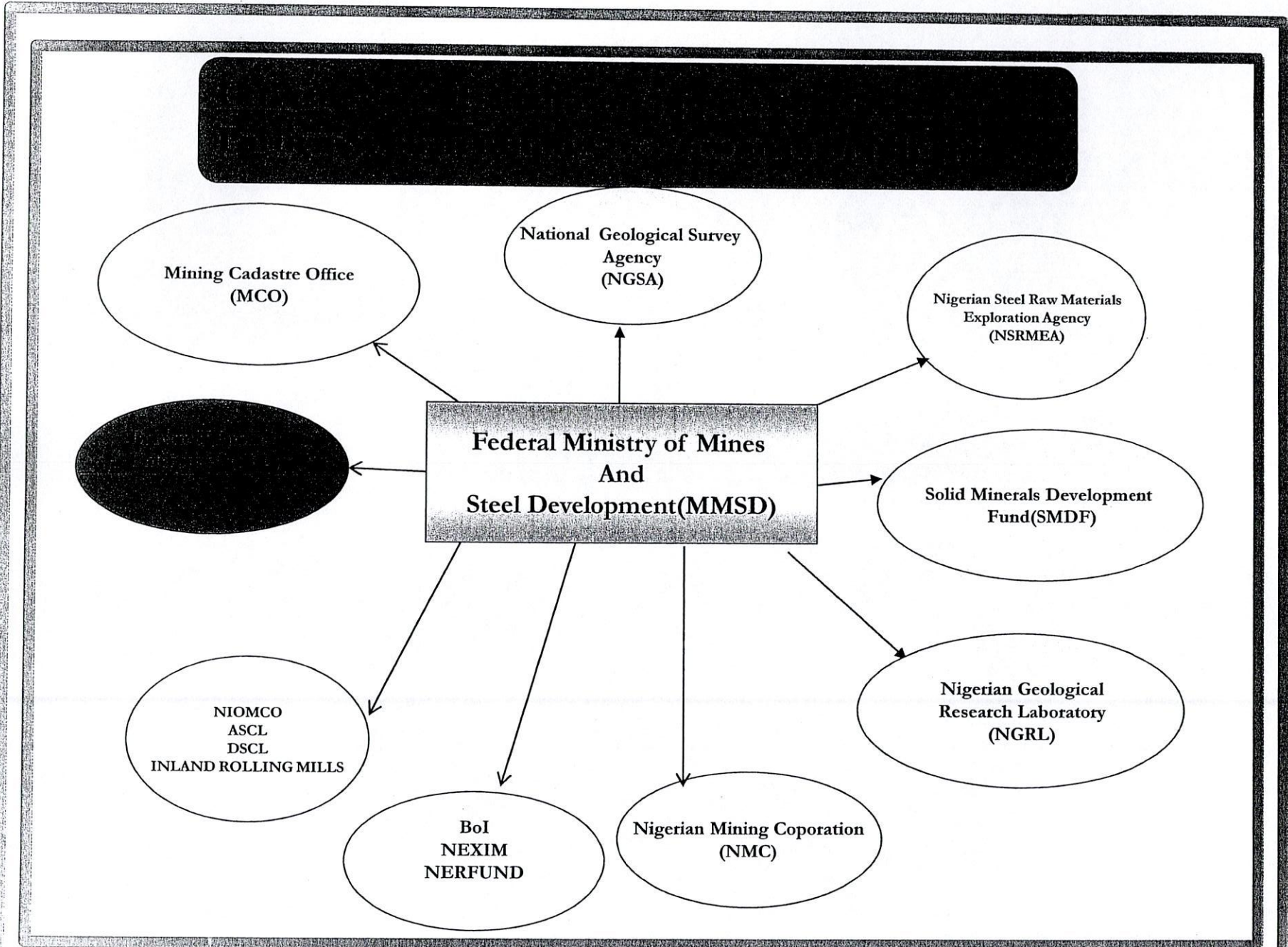






Understanding how the States can operate in the mining sector

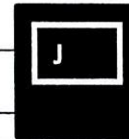




In order to overcome the challenges and as well as institutionalize the best practices that would unlock the potentials of the Nigerian Mining Sector, the following, including without limitation could be developed for each state of the federation:

