



DEPARTMENT OF LICENSING AND AUTHORIZATION

LICENSE FRAMEWORK FOR THE ESTABLISHMENT OF MOBILE VIRTUAL NETWORK OPERATORS IN NIGERIA

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Introduction

- a) In 2017, the Nigerian Communications Commission (NCC) published a Request for Proposal (RFP) for the “Development of a Licensing Framework for Mobile Virtual Network Operators (MVNOs) in Nigeria”. This framework document has been developed in pursuant of the RFP and the Nigerian Communications Act, 2003.
- b) The conditions and recommendations put forward in this document represent careful analysis and reporting of findings obtained from desktop research into other jurisdictions and the regulatory approach utilized in licensing MVNOs within their respective regions. Literature reviews of past and present surveys of the Nigerian market, along with current regulatory documents were conducted to ascertain the readiness of the Nigerian telecommunications market for Mobile Virtual Network Operators.
- c) Conclusions from both global and local research, along with adapting International Best Practices have been used in formulating this framework.
- d) An internal workshop as well as an Industry stakeholder focused group discussion was conducted, and all comments have been taken into consideration in the development of this framework document.
- e) The Commission reserves the right to amend this framework as it deems fit.
- f) This document should be read alongside:
 - i. The Nigerian Communications Act, 2003
 - ii. The Unified Access Service License Framework,
 - iii. Other related Regulatory and Guideline documents as stated within this framework.

1. Objectives of the License Framework

The core objectives of licensing Virtual Network Operators have been summarized below

- a) To give the service providers of virtual mobile communications service an opportunity to participate in the telecommunications provisioning market of Nigeria, with an emphasis on improving the telecommunication output of the country.
- b) To ensure that all core stakeholders are adequately catered for and protected within a Virtual Network Operator enabled environment.
- c) To allow for the Virtual Network Service to contribute to the availability and expansion of quality mobile coverage through redundant capacity utilization, active infrastructure sharing, national roaming, and other telecommunication elements that enable it.
- d) To present guidelines to which MVNO operations can flourish within the Nigerian Telecommunications market..

2. Scope of the Framework

The scope of this framework detailed below serves the purpose of enumerating expected operations of Mobile Virtual Network service providers as observed in other markets.

- a) Sales and Distribution – Providing adequate SIM card sales and distribution channels, registration of subscribers, sales and distribution of devices, etc.
- b) Tariff and Billing – Development of an efficient tariff structure, ensuring adequate and accurate billing systems, etc.

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- c) Customer Relationship Management – Provision of necessary Customer Relationship Management systems for catering to customers and their needs, resolving issues and disputes with customers, etc.
- d) Devices, Applications Services and SIM Management – Provisioning of Application and Value-Added Services, ensuring proper SIM management operations, meeting Quality of Service (QoS) Key Performance Indicators (KPIs) with regards to VAS and related services, etc
- e) International Data and Voice services
- f) Facility Management – Ensuring that devices and facilities meet the technical standards set by the Commission
- g) Core Network functions and Spectrum Access – Provisioning of network access to ensure quality delivery of mobile telecommunications services to the end users, ensure frequency standards are met for spectrum access, etc.

3. Regulatory Intervention

3.1. Negotiations:

- a) The Commission proposes no Mandatory regulation of MNO – MVNO negotiations and as such suggest a purely commercial agreement between the two parties. This proposal is put forward in good faith that negotiations and resolutions shall be fair and expeditious.
- b) In the likelihood that negotiations or resolutions appear unfair and in violation of the good faith by any of the parties involved, the Commission maintains the position of intervening as deemed fit, in pursuant of reports submitted by either party detailing reasons of suspected unfair negotiation or resolution practice.
- c) Unfair negotiation practices are outlined:
 - i. Obstructing or delaying negotiations or resolutions
 - ii. A party being coerced or misled to make an agreement against its intent
 - iii. Non-provision of information about service provider’s capacities that are necessary for wholesale agreements
 - iv. Attempting to preclude furnishing of information by a service provider to the Commission through Non-Disclosure Agreements
 - v. Offering discriminatory terms
 - vi. Negotiating terms that are static and prevent amendment in the likelihood of a change in the Commission’s statutes
 - vii. Any other negotiation or resolution practises that a party deems unfair and detrimental to the efficient and prompt conclusion of said agreements.

3.2. Relationship:

- a) The Commission also proposes no mandated regulation of the Host Operator-MVNO relationship, to foster an “organically” competitive market. The terms within the negotiation agreement will serve as the core benchmark for which the Commission shall hold both parties responsible and accountable
- b) Anti-Competitive behaviours include but not limited to:
 - i. Deviating from the set terms and conditions of the agreement
 - ii. Misrepresenting information of any kind or making unilateral decisions with intent to tilt the scales off balance
 - iii. Collusion attempts of any kind with other networks operators
 - iv. Any other behaviours unfavourable to a prosperous partnership

4. MVNO Concept

4.1. Definition

(A Mobile Virtual Network Operator (MVNO) is a telecommunications product and service operator that rides on top of the capacity of a fully Licenced Telecommunications Service provider or Mobile Network Operator (MNO). The MVNO reaches a “Wholesale Agreement” or “Revenue Sharing Agreement” with the Telecommunications Company (Telco) through negotiations and delivers its services after bulk purchasing resources from the Telco. The defining difference between an MVNO and an MNO is the simple fact that an MVNO has no ownership whatsoever of spectrum elements, irrespective of its operational model.

4.2. MVNO Service Operations in Nigeria

This section details the operations of an MVNO within the Nigerian market. It is represented as subsystems which indicates the level of control an entity possesses within the mobile service delivery value chain, depicted in Annexure A.

