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TECHNOLOGY TRANSFER IN NIGERIA'S OIL AND GAS INDUSTRY:

COMPLIANCE, GAPS, AND PRACTICAL SOLUTIONS

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INTRODUCTION

Technology transfer is the sharing or disseminating of knowledge, skills, methods, technologies, equipment, intellectual property or innovations from one entity (often a foreign company, university or research institution) to another (often a local company, country, or individual) enabling the recipient to use, adapt, and apply it independently to foster innovation, economic development and improved capabilities.[1] Technology transfer embedded in the Nigerian Oil and Gas Industry Content Development Act, 2010 (the "Act")[2] is an instrument towards Nigeria's local content aspirations of building indigenous technical capacity, reducing reliance on foreign expertise, and fostering sustainable industrial growth in the oil and gas industry. The expectation is that International Oil Companies ("IOCs") operating assets, alongside international oilfield service providers (together "International Companies") operating in Nigeria not only operate or provide services but also transfer the knowledge, skills, processes, and equipment necessary for indigenous companies to independently execute operations in the oil and gas industry.

However, the practical implementation of technology transfer has been uneven. Some international companies, prioritizing profit and proprietary advantage, limit transfers to basic or brief training while retaining advanced technical processes exclusively.

This article examines the scope of technology transfer in Nigeria's oil and gas sector, regulatory framework, guidelines for execution, challenges facing Nigerian companies and strategies for overcoming these challenges.

REGULATORY FRAMEWORK FOR LOCAL CONTENT IMPLEMENTATION

The Nigerian Content Development and Monitoring Board ("NCDMB" or the "Board") regulates local content development in the oil and gas industry in accordance with the provisions of the Act.[3] Key regulations and guidelines include:

- Nigerian Oil and Gas Research and Development Regulation, 2021
- Regulation for Training in the Nigerian Oil and Gas Industry, 2021
- Nigerian Oil and Gas Industry Technology Transfer Regulation, 2021
- Guidelines for Nigerian Content Human Capital Development Implementation Strategy
- Guidelines on Deduction of 1% Nigerian Content Development Fund (NCDF) levy

These instruments collectively establish the framework for indigenous technical capacity development and enforce technology transfer obligations.

1 https://kwintely.com/glossary/what-is-technology-transfer/ accessed August 25, 2025.

2 Section 43 of Nigerian Oil and Gas Industry Content Development Act (NOGICDA) 2010

3 Ibid. section 70.

1. Operational Obligations in Local Content

The Act imposes specific operational obligations for operators as a condition for regulatory approval. They include technology transfer, employment and training of Nigerians, first consideration for Nigerians in the award of contracts and procurement, and the succession program for expatriate positions.

i. **First Consideration Requirement:** Nigerians must be given priority in contracts, procurement, and service provision,[4] demonstrated through submission of a Nigerian Content Plan ("NCP") to the Board for approval.[5]

ii. **Employment and Training:** Operators must give first consideration to Nigerians for employment and training[6] and submit an Employment and Training Plan to the Board,[7] including measures to develop local expertise where expatriates are engaged.[8]

iii. **Nigerians for Junior and Intermediate Cadre:** All junior and intermediate positions in oil and gas operations are reserved exclusively for Nigerians.[9]

iv. **Succession Plan:** Operators are mandated to submit a succession plan. Nigerians must understudy such positions for a maximum of four years, after which the roles must be fully Nigerianized.[10]

v. **Threshold for Management Positions held by Expatriates:** Expatriates are permitted to occupy no more than 5% of management roles as may be approved by the Board.[11]

vi. **Prohibition of Importation of Welded Products:** The Act prohibits the importation of welded products. All fabrication and welding activities in the oil and gas industry must therefore be carried out within Nigeria.[12]

vii. **Research and Development (R&D):** Operators are required to submit an R&D plan to the Board and update every six (6) months.[13]

viii. **Technology Transfer:** Operators must prepare and submit a Technology Transfer Plan,[14] ensuring that international contractors and service companies establish joint ventures, partnerships, or licensing agreements with Nigerian entities.[15]

Collectively, these measures are intended to reduce overreliance on foreign expertise and guarantee that Nigerians derive maximum value from industry operations.