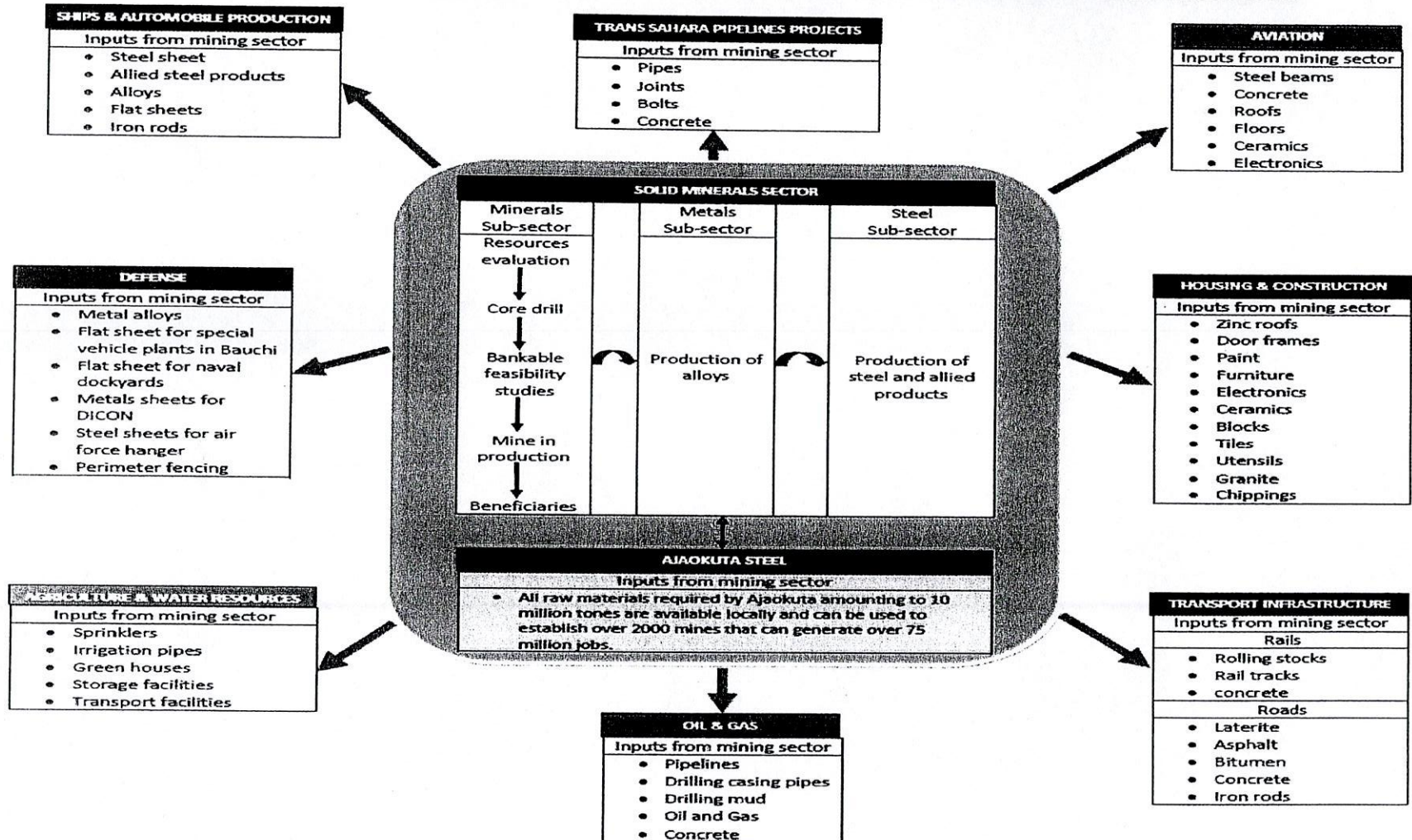
- Creation of a Junior Mining Companies (JMCs) out of the States Investment Companies
- The JMCs would resources within the listed government agencies and departments
- States should advocate for the creation of a Solid Minerals Development Authority (SMDA), modelled after the Nigeria Sovereign Investment Agency (NSIA), to manage the data generated through the (JMC)
- This synergy would create the platform for the funding of mining programs and development of common shared infrastructure that could be funding through the Solid Minerals Development Fund as a means of actualizing the objectives of the Mining Act 2007 or equity and debt based on cash flow models.
- The program would permit states through thee SMDA to work with private sector to float a Solid Minerals Investment Fund which can be listed on the Nigeria Stock Exchange and other Exchanges to attract investors into the sector who may not wish to invest directly in the sector.