A 4-tier system is proposed with an opportunity to choose a unified license in which the entity has the freedom to operate within any of the tiers. Within this section, the potential mobile virtual network operator will be abridged to VO (plural VOs).

Tier - 1	Services Virtual Operator
	<p>A V.O within this tier leverages on its ability to offer services to its customers without owning any switching or intelligent network infrastructure. They do not control any numbering resources.</p> <p>Responsibilities lie with the host Licensee to provide wholesale capacity to the V.O for delivery of its products and services</p> <p>VAS services are the differentiating factors for VOs and rely on a revenue sharing model for calls as a simple reseller, or sufficiently limited tariff and pricing control as a more enhanced virtual service provider. Its pricing infrastructure is strongly tied to that of its host.</p> <p>This license therefore subsumes the VAS providers’ license and applicable conditions within VAS license must be adhered to by a VO providing VAS.</p> <p>They can run their own SMSC, distribute and own their own content, as well as offer basic network services such as voicemail to their customers.</p> <p>The Operator is free to operate in at least one of the following areas:</p> <ol style="list-style-type: none">I. Own BrandII. Own Sales and Distribution channelsIII. Device and Phone sales and managementIV. Limited tariff controlV. Customer Relation PlatformVI. Own Content/ApplicationsVII. Host and distribute VASVIII. Can run SMSC for SMS

Tier - 2	<p style="text-align: center;">Simple Facilities Virtual Operator</p> <p>A VO within this tier assumes more control of the value chain which allows it to significantly differentiate itself from its host. The VO does not have Core Switching and Interconnect capabilities but can set up its own Intelligent network (IN) to provide their own IN services to the customer.</p> <p>It can own more of the customer segment than Tier-1 operators with the capacity of establishing its own Home Subscriber Register or Authentication centre, Equipment Identity Register, and Home Location Register, if it desires to.</p> <p>They rely on the number ranges of their host MNOs although they have access to short codes or premium numbers for customer care and must adhere to the guidelines set forth by the Commission.</p> <p>Its capacity to control its own tariff structure and packages to a high degree allows it to generate its own revenue through traffic from its own customers but relies on a shared revenue structure with the host for inbound calls.</p> <p>The VO can manage areas from Tier - 1 in addition to at least one of the following areas:</p> <ol style="list-style-type: none">I. Owns and issues its SIMII. Owns and operate its own Intelligent networkIII. Own and Operate EIR/HLR/AUC/HSS
Tier - 3	<p style="text-align: center;">Core Facilities Virtual Operator</p> <p>Within this tier, an operator relies on its technical and commercial prowess to launch and operate a full core network with switching and interconnect capabilities.</p> <p>The VO relies totally on its host to provide Radio Access capacity at wholesale to deliver its products and services to its customers.</p> <p>The VO can engage in interconnect agreements with other network providers. Revenue generation stems from both outbound and inbound calls which gives it full control over its tariff structure.</p> <p>VOs within this tier are earnestly urged to target underserved and unserved areas with subsidised requirements to operate in those areas, being taken under consideration by the Commission.</p> <p>The VO can manage areas from Tier - 2 in addition to at least one of the following areas:</p> <ol style="list-style-type: none">I. Owns and manages core network elements (switching and interconnections including:<ol style="list-style-type: none">a. IP Multimedia Subsystemb. MSC and GMSCc. PGSN/PGWd. SGSN/SGWe. MME

Tier - 4	<p style="text-align: center;">Virtual Aggregator/Enabler</p> <p>The operator within this tier is responsible for aggregating and/or Enabling VO services within the market. It relies on a model in which it stands as a middleman between the MNO and multiple VOs</p> <p>The aggregator is responsible for purchasing bulk capacity from a licensed network operator, and reselling it to multiple VOs, therefore streamlining the process of negotiating capacity agreements with said network operators.</p> <p>The aggregator is permitted to choose what level of the value chain it desires to aggregate. This means that an aggregator can rely on its host for switching and interconnect purposes but control its intelligent networks and content delivery platforms, therefore only capable of aggregating VOs from tier – 2. It is usually not common to see aggregation of tier – 3 VOs, but it is technically possible.</p> <p>Enablers on the other hand provide a platform which VOs can “outsource” the heavy lifting of B/OSS (Business/Operations Support Systems) processes to, while they focus on the sales, marketing, and distribution aspect of the value the VOs are creating.</p> <p>In pursuant of the objective to improve national coverage, these operators are permitted to directly engage customers within an underserved and unserved region through a “Shared Rural Coverage Agreement” with a licensed spectrum owner. Within congested and urban markets, they can only perform the role of aggregation and enabling of MVNOs.</p> <p>The Aggregator/Enabler is permitted to:</p> <ol style="list-style-type: none">I. Install capacity to serve its aggregation/enabling platform as it deems fit.II. Perform the role of a Core Facilities Virtual Operator (Tier – 3) where the region being served is underserved or unserved.
Tier – 5	<p style="text-align: center;">Unified Virtual Operator</p> <p>In the simplest terms, a VO within this tier can decide the level of service it desires to offer ranging from tier – 1 to tier – 4. This gives the VO freedom of choice to deploy its services the way it deems fit if it still has a valid license.</p> <p>They can engage in “Shared Rural Coverage Agreement” within underserved and unserved regions.</p>

5. The Market Players

5.1. Host Network Operator

Depending on the operational model, an MVNO can choose to have its agreements with any of the licensee within this section of market players depending on the available capacity and negotiation terms

- Spectrum license
- Universal access services license
- Digital mobile license
- V-sat license
- GMPCS license

The host network operator is responsible for the following:

- negotiating suitable terms with MVNOs
- providing network capacity as negotiated
- Ensuring SLAs between both parties and how it determines responsibilities such as QoS, maintenance, control, and so on
- Any other necessary function which allows MVNO products and services in the market
- Cannot own more than 10% of an MVNO from tiers 1 – 4 and 5% of an MVNO from tier 5

5.2. National Carrier, NLD and International Gateway Providers

Could provide MVNO the opportunity to deliver services beyond what the typical host network operator might be able to offer.