[4] Ibid. Section 12
[5] Ibid. Section 7
[6] Ibid. Section 28
[7] Ibid. Section 29
[8] Ibid. Section 30
[9] Ibid. Section 35
[10] Ibid. Section 31
[11] Ibid. Section 32
[12] Ibid. Section 53
[13] Ibid. Section 38
[14] Ibid. Section 44
[15] Ibid. Section 45

2. Financial Obligations in Local Content

Beyond operational obligations, the Act also imposes financial responsibilities designed to support capacity development and ensure sustained investment in local participation.

i. **The 1% Nigerian Content Development Levy ("NCD levy")**

Section 104 of the Act establishes a Nigerian Content Development Fund (NCDF) administered by the Board to finance projects and initiatives that enhance local content in Nigeria's oil and gas industry, funded through a 1% levy on the total cost of upstream projects.[16]

In 2023, the Incorporated Trustees of the International Association of Drilling Contractors, Nigeria Chapter ("IADC") sued the NCDMB by challenging the collection of the 1% Nigerian Content Development Fund ("NCDF") levy[17] arguing that it applied only to upstream contracts awarded directly by operators or entities actively involved in upstream projects. The Board, relying on its **Guidelines on the Deduction of the 1% NCDF Levy,** maintained that the levy applies to **every upstream contract or sub-contract emanating from an upstream oil and gas project.**[18] The court dismissed the suit at the preliminary stage, ruling that the Board acted within its statutory mandate and that the action failed to disclose a reasonable cause of action.

ii. **Project-Based Human Capital Development (PBHCD)**

By the provisions of the Guidelines for Nigerian Content Human Capital Development Implementation Strategy, operators of projects at different thresholds (call off contracts, $1m to $100m, $100m to $500m and above $500m[19]) are saddled with the obligation to set aside a percentage of the total project cost as training budget for Human Capital Development (HCD).[20]

IMPLEMENTATION OF NIGERIA CONTENT HUMAN CAPITAL DEVELOPMENT OBLIGATIONS

To translate the policy intent into measurable capacity development, the Board operationalized the Human Capital Development provisions of the Act[21] through the Guidelines for Nigerian Content Human Capital Development Implementation Strategy, 2020 (the Guidelines).[22] These Guidelines bridge the gap between the Act's broad provisions and their practical implementation by establishing four key initiatives for Human Capital Development:

a. Direct Intervention Human Capital Development (DIHCD):[23] Under the DIHCD initiative, the Board directly sponsors the training of graduates and artisans in professional, technical, vocational, entrepreneurial, and soft/essential skills.[24]

b. Project-based Human Capital Development (PBHCD): Candidates for the PBHCD are usually selected from the Nigerian Content Joint Qualification System (NOGIC JQS).[25] The training lasts for 12 months or the duration of the project, whichever is longer.[26]

16 Guideline 1 of the Guidelines on Deduction of 1% of Nigerian Content Development Fund (NCD) levy
17 FHC/YNG/CS/178/2022
18 Guideline 2 of the Guidelines on Deduction of 1% of Nigerian Content Development Fund (NCD) levy
19 Guideline 5.2.1 of the Guideline for Nigerian Content Human Capital Development Implementation Strategy
20 Ibid. Paragraph 5.2.2
21 Section 5 of the NOGICD Act
22 Guideline 3.0 of the Guideline for Nigerian Content Human Capital Development Implementation Strategy
23 Ibid. Guideline 5.1
24 Ibid.
25 Ibid. Guideline 5.2.2(x)
26 Ibid. Guideline 10.0

c. Collaborative Human Capital Development (CHCD):[27] This initiative is executed through partnerships between the Board and key industry stakeholders, including NNPC, PTDF, PETAN, OGTAN, PTI, ITF, NDDC, international and national oil companies, marginal field operators, service providers, and tertiary institutions, among others.

d. Remedial/Non-compliance Human Capital Development:[28] This type of Human Capital Development is a remedial initiative targeted at operators, contractors, or project executors who have wilfully or consistently breached the provisions of the Act and Nigerian content related matters.

TECHNOLOGY TRANSFER: BEYOND HUMAN CAPITAL DEVELOPMENT.

Nigeria's local content objectives extend beyond individual training to the development of institutions, systems, and industrial capability through technology transfer. Technology transfer entails the embedding of advanced processes, proprietary technologies, and technical know-how passed from international companies to indigenous participants.

The Nigeria Oil and Gas Industry Technology Transfer Regulations, 2021 (the "Regulations") defined "Technology" as the application of scientific, systematic and commercially usable knowledge, information and skills developed outside Nigeria to produce goods, materials, services or processes utilized by an operating company for the purpose of achieving its operation.[29] The regulations classify technology transfer into three broad categories:

i. The transfer of hardware technology such as machinery, equipment, products and other forms of hardware technology;[30]

ii. The transfer of information-based technology such as data, design, statistics, manuals, blueprints, software, processes, models, methods and techniques;[31]

iii. The transfer of intangible technology, such as technical skills and knowledge, i.e. skill-based training, by international companies to indigenous participants.[32]

REGISTRATION OF TECHNOLOGY TRANSFER AGREEMENTS

All agreements involving the transfer of foreign technology, such as patented inventions, trademarks, know-how, the supply of machinery and plants, the supply of basic or detailed engineering, technical assistance, or management services to a Nigerian entity must be registered with the National Office for Technology Acquisition and Promotion (NOTAP).[33] The primary purpose of registration is to facilitate the repatriation of proceeds arising from such transfers, and not a condition precedent to the validity of the transfer.[34]

Judicial interpretation of the effect of non-registration of technology transfer agreements has evolved through case laws. In Limak Yatirim, Enerji Uretim Isletme Hizmetleri Ve Insaat A.S. & Ors V. Sahelian Energy & Integrated Services Ltd,[35] the Court of Appeal held that an unregistered agreement was void, creating the impression that non-registration invalidates such contracts.