Industry Benefits of the Mining Sector





PROJECT DEVELOPMENT NARRATION (MINING SECTOR SUPPORTED NATIONAL DEVELOPMENT FRAMEWORK)

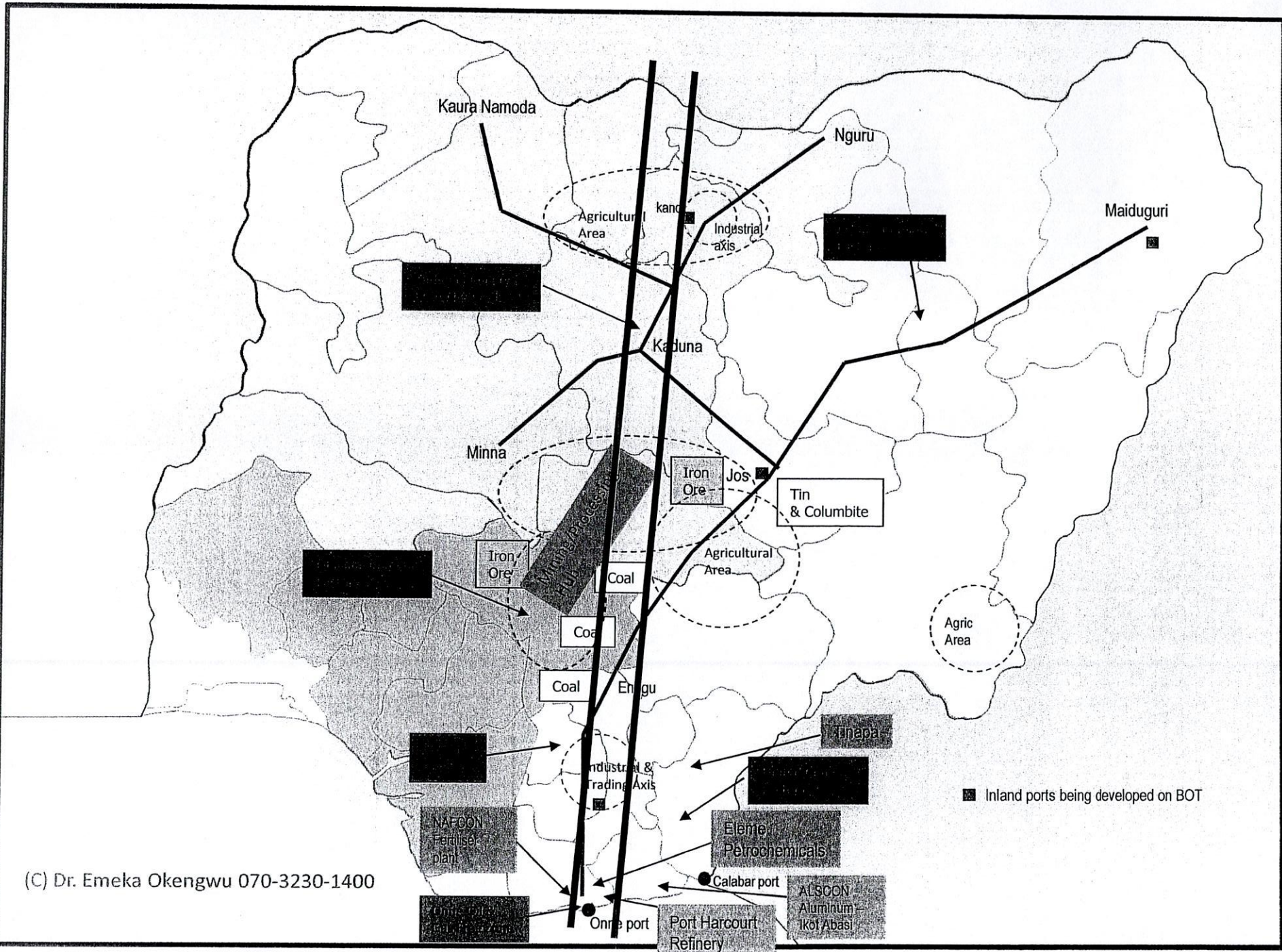


Socio-Economic Benefits of the program for the State Governments

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Creating a development corridor that would align the job creation, industry and infrastructure projects of the Federal and State governments into an integrated production beneficiation utilization and development of allied infrastructure through;

- Production of minerals and metals commodities required as raw materials inputs by the manufacturing sector, resulting in improved capacity utilization, foreign exchange earnings/savings, and wealth and job creation.
- Facilitating the production of coal needed to fire coal fired plants that would contribute 30% of the nation's power generation by 2018.
- Revitalize the entire steel sector for the operation and production of 3 million tons of liquid steel per annum by 2015 and 12.2 million tons of liquid steel per annum by 2018.
- Becoming a major regional and global producer of aluminum and steel products with target of 100,000 tons per year of primary aluminum and 3 million tons per year of steel products by the year 2015.
- Achieving enhanced capacity to supply 50% of the skilled manpower required for all segments of the minerals and metals sector, and
- Increase the sector's contribution to the nation's GDP from the current 0.4% to at least 5% by the year 2016 and 10% by 2020. (*Source: Road Map for the Development of Solid Minerals and Metal Sector*)



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**What our contemporaries have achieved using their Minerals, Metals
and Steel resources**



- The Middle East Region which has moved its collective steel production capacity from a mere 4 million tons per annum by 1996 to the present 20million tons per annum with a projection of 40 million tons per annum by the year 2015.
- North Korea has launched Rockets into space.
- Pakistan has one of the largest military wares production capacity
- China has become the world largest growing economy and biggest exporter, largest consumer and producer of steel products
- India has become one of the largest producers of steel and controls over 65% of the worlds steel industry and markets.
- Brazil has taken a leadership position in the production of automobile and is presently supplying the aircrafts for our national carrier
- Iran is rounding up its nuclear power production process and runs its 600,000 barrels per day crude oil refinery with Iranian steel and technology.
- Furthermore all these countries presently export their products and home grown technology to Nigeria and this is in spite of the fact that Nigeria has defense facilities that has the capacity and technology to produce and maintain some military material presently imported from this countries locally.

List and State of some Minerals development facilities in Nigeria



S/N	COMPANY	ACTIVITIES	OPERATIONAL STATUS
1	Nigerian Kaolin Ltd	Mining and Processing of kaolin	None Performing
2	Nigerian Barites Mining and Processing company ltd	Mining and processing of Barites	None Performing
3	Nigerian Tin and Allied Mineral Products ltd	Mining of Tin and Associated Minerals	None Performing
4	Nimco Quarry products ltd	Production of crushed stones for construction	None Performing
5	Nimco Feldspar Quarzt Project	Processing of Feldspar and Quarzt	None Performing
6	Nimco Gold Mining Co. Ltd	Mining and Processing of Gold	None Performing
7	Nimco Terazzo Co ltd	Production of Precast /Terrazzo tiles	Produces only on contracts
8	Naraguta Bricks Works	Production of Clay Bricks	None Performing

S/N	MINE	OPERATIONAL STATUS
9	<i>Ribadu Mine</i>	None Performing
10	Ezinmo Coal Field,	None Performing
11	Inyi Coal Field,	None Performing
12	<i>Ogbete Mine,</i>	None Performing
13	Ogboyoga I Coal Field,	None Performing
14	Ogboyoga II Coal Field,	None Performing
15	Ogwashi-Azagba Lignite Field,	None Performing
16	Okaba Coal Field,	None Performing
17	Okpara Mine,	None Performing
18	Onyeama Mine	None Performing
19	Owupka Mine	None Performing
20	Amansiodo Coal Field,	None Performing

30	Ibadan Brick Works	100% NMC	Production of Clay bricks	Less than 5% Utilization of Capacity
21	Enugu Brick Works	100% NMC	Production of Clay bricks	Less than 5% Utilization Capacity
22	Ikorodu Brick Works	100% NMC	Production of Clay bricks	Has Achieved a Maximum of 25% Plant Utilization Capacity
23	Kano Brick Works	100% NMC	Production of Clay bricks	None Performing
24	Oil Chem TC	NMC 40% Oil Chem 60%	Milling of Barites	Under Performing
25	Nigerian Freedom Mining Co. Ltd	NMC 40% Freedom 60%	Production of Clay Bricks	Producing Minimally
26	Arewa Ceramic	40% Bauchi Govt. 40% NMC, 10% Boressing, 11% Unifinance	Manufacture of Ceramics Sanitary Wares and Fitting	Producing Below Installed Capacity
27	Katsina Kaolin Ceramics	NMC 15%, Katsina Investment 65% Unifinance 30%	Mining and Processing of Kaolin	Production Mainly based on Contracts

Proposed Next Steps



Possible Phases of Project Development

Phase 1

*Establishment of programs
to ascertain real volume and value of mineral
endowments in the states and instruments
that they will use in participating in its
exploration and exploitation*

Phase 2

*Establishment of mine development
programs and beneficiation facilities for each
State based on its minerals of comparative advantage*

Phase 3

*Identification of funding sources/roles of actors
(FGN/States/Private Sector and
establishment of vehicles for projects (SPV, etc)*

Next Steps

Establish a formal working relationship with NGF for the development of an inclusive framework that can be applied by State governments for the exploration and development of minerals in Nigeria.