MVNOs that enter into agreements with a licensee from this section must be looking to deliver a focused service that involves nationwide provisioning and/or international telecoms products & services.

- National carrier licence
- National long distance
- International gateway licence

National carriers and international gateway providers can perform the following functions:

- Negotiating suitable terms with potential MVNOs looking to provide wider scale services
- Provide nationwide, long distance and international network capacity as required by MVNO.
- Any other necessary functions catered to MVNOs with international and national carrier products and services.

5.3. Infrastructure Companies

Full Facilities based MVNOs require backhaul connectivity to and from its MSC and the Host Network Operators' Radio Access Sites. This can be actualised through the contractual deployment and maintenance of infrastructure with Infracos that are licensed for that purpose.

- Infracos have simple function with respect to MVNOs which centres around the establishment of necessary infrastructural elements needed for its operations.

5.4. VAS Aggregators

The VAS aggregator framework published in 2018 stipulates that VAS provisioning by an operator must be deployed through a VAS aggregator. An MVNO can be a network provider for VAS aggregators in addition to the MNOs.

MVNOs being aggregators can obtain a VAS aggregator license to offer VAS aggregation platform.

Aggregators can also become an MVNO if it desires to play within the virtual network provisioning space.

- VAS aggregators can play an important role in the development of MVNOs by allowing MVNOs and aggregators to enter negotiations for the use of MVNO networks to distribute the content of VAS providers

6. General Licensee Guidelines

6.1. Compliance with the Act and Regulatory Statutes

- a) The Licensee shall endeavour to comply with the provisions of the National Communications Act, 2003
- b) The Licensee shall comply with the provisions of the Licensing Regulation, 2019

6.2. Licencing Obligations

6.2.1. General Obligations

These general eligibility criteria serve as general guidelines for potential licensees to facilitate a smooth licensing application process. It is simply an echo of the regulations stipulate in the Licensing Regulation document, 2019.

- a) Licensee must be a corporate body registered under the laws in force in Nigeria with proof of same submitted to the Commission during application
- b) Licensees are to file with the Commission, the full contract agreement with at least a Host Network Operator or a National Carrier.
- c) Licensee is obliged to show proof of financial capabilities to cover its CAPEX and OPEX for the implementation of its strategic operations.
- d) Licensees must meet the technical requirements of the Commission for operating within the tier of choice.
- e) Where applicable, Licensees should have secured reservation or assignment of resources required to operate specifically Numbering resources
- f) Licensees must be aware of the necessity to obtain other licences in provisioning its full services and outline them when submitting application
- g) Licensees shall provide necessary information to the Commission as specified under Schedule 1 of the Licensing Regulation document, 2019
- h) In line with Executive Order regarding contracts and services, Licensee should show prove of local content in its ownership and service delivery.

6.2.2. Obligations of each Virtual Operator Tier

Tier - 1	Service Virtual Operator <ul style="list-style-type: none"> - The licensee must select to perform some, or all Operations outlined under tier - 1 of section 4.2. - The licensee within this category has no control of facilities and therefore is focussed on its differentiated services to the customers. - The licensee should be able to ensure proper interfacing with its Host Network Operator - The licensee must prove its capacity to provide high grade of service to its customers by submitting a summary of its experience delivering service at a commercial scale.
Tier - 2	Simple Facilities Virtual Operator <ul style="list-style-type: none"> - The licensee must select from the range of operating areas outlined in tier-2 of section 4.2. - Licensees should focus on Niche markets to offer their products and services - All interfaces to its host must be implemented to deliver high grade of service - Licensee must ensure that it has the technical capacity to operate and maintain any facilities under its control

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	<ul style="list-style-type: none">- The Licensee must permit the Commission to inspect any facilities under its control. A written notification will be sent to the Licensee prior to inspection
Tier - 3	Core Facilities Virtual Operator <ul style="list-style-type: none">- The licensee must select from the range of operational activities outlined in tier – 3 of section 4.2 of this framework- All facilities used in network must be compliant with the regulatory technical standards- The Licensee will be notified of any inspections of facilities owned to be conducted by the Commission- In pursuant of the Commission’s attempt to improve National coverage; licensees of this category are urged to design their business case with Underserved and Unserved areas in focus. This is simply a guideline to prevent the possibility of cannibalization of HNO’s products and services especially in congested regions.- Interconnection Agreements must be according to the Interconnection Regulation set forward by the Commission.
Tier - 4	Virtual Aggregator / Enabler <ul style="list-style-type: none">- The Licensee must perform their normal operations of aggregating and enabling MVNOs where they desire- The Licensee can operate as a typical MVNO in underserved and unserved regions of the country- The processes of negotiation should be streamlined to ensure that potential MVNOs time to market is as minimal as possible compared to negotiating with a Licensed HNO- The choice of facilities controlled and maintained by an MVNE should be determined by the capacities of both HNO and itself.
Tier - 5	Unified Virtual Operator <ul style="list-style-type: none">- The Licensee is not restricted when selecting the range of service areas to operate in through the duration of its License tenure- The Licensee must adhere to all obligations stipulated in the previous tiers as it offers services within those tiers- The licensee must not engage in any anti-competitive conducts that places licensees from lower tiers at a disadvantaged position- The Licensee within this tier is the closest virtual entity to a full mobile network operator and will be held to such standards and accountability accrued to mobile network operators when delivering services to customers

6.3. Licensing Process

- a) The Licensing process of Virtual Network Operators will conform with the established licensing processes and requirements set by the Nigerian Communications Commission for obtaining an Individual License
- b) The licensee must complete an initial Introduction form which furnishes the Commission with information needed to prepare its license upon agreement with the host MNO
- c) Along with the introduction form, the Licensee must submit an PBG (Performance Bank Guarantee), FBG (Financial Bank Guarantee), and a summary of capital structure

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proving its capacity to fund and maintain its operations through the tenure of the license.

- d) Administrative award will be made upon completion of above requirements stipulated in 6.3(b) and (c).

6.4. License Fee

The table below summarises the potential license fee ranges for potential categories.

<i>Categories</i>	<i>FEE</i>
<i>Tier – 1</i>	₦ 35,000,000
<i>Tier – 2</i>	₦ 60,000,000
<i>Tier – 3</i>	₦ 130 000 000
<i>Tier – 4</i>	₦ 200 000 000
<i>Tier – 5</i>	₦ 500 000 000

6.5. License Tenure

The License will be valid for a period of Ten (10) years with an option to renew the license for the same term

6.6. Renewal of License

- a) Renewal of License shall be on request by the Licensee not later than 12 months before the current license tenure ends
- b) The Licensee should ensure that License renewal obligations are met no later than six (6) months before the expiration of current License tenure, including but not limited to:
- License renewal fees and other financial obligations
 - Valid HNO – MVNO agreement filed
 - Other criteria to enable renewal of License
- c) The Commission reserves the right to review the performance of the Licensee during the current license tenure to ascertain worthiness of Licensee to continue delivering its services

6.7. Suspension or Revocation of License

- a) The License is subject to revocation or suspension under the same conditions set within Condition 21 of the Unified Access Service license framework.
- b) The License can also be revoked or suspended if the Licensee violates the MVNO agreement between itself and the MNO, or violates any of the conditions stated within this framework
- c) The License can be revoked if Licensee operates beyond the scope of the tier it has indicated and paid the license fees for.

6.8. Roll-Out Obligations

- a) The Licensee must ensure that its services are rolled out within twelve (12) months of obtaining its license.
- b) The Licensee must ensure that it sticks to the terms of agreement as stated in its business proposal and service delivery within the MVNO agreement with MNO.

7. Other Licensing Obligations

This Section is concerned with non-general licensing conditions. It caters to specifics not covered in chapter 4 above.

7.1. Commercial Agreement With MNO

- a) A Licensee must have a completed Commercial Wholesale Agreement with a Host Network Operator. This agreement must be filed with the Commission prior to application for an MVNO license.
- b) A duration of One hundred and twenty (120) days from the beginning of negotiations is permitted for the completion and conclusion of commercial agreement, upon which the Commission reserves the right to mediate in line with the current provisions in the regulatory statutes.
- c) The document must detail Technical parameters, Operations, Financial obligations, Legal understandings, SLAs and other stipulations both partners deem fit.
- d) Annexure B details a proposed MVNO agreement outline.

7.2. Prohibition of Anti – Competitive Conduct

- a) A Licensee must comply with the Competitive Practices regulation issued by the Commission in delivering its services
- b) A Licensee must ensure that it reports all suspected anti-competitive behaviours from Network Operators (Host or Visitor) and other MVNOs as soon as observed
- c) The following are deemed as anti-competitive behaviour but not limited to:
 - I. Attempts to unfairly strain network capacity offered to MVNO
 - II. Predatory wholesale pricing
 - III. Discriminatory intent in providing network capacity
 - IV. Entering into exclusive agreements that prevent competitors having access to capacity
 - V. Misleading potential entrants on the availability of capacity
 - VI. Placing a condition within agreements that could lead to a disadvantaged party

7.3. Value Added Services

- a) VAS is a primary differentiator for MVNOs service providers and as such the VAS license is subsumed under the MVNO license, permitting an MVNO to host and distribute its **own** content to the customers
- b) Licensees are however forbidden from distributing VAS content created and managed by other VAS providers.
- c) Failure to comply with condition 7.3(b) above will lead to sanctions on licensee and possible revocation of license.
- d) Licensees are free to negotiate with VAS aggregators to provide network access, if it is a more efficient route than the MNOs
- e) A tier -1 to tier – 3 MVNO is precluded from obtaining a VAS aggregators license.
- f) A Licensee with aggregating permissions can obtain a VAS aggregators license.

7.4. Numbering Plan

- a) A Licensee must adhere to the Numbering Plan regulations set out by the Commission at all times. There are two (2) potential pathways a Licensee may follow.
 - i. A Licensee may choose to rely on the numbering plan of its host MNO. This choice will most likely be for tier-1 and tier-2 MVNOs. This will mean that all Numbering obligations will fall on the host MNO.
 - ii. A Licensee operating with a tier-3 to tier -5, has the capability to own unique Mobile Network Code without relying on the number range of host MNO. NCC regulation and guidelines on numbering apply to these virtual operators.

7.5. Infrastructure Sharing and Collocation Services

- a) The Licensee is mandated to comply with all infrastructure sharing and collocation guidelines and regulations set forth by the Nigerian Communications Commission.
- b) Where applicable, the Licensee is permitted to engage in negotiations for active Infrastructure sharing partnership with an operator, in conformity with the forthcoming active infrastructure sharing regulation.

7.6. Interconnection and National Roaming Agreements

- a) A Licensee with access to Interconnect capacities has the right to interconnect its network with the carrier of any other Telecommunications Licensee with Interconnect capabilities also.
- b) A Licensee with the capabilities of Negotiating Interconnection arrangement shall comply with those stated in Condition 16 within the Unified Access Service where applicable.
- c) The Licensee is subject to conforming to National Roaming agreements as stated in Condition 35 of the Unified Access Service framework.
- d) The licensee should endeavour to adhere to the new National Roaming Regulations being drafted by the Commission.

7.7. Billing Systems and Metering Equipment

- a) There must be utmost caution taken by the licensee to ensure that all billing systems and metering equipment used in connection with the service being delivered must be accurate and reliable.
- b) The Licensee must ensure that all billing systems and Metering Equipment conform to the technical standards through periodic tests. Test results must be submitted to the Commission within a time window of completing said tests as the Commission may determine:
 - I. A 14-day period is the set time limit to submit test results
 - II. The licensee shall allow the Commission inspect equipment at any time and cooperate
 - III. The Licensee shall modify or improve such system in accordance with any reasonable requirement which the Commission may specify in writing
- c) Pursuant to Condition 7.7b(ii), the Commission shall inspect the metering and billing systems at reasonable times and on giving reasonable notice to the Licensee except

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in any circumstance where giving such notice would frustrate the purpose of the inspection

- d) The Licensee shall on request provide each of its Customers, save pre-paid customers, at no additional cost, with an itemised bill which shall contain, amongst other details, the name, address, telephone number, account number, number called, time of call, call duration and call charge. The Licensee shall ensure that calls that are free of charge to its Subscribers, including calls to helplines and Emergency Organisations, shall not be identified in its Subscribers’ itemized bills

7.8. Network Quality of Service Delivery

Tier – 1	Service Virtual Operator Dependent on the degree of ownership of customer, the HNO and the licensee may share responsibility of QoS within the contract agreement
Tier – 2	Simple Facilities Virtual Operator a) The MVNO owns the customer and relies only on network switching elements of the HNO and as such most responsibility goes to the MVNO. This should also be clearly stipulated in the contract agreement
Tier – 3	Core Facilities Virtual Operator a) Fully responsible for QoS obligations that pertain to Core Network provisioning but not Radio Access, in pursuant of the QoS guidelines set by the Commission
Tiers – 4 & 5	Virtual Aggregator / Enabler & Unified Virtual Operator a) Being a more layered model, the MVNE shall agree with its Host Network Operator and all MVNOs plugged into its system, who takes the QoS responsibilities b) Depending on the level of service bouquet being offered by the Tier – 5 Licensee.

7.9. Service Agreement

- a) A service agreement detailing terms and conditions for provision of services to the customers must be submitted to the Commission within a space of 75 (Seventy-Five) days after commercial launch.
- b) The Commission shall approve or disapprove the service agreement submitted and will communicate to the Licensee in 30 (thirty) days.
- c) If disapproved, the Licensee has a period of 15 days to submit a revised service agreement
- d) Modification of agreements must be communicated with the Commission and customers with a prior written notice of not less than 30 days and must await a response from the Commission through those 30 days.
- e) All services to be provided by MVNO and MNO must be clearly defined in the MVNO agreement

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- f) Quality of Service parameters should be outlined and commitments to meeting these targets as contained in the QoS regulations and guidelines.
- g) The Service Level Agreement must include a definition of response times with regards to faults and failures. Concerned parties must be informed about said faults and failures, and related obligations pertaining to it should be specified.
- h) Annexure B outlines contents in a proposed SLA within an MVNO agreement.

7.10. Compliance

- a) The Licensee shall ensure that it complies with Consumer Code of practice approved by the Commission.
- b) The Licensee shall incur sanctions stipulated by the Commission if it operates beyond the scope of the MVNO tier for which it is licensed to.
- c) The Licensee shall be bound by all information provided and its commitments made when acquiring its license, agreeing with a Host MNO and other agreements required to obtain legibility to deliver mobile telecommunications services within this regulatory regime
- d) The Licensee must comply to Nation Security Protocols and Consumer information protection as required by the statutes of the Commission, where applicable.
- e) The Licensee must ensure that it meets the KPIs that pertain to its operating model as detailed within the QoS regulations and guidelines
- f) The Licensee shall make sure it complies with other regulatory authorities within the country such as the CBN, CAC, etc.
- g) Licensees are subject to Laws of the Federal Republic of Nigeria

7.11. Unserved and Underserved Areas

“Unserved” and “Underserved” areas refer to the regions in the country in which network does not exist or has incredibly low coverage, respectively. In line with the Commission’s objectives to provide universal access to these areas according to the Nigerian Communications Act, 2003:

- a) Priority will be given to Licensees that target markets that fall within the unserved and underserved regions
- b) MVNEs are restricted to provide services to customers only within underserved and unserved areas
- c) A Licensee within tier - 3 to tier – 5 can engage in “Shared Rural Coverage Agreements”, allowing them to co-own and co-manage a Radio Access network within that region only.
- d) The Commission will seek to provide subsidized mandates to operate within this region to encourage MVNOs to create business cases for these regions

7.12. Customer Obligations

- a) The Customer should have easy access to all necessary information that allow them to connect to the services being offered by a licensee. This include but not limited to:
 - I. Customer Service Information
 - II. Access Code(s) or Number (s) used for obtaining specific services
 - III. Instructions on accessing these services
 - IV. Tariff information
 - V. Condition of services

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- VI. Any other information that the Licensees deems fit to supply the customer
- b) The Licensee is obligated to ensure that it meets the necessary Customer Service KPIs as required by the Commission's QoS guidelines and regulations, where applicable
- c) The Licensee is responsible for customer data and information. It is imperative that the licensee must adhere to all data protection and security practices and cannot rely on the MNO to provide such unless this is outrightly stated within the Contract agreement.

7.13. Number Portability

- a) The Licensee for an MVNO license where applicable, falls under the obligations of mobile number portability regulations and guidelines set by the Commission.
- b) It must be explicitly stated in the agreement, the process in which number portability regulation is enforced between the two Parties for ease of transition of customers

7.14. Other Financial Obligations

- a) The Licensee must ensure that all other financial obligations bar the License fee, must be paid including Annual Operating Levy (AOL) and Statutory contributions to USPF, where applicable.

7.15. Other Licenses

- a) The following licenses are considered subsumed within the MVNO license:
 - i. Sales & Installation
 - ii. VAS provider
 - iii. Internet Service
 - iv. International Data Access

7.16. Reporting, Record Keeping, and Information Furnishing

- a) Licensees are mandated to submit reports to the Commission regularly. These reports include but are not limited to:
 - i. Financial Reports submitted Quarterly and Annually
 - ii. Subscriber based reports to be submitted Monthly. This includes subscriber numbers and Customer Charter reports.
 - iii. Core Network QoS reports as requested by the Commission's guidelines, where applicable
 - iv. Radio Access Network reports where applicable
- b) Licensees are also mandated to keep records of any compliance test or standards check for the purpose of furnishing it to the Commission when requested.

7.17. Type Approval and Technical Standards

- a) A Licensee may require owning and operating certain infrastructural elements which must adhere to the Type Approval regulations and guidelines set by the Nigerian Communications Commission.
- b) A License holder is obliged to adhere to all technical standards and compliance when operating any technical equipment (Core Network, Radio Access Network, Billing and Metering, Customer Relationship)

7.18. Contracts and Dispute Resolution

- a) Contracts must adhere to the laws of the Federal Republic of Nigeria

- b) Where there is a dispute, the necessary windows of Mediation and Arbitration, created by the Nigerian Communications Commission should first be explored before using other avenues.
- c) Parties to contract will determine the place and timeframe for dispute resolution in an expedited manner. The Commission reserves the right to step in if delay in this determination is observed and reported

8. Limitations of the License

This section determines the limits to which the Licensee is limited to the provisioning of its services

- 8.1. Licensee will be limited to only the services proposed within the scope of the License document
- 8.2. A licensee operating under this licence is unequivocally inhibited from controlling or operating spectrum resources outside of an underserved and unserved region
- 8.3. Licensee is not exempted from applying for any other licence required for providing services beyond the scope of this Licence.

9. Definitions

Administrative Award	“This is a process in which a license can be awarded to a licensee at the disposition of the Commission.”
Annual Operating Levy	“The levy that is payable by eligible Licensees pursuant to these Regulations and the Licences”
Licensee	“This is an entity applying for the license to provide MVNO services in the country”
Application Services	“These are services provided to customers access to a particular software application over a network.”
Auction Process	“This is the process in which the Commission will use auction method to license MVNOs”
Backbone Infrastructure	“The larger transmission line that carries data gathered from smaller lines that interconnect with it.”
Beauty Contest	“This involves selection of the recipient of an MVNO License from a list of contestants based on the best criteria set by the Commission”
Branded Reseller MVNO	“This MVNO model is only concerned with sales and distribution of branded SIM and relies heavily on the host MNO for all other network service operations.”
Capacity Resale	“The act of selling telecommunications capacity as wholesale to another service provider”
Collocation	“Means the placement of transmission equipment owned by the interconnection demanding operator in the premises of the interconnection providing operator for interconnection to that operator’s network”
Commission	“The Nigerian Communications Commission”
Core Network	“The physical elements and operations that have the function of interconnecting primary nodes that access the radio network.”

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Enhanced Service Provider MVNO	“Performs the same functions as the simple service provider MVNO but utilize intelligent network elements for VAS provisioning and may also own its own Home Location Register for MSISDN control”
Fixed Telecommunication Services	“In telecommunications, a fixed service (or fixed radiocommunication service) is a radiocommunication service between specified fixed points”
Financial Bank Guarantee	“Financial guarantee is when the bank assures the beneficiary about the applicant’s intent of paying money. If the applicant is unable to pay as per the contract, the bank will pay on behalf of the applicant”
Full MVNO	“This is the MVNO that has control of all network elements except the radio access network”
Host	“From the point of view of an MVNO, this is a network operator that agrees and provides telecommunications capacities at wholesale to it. “
Infrastructure Sharing	“Means the joint use of network facilities by two or more operators subject to agreement specifying relevant technical and commercial conditions. The term “infrastructure sharing” is more general than the term “collocation” and unless explicitly stated otherwise, infrastructure sharing refers for the purposes of these Guidelines to the sharing of facilities that are not feasible for collocation”
Intelligent Network	“A standard network architecture that allows operators to provide VAS in addition to other standard telecommunications services.”
Interconnect	“This is the physical linking of a carrier's network with equipment or facilities not belonging to that network”
MNO	“See Network Operator”
Mobile Virtual Network Operator	“See Virtual Network Operator”
Mobile Network Code	“A sequence of Numbers used to identify a given network. In this case it is the 4-digit numbers as described in the numbering plan of the Nigerian Communications Commission.”
Mobile Network Operator	“See Network Operator”
Mobile Number Portability	“Mobile number portability (MNP) is a service that allows a mobile phone customer to change telecom carrier and keep the same phone number”
Mobile Virtual Network Enabler	“This entity has the ability to negotiate better wholesale agreements with their host MNOs and provide a platform in which it can resell its capacities to other MVNOs thus streamlining the virtual network provisioning activities. The MVNE can also engage in spectrum leasing agreements if required.”
MVNO	“See Virtual Network Operator”
Numbering Resource	“See Numbering Plan”
Numbering Plan	“A numbering plan is a type of numbering scheme used in telecommunications to allocate telephone/cellular numbers to subscribers and to route telephone/cellular calls in a network”
Performance Bank Guarantee	“Performance bank guarantee secures the beneficiary about the applicant’s performance. In a case where the applicant does not perform as per the contract, the bank will be liable for the applicant and pay the amount mentioned in the guarantee document”
Radio Access Network	“This involves all elements used to access the wireless spectrum to deliver mobile network service”

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<i>Service Level Agreement</i>	“A commitment between a service provider and a client which in this case, the potential virtual network service provider.”
<i>Simple Service Provider MVNO</i>	“This MVNO model is involved in sales and distribution but also relies on its capacity to cater for their customer directly with CRM and billing systems, but requires the MNO to handle the rest of the network service provisioning like VAS, core elements, Application services, etc”
<i>Spectrum Access</i>	“See Radio Access Networks”
<i>Spectrum Elements</i>	“This includes the infrastructure and services that are involved in access spectrum”
<i>Spectrum Lease Agreement</i>	“An agreement in which a licensed spectrum owner can lease its redundant spectrum resources to another service provider”
<i>Spectrum Trading</i>	“An action where license operators are allowed to trade their exclusively assigned spectrum usage rights to unlicensed parties, with the objective of enhancing the efficient use of spectrum”
<i>Network Operator</i>	“This is a licensed spectrum holder that is permitted to provide mobile telecommunications services in Nigeria.”
<i>Virtual Network Operator</i>	“This is a licensed entity permitted to provide virtual network services which include all network provisioning except owning spectrum direct from the commission.”
<i>Visitor</i>	“From the point of view of an MVNO, this is a network operator that is not hosting it. “
<i>Wholesale Agreement</i>	“This is the contract between an MVNO and an MNO that confirms the agreement of the latter to sell its unused or redundant capacity to the former at wholesale rate, for which the former may offer telecommunications services to end users.”
<i>Value Added Services</i>	“These are services beyond the standard voice calls, fax and text services”

Annexure

A. Mobile Service Value Chain and MVNO Models

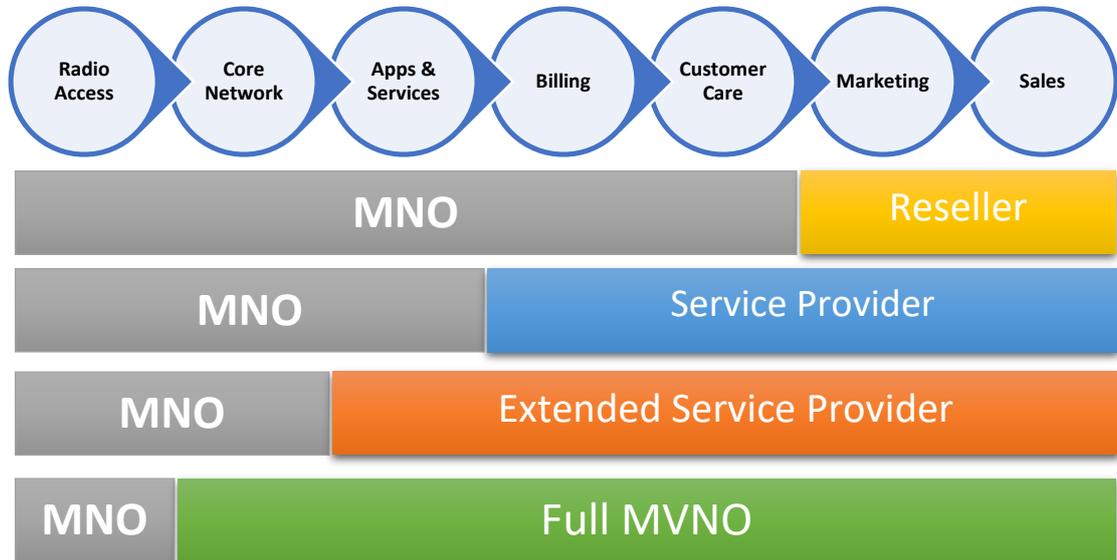


Figure 1: MVNO Operational Models adapted from Veridian Systems

B. Outline of MVNO Agreement

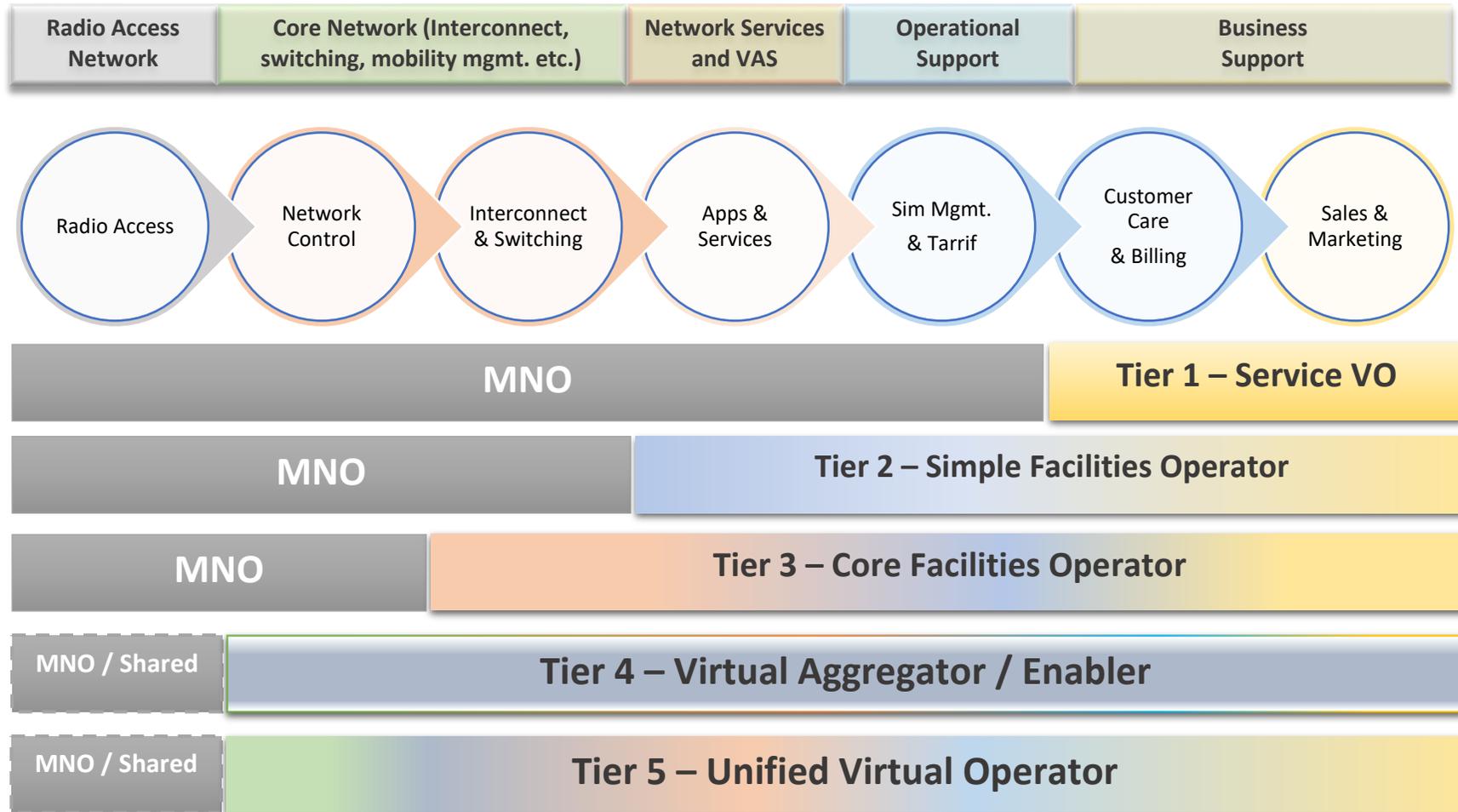
This outline serves only as a guideline to the contents of an MVNO agreement. Although not presented as a standard for MVNO agreement, the Commission expects elements from this outline to be present in an actual MVNO agreement.

- | | | |
|----------------------|-------|---|
| General Framework | Legal | a) Usually begin with an introduction, definitions, and interpretations |
| | | b) Confidentialities and Non-Disclosures agreements |
| | | c) Date of Commencement and duration should be clearly stated |
| | | d) Legal Rights, Protection, Intellectual Property, liabilities, suspension or termination terms, Dispute and Arbitrations, Governing Law, and jurisdiction, etc, should be defined and agreed on |
| | | e) Provision for Renewal of terms if desired |
| | | f) Safety agreements for staff and systems |
| Technical Parameters | | a) Provision for User equipment and terminal equipment where applicable, with plans for compliance and type approval testing. |
| | | b) Numbering arrangements between host and MVNO if applicable. If not, numbering resources should be requested from Commission along with License application |
| | | c) Interface standards according to international best practices should be detailed |
| | | d) Number portability business rules developed for MVNO |

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- e) Network QoS parameters should be defined extensively
-
- a) Infrastructure Planning and traffic forecasting should be outlined for both parties
 - b) Collocation and Infrastructure sharing arrangements should be outlined
 - c) Description of ordering and implementation processes with sufficient time for parties to make necessary adjustments for continuity of service to subscribers
 - d) Billing processes like CDR generation, payment processes and reconciliation must be developed and outlined
 - e) Maintenance processes involving Network operation, Traffic management, Routing management, SIM Management, Operational testing, safety standards, etc, should be outlined
- Operational Processes
-
- a) Detail of billing and payment times should be indicated
 - b) Detail the margins between wholesale and retail price of services being offered.
 - c) Effective price structure should be developed to account for services not offered by host MNO
All rates should be agreed upon and justifications provided with the aim of fostering competition in the market
 - a) All proposed services by both parties must be defined and described
 - b) Scope of services and configuration processes must be clearly stated
 - c) Mode of Service provisioning, technical properties of services and operational conditions must be outlined.
 - d) Quality and Grades of services targets must be enumerated with penalties for failure to meet these targets clearly stated.
 - e) Management of Host-MNO – MVNO relationship must be defined through provision of Joint Committees, Network information availability, prior agreements on network changes, upgrades, repairs and maintenance, database management, and a first level dispute resolution process between the parties.
- Financial Structure
-
- Service Level Agreements

C. Telecoms Service Value Chain and MVNO Tiers



D. MVNO Tiers and Operational Elements

