

FINAL REPORT

ON THE HARMONIZATION OF SHORT CODES IN USE IN THE INDUSTRY

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LIST OF ABBREVIATIONS

CTO – Commonwealth Telecommunication Organization

ITU – International Telecommunication Union

IWG - Industry Working Group

MDAs – Ministries, Departments and Agencies

MNOs – Mobile Network Operators

NEMA – National Emergency Management Agency

NCA - National Communication Authority of Ghana

NCC – Nigerian Communications Commission

NSPC - National Sort Code Plan

TOR - Term of Reference

VAS – Valued Added Services

EXECUTIVE SUMMARY

In April 2011, the Nigerian Communications Commission (NCC) took over the administration and management of all short codes with the aim of providing a cohesive regulatory frame work and practice standard, and to harmonize the short code database in Nigeria. In furtherance to this, the Commission in June 2017, engaged MOLCOM MULTI CONCEPTS LIMITED as the project consultant to harmonize all short codes in the industry in Nigeria. The primary objective is to comprehensively review and harmonize all existing short codes in use in Nigeria and develop a "National Short Code Plan (NSCP)" for the industry.

To achieve this, the project consultant started by researching on short code global best practices in other climes, looked at recommendations on short code administration by organizations like International Telecommunication Union (ITU), and engaged identified key project stakeholders. This was accomplished through research, project meetings with the project sponsor, stakeholders' fora like the Industry Working Group (IWG) on short code in Nigeria and interviews. In addition, a questionnaire was developed by the consultant to solicit individual opinions of key stakeholders, and understand their expectations and concerns in relation to the project. The developed questionnaire was approved by the Commission; copies of which were sent to relevant stakeholders in the industry. Though the questionnaire response was poor (only 27% responded), the received responses were analysed and presented along with other project proposals to the key project stakeholders, at a stakeholder's focus group meeting facilitated by the project sponsor on the 23rd November, 2017, in Lagos with the aim of facilitating an all-inclusive short code plan for the industry.

The project is now 100% completed in terms of overall scope and deliverables with a well-defined classification and categorization of short codes, a clear migration plan of all existing short codes to the new short code plan, a clean database with allocation details, and recommendations toward a new National Short Code Plan contained in a separate document. A key recommendation of this project is the harmonization of common codes for accessing critical services across all networks. If implemented, a significant benefit would be a notable reduction in the need for end users to commit to memory different codes for each network for common network services - enhancing consumer experience. Most importantly, 84% of 3-digit codes, 98% of 4-digit codes and 99% of 5-digit codes would be free for new allocations after harmonization if the project recommendations are implemented.

1.0 INTRODUCTION

Contemporarily, it is no secret that value-added services (VAS) has largely become an integral part of human life globally; owing to the different offerings (products and services) on display by most telecommunication network operators and VAS providers collectively. This has provoked increased demand for short code number resources, required to drive the delivery of these products and services amongst operators and VAS providers. However, it is instructive to note that, short code number resources are limited in number – it is finite in number; hence, these geometrically increasing demands for them may not be marched effectively with availability, if proactive and creative actions are not taken now. In line with this, the Commission decided to develop a new short code plan that would resourcefully re-organize and harmonize all existing short codes issued in the recent past, whilst developing a framework that is consistent with global best practices, for current and future demands. This is a fallout of the prevailing challenges being experienced in the allocation and operation of short codes; post-introduction of the guidelines on short code in Nigeria – particularly, regularization of short codes and inefficiency in short code usage within the industry. To this end, the Communication engaged Molcom Multi-Concepts Limited as the project consultant to harmonize all existing and active short codes in use in the industry, and to develop a new "National Short Code Plan" for the industry.

NOTE - Harmonization in this content implies, the process of creating a set of criteria governing short code allocation by establishing a model that would classify short code number resources into appropriate groups (classes/categories of service); whilst recommending appropriate short code number band for each category of service

Thus, this final report is a presentation of all the works that has been undertaken by Molcom Multi-Concepts Limited in conformity with the project scope and deliverables as contained in the project "Term of Reference" (TOR) and the approved project management plan.

1.1 PROJECT BACKGROUND

Before the introduction of the guidelines on short code operation in Nigeria and the development of a licensing framework for value added services, short codes were administered and assigned by individual Mobile Network Operators (MNOs). As a result, there was an absent of a centralized reference database, which made it difficult to correctly ascertain the availability of short code number resources across MNOs and VAS providers. This situation made administration and management of short code number resource difficult and seemly unorganized in the industry; with lot of inefficiency in the utilization of existing and active short codes by allotees. Clearly, there was an urgent need to chart a new course for a new narrative in the administration, management and utilization of short codes in the industry. In view of this, the Commission was compelled to take over the administration and allocation of all short codes across the industry with the introduction of the guideline on short codes operation in Nigeria, in April, 2011. This action gave rise to a more organized short code regime with a realistic database for reference across the industry - but it also generated problems.

For instance, at present, there are lots of different short codes being used for similar services cross the networks. Each MNOs use different short codes for different customer services like credit balance check, credit recharge, call centre enquiries et al. The situation gets even more complex, when the number of short codes used by VAS providers for their numerous value-added services are factored in. To this end, there was a persuading need to *harmonize* all short codes used for common customer services - making them uniform across all networks. This would significantly reduce the need for end users to memorize different codes for each network for same service. Besides, it would also free up some short code for allocation to other short code driven customer services. Furthermore, there was also a compelling need to clearly classify and categorize short codes according to class of service, to help standardize its allocation and administration - aligning it to global best practices. Equally, developing an efficient National Short Code Plan for the industry that would address the inadequacies and challenges of the current regime was imperative. These inadequacies include:

- Inadequate short code data/statistics
- Lack of standardized code classification/categorization

- Unequal access to number resources
- o Difficulty in regularizing certain short codes presently in use across all networks
- Limitation of short code number blocks
- Indiscriminate/inefficient use of short codes by MNOs and VAS licensees

1.2 PROJECT OBJECTIVES

The objectives of this project include:

- o To carry out a comprehensive review and harmonization of all existing and active short codes that are in use in Nigeria
- o To develop a National Short Code plan (NSCP) for the industry

1.3 PROJECT SCOPE

The scope of this project would include:

- 1. Review the current short codes plan, records of all short code allocations made by the commission and mobile network operators and:
 - a. Produce a clean database with clear allocation details of all short codes allocations.
 - b. Develop a robust and efficient short code plan for the industry in accordance with the guidelines on short code operation in Nigeria.
 - c. Develop a system for classifying and categorizing short codes according to class of services (lottery, games, mobile money, social activities) government and non-governmental use.
 - d. Recommend the maximum number of short codes and type of short codes to be allocated to each Value-Added Services (VAS) licensee.
- 2. Recommend common short codes to be used for requesting critical information from mobile networks such as credit balance check, credit top-up, common customer care short codes, et al to enhance consumer experience.
- 3. Identify global best practices in short code planning, administration and allocation.

4. Provide a clear road map, strategy and migration plan for migrating all existing short codes to the new short code plan.

- 5. Identify new trends and innovations requiring the use of short codes that may significantly impact telecommunication service delivery in Nigeria
- **6.** Make recommendations that would guide the Commission in formulating policies and guidelines that would stimulate growth and healthy competition in the provision of value added services in Nigeria
- 7. Gather useful statistics on value-added services and short code utilization in Nigeria

1.4 REPORT ORGANIZATION

This report is organized as follows:

- **1.** Introduction
 - ✓ Project Background
 - ✓ Project Objectives
 - ✓ Project Scope
 - ✓ Report Organization
- **2.** Project History
- **3.** Project Implementation
- **4.** Questionnaire distribution, result and analysis
- **5.** Project Achievements
- **6.** Recommendations
- **7.** Conclusion

2.0 PROJECT HISTORY

A summary of key project events with historic dates includes:

OFFICIAL PROJECT KICK-OFF MEETING: On 20th July 2017, the project kick-off meeting took place with NCC short code harmonization project team and Molcom project team in attendance. The meeting signified the official kick-off of the project and the familiarization of Molcom project team with NCC short code harmonization project team. General project principles, objectives and road-map towards achieving an effective implementation of the project baselines - scope, schedule and budget, were discussed and agreed. The NCC project team for the meeting include:

- I. Engr. Anthony Ikemefuna NCC Head of Fixed Networks
- II. Engr. Victor Adoga
- III. Engr. Kings Adeyemi
- IV. Engr. Tanana Biaduo
- V. Engr. Sayyadi Sani– NCC Project Manager (short code harmonization project)
- VI. Engr. Mohammed Abubakar Asst. NCC Project Manager (short code harmonization)
- VII. Engr. Ikenna Mbam

- I. Engr. Paul Dinwoke Chief Executive Officer
- II. Kelvin Ikediashi Project Manager
- III. Christian Ochiaka Project team member
- IV. Adamu Ibrahim Project team member
- 2. On 26th July 2017, an official letter requesting the presentation of the project inception report was written by Molcom (project consultant) to NCC (project sponsor). NCC acknowledged receipt the same day.
- 3. On 27th July 2017, NCC officially replied Molcom in a letter ref: NCC/TSNI/NNP/VOL.17/136/2017 acceding to Molcom request to present the project inception report on the 28th July 2017 at the Commission's headquarters in Maitama, Abuja.

4. PROJECT INCEPTION REPORT PRESENTATION – On the 28th July, 2017, Molcom project team did a slide presentation of the project inception report, detailing the proposed project management plan that include:

- Proposed project approach (methodology)
- Proposed project work break-down structure (WBS)
- Proposed project schedule
- o Proposed project timeline with milestones
- Project team organizational chart
- Project deliverables

The NCC project team for the meeting include:

- I. Engr. Anthony Ikemefuna NCC Head of Fixed Network
- II. Engr. Kings Adeyemi
- III. Engr. Tanana Biaduo
- IV. Engr. Sayyadi Sani NCC Project Manager (short code harmonization project)
- V. Engr. Mohammed Abubakar Asst. NCC Project Manager (short code harmonization)
- VI. Engr. Ikenna Mbam

- I. Engr. Paul Dinwoke Chief Executive Officer
- II. Kelvin Ikediashi Project Manager
- III. Christian Ochiaka Project team member
- V. Mubarak Idris Project team member
- 5. On the 31st July, 2017, Molcom Multi-Concepts Limited received an official invitation to the 14th meeting of the Industry Working Group (IWG) on short code via a letter ref NCC/TSNI/SHORT CODE/VOL. 33/228.11/2017

6. On 2nd August 2017, Molcom attended the 14th meeting of the IWG on short code at the Commission's Lagos zonal office. Molcom representatives at that meeting include:

- I. Engr. Paul Dinwoke Chief Executive Officer
- II. Kelvin Ikediashi Project Manager
- 7. On 5th September, 2017, third project meeting took place at the Commission's headquarters with NCC short code harmonization project team and Molcom project team in attendance. The proposed harmonization model and classifications/categorizations of short codes was presented by Molcom project team. Feedbacks were received from NCC project team while other relevant information/documents were requested by Molcom project team from the Commission.

The NCC project team for the meeting include:

- I. Engr. Kings Adeyemi
- II. Engr. Tanana Biaduo
- III. Engr. Sayyadi Sani NCC Project Manager (short code harmonization project)
- IV. Engr. Mohammed Abubakar Asst. NCC Project Manager (short code harmonization)

- I. Kelvin Ikediashi Project Manager
- II. Christian Ochiaka Project team member
- **8.** On 19th October 2017, 15th meeting of the IWG on short code was held at the Lagos zonal office of the Commission. Molcom representative at the meeting include:
 - I. Engr. Paul Dinwoke CEO, Molcom Multi-Concepts Limited
 - II. Kelvin Ikediashi Project manager

9. 30th October 2017, the fourth project meeting between Molcom project team and NCC project team was held. In the meeting, Molcom project team presented:

- o Improved class/categories of short code and harmonization model based on the feedback received from NCC project team at the third project meeting (5th September 2017)
- Proposed short code band per class of service
- Proposed questionnaire to key project stakeholders (MNOs, VAS providers and Banks)

The NCC project team for the meeting include:

- I. Engr. Bako Wakil NCC Deputy Director (Technical Standard and Network Integrity)
- II. Engr. Edoyemi Ogoh NCC Assistant Director (Technical Standard and Network Integrity)
- III. Engr. Anthony Ikemefuna NCC Head of Fixed Network
- IV. Engr. Kings Adeyemi
- V. Engr. Tanana Biaduo
- VI. Engr. Sayyadi Sani NCC Project Manager (short code harmonization project)
- VII. Engr. Mohammed Abubakar Asst. NCC Project Manager (short code harmonization)

- I. Engr. Paul Dinwoke CEO, Molcom Multi-Concepts Limited
- II. Kelvin Ikediashi Project Manager
- III. Barr. Jennifer Ezeogu Project team member
- IV. Christian Ochiaka Project team member
- 10. On 20th November 2017, the fifth project meeting between Molcom project team and NCC project team was held. The meeting was to fine tune the preparation for the forth coming Stakeholders' Focus group engagement on short code harmonization, scheduled for 23rd November 2017 at the Digital Bridge Institute in Lagos. Molcom project team did a slide

presentation in preparation for the focus group engagement and got feedbacks from the Commission.

The NCC project team for the meeting included:

- I. Engr. Tanana Biaduo
- II. Engr. Sayyadi Sani NCC Project Manager (short code harmonization project)
- III. Engr. Mohammed Abubakar Asst. NCC Project Manager (short code harmonization)

- I. Kelvin Ikediashi Project Manager
- II. Barr. Jennifer Ezeogu Project team member
- III. Christian Ochiaka Project team member
- 11. STAKEHOLDERS FOCUS GROUP ENGAGEMENT: On the 23rd of November, 2017, a stakeholders' focus group engagement on the harmonization of short code in use in the industry project, facilitated by Commission was held at Digital Bridge Institute in Lagos. The key highlight of the engagement was a slide presentation by Molcom project team, which was followed by a "Question and