A few of Our Competencies



- 2003-2004: Part of the technical working group for the review of the fiscal and legal frameworks for the Solid Mineral Sector in Nigeria.
- 2008: External consultant to the Ministry of Mines and Steel Development on the review of the technical audit bids for Ajaokuta Steel Plant and Nigerian Iron Ore Mining Company (NIOMCO)
- 2008: Developed the Request for Proposal (RFP) for the Ministry of Niger Delta Affairs for the engagement of consultants for the 5 year integrated infrastructure development program of the Niger Delta Region
- 2008: Conducted Studies on the Development of limestone deposits in jakura for the New Nigeria Development Company(NNDC).
- 2009: Carried out consultancy services for the Zamfara State Investment And Property Development Company Ltd for a technical roundtable to the challenges of the lead poisoning caused by illegal mining activities.
- 2008- 2009: Member National Technical Working Group (NTWG) Metals and Steel committee of the Vision 20-20-20 project.
- 2010: Consultancy services to the Council of Nigerian Mining Engineers and Geoscientists (COMEG) on the Accreditation of relevant professional courses such as Mining, Metallurgy, Geosciences and related courses in tertiary institution in Nigeria
- 2010: Consultancy services to the Council of Nigerian Mining Engineers and Geoscientists (COMEG) for the production of Terms of Reference (ToR), Scope of Work (SoW) and Request for Proposals (RFP) on Technical Evaluation /Field Verification of Saline intrusion in the coastal belts and inland basins of Nigeria.
- 2009: Consulted for the Zamfara State Government on the use of the states mineral resources for economic development programs across fourteen local government areas of the state(leading to the establishment of 15 mineral exploration companies and acquisition of 140 mineral titles for the state).

- 2010: Developed the blueprint for the Consultant Federal Ministry of Science and Technology on the development on the development of an integrated cluster model across the 9886 wards in the Federation
- 2010. Developed the framework for the disposal of non operational aircrafts for the Federal Ministry of Aviation.
- 2010: Conducted a study for the United States Embassy in Lagos Nigeria on a study for the potentials of the Nigerian Mining Sector
- 2011: Conducted an independent assessment of the coal deposits in owukpa coal mine for the Government of Benue State Government of Nigeria for the use of the mineral resources of the State to create economic activities
- 2011-2012: Developed the framework to enhance the implementation of a national sub structure model based on natural resources endowments for the Central Bank of Nigeria (CBN)
- 2012: Carried out a scoping study for the Canadian International Development Corporation (CIDA) for a scoping study on the Nigerian Mining Sector.
- 2012: Developed the strategies for awareness creation /popularization of Energy Efficiency for domestic and industrial locations in Port Harcourt for the Energy Commission of Nigeria (ECN)
- 2012-2013: Consultant to the Review Committee on the Review of the 2001 National Civil Aviation Policy for Federal Ministry of Aviation
- Chairman Mining Thematic Working Group National Integrated Infrastructure Master Plan (NIIMP) for the design and development of the blueprint that would be used by the Government of Nigeria for the design and financing of a 30 year infrastructure development program for the mining sector.
- Presently rounding a consultancy for the World Bank as National Strategy Specialist on Mining Corridors Development in Nigeria

Conclusion



I have highlighted in the preceding slides, subject to my review of the Ministry's Master Plan, my understanding of the Nigerian Solid Minerals sector, its history and development, challenges, suggestions on how the potential of the sector will be unlocked and the benefits of this to the growth and development of the country which I believe should be considered by this esteemed body of most distinguished Excellencies .

I will be pleased to present in detail its Work Approach, Methodology and Key Roles for the execution of this project aimed at unlocking the potentials of the mineral resources in each state of Nigeria

It is indeed a most cherished privilege to be accorded the rare honour to stand in your most revered presence

Thank you so much

Dr. Emeka Okengwu