However, in a more recent decision, the Court of Appeal in Champion Breweries Plc V. Brauerei

[27] Ibid. Guideline 5.3
[28] Ibid. Guideline 5.4
[29] Regulation 22 of the Nigeria Oil and Gas Industry Technology Transfer Regulations, 2021 (the Regulations)
[30] Ibid. Regulation 6
[31] Ibid. Regulation 7
[32] Ibid. Regulation 8
[33] Section 4 (d) and 5(1) of the National Office for Technology Acquisition and Promotion Act
[34] Ibid. Section 7
[35] (2021) LPELR-58182(CA)

Beck Gmbh & Co. KG[36] the Court clarified that non-registration does not affect the validity of the contract itself; it only prevents the foreign party from legally repatriating funds arising from the agreement. Consequently, parties remain bound by the terms of unregistered agreements, but any attempt to remit payments abroad without registration is prohibited and may expose the company or directors to liability. Registration with NOTAP is therefore a condition precedent for remittance of payments overseas.

CHALLENGES OF THE IMPLEMENTATION OF TECHNOLOGY TRANSFER

Despite the existence of legal and institutional frameworks designed to promote technology acquisition in the Nigerian oil and gas sector, several persistent issues continue to hinder meaningful local technological development. These include:

1. **Compliance Gaps:** Many international companies fulfil regulatory requirements only on paper. Training programs are often superficial, limiting genuine transfer of advanced skills and proprietary knowledge. As a result, indigenous operators remain dependent on expatriates and international contractors.
2. **Reluctance to Share Proprietary Knowledge:** IOCs frequently guard critical technical know-how and sophisticated engineering processes, viewing them as competitive advantages. This perpetuates dependence on foreign expertise.
3. **Weak Regulatory Enforcement:** The Nigerian government has historically been cautious in enforcing local content and technology transfer obligations, fearing that strict enforcement could discourage foreign investment and destabilize an oil-dependent economy.
4. **Multiplicity of Laws and Overlapping Regulations:** Technology transfer obligations are fragmented across several statutes, regulations, and guidelines, including the NOGICD Act, Technology Transfer Regulations, and NOTAP Act, making compliance cumbersome.

STRATEGIES TO TACKLE THE CHALLENGES

1. **Enhanced Board Oversight:** Oil company boards should go beyond verifying documents, instituting internal audits to monitor actual technology transfer and ensure commitments result in measurable capacity building and skills acquisition.

[36] (2025) LPELR-81422(CA)

2. **Collaborative Training Initiatives:** In partnership with the Nigerian Upstream Petroleum Regulatory Commission (the Commission), the Board may enter bilateral or multilateral training agreements with OPEC member states, crude oil off-takers, or strategic energy partners. A notable reference is the Norway–Ghana Oil for Development Programme (2007), which contributed to local content creation by strengthening Ghana's institutional, legal, and technical capacity to manage its petroleum resources and deliberately embed local participation into the oil and gas value chain.[37]

3. **Mandatory or "Quid-Pro-Quo" Technology Transfer (The China Model):** China historically tied foreign market access to mandatory technology transfer through joint ventures or licensing. While potentially discouraging investment, it accelerated domestic technological advancement. Adapting this approach could ensure Nigerian operators obtain substantive technology transfer rather than mere procedural compliance.

4. **Legal Uniformity and Consolidation:** Fragmented laws and overlapping regulations make compliance difficult. Consolidating all local content provisions into a comprehensive law would reduce conflicts, simplify enforcement, and improve compliance incentives.

CONCLUSION

To fully realize the benefits of local content, Nigeria must strengthen regulatory oversight, enforce compliance, and foster collaboration between government, IOCs, and indigenous firms. Investment in R&D, structured apprenticeships, and incentives for genuine technology embedding are essential. Success in technology transfer depends not only on legislation but on all stakeholders' commitment to ensuring that knowledge, processes, and innovations are genuinely indigenized for sustainable growth in the oil and gas sector.

[37] https://www.norad.no/contentassets/6e5b56d51fab44eeb1879da8078d15f4/the-oil-for-development-ofd-programme.pdf accessed on September 3, 2025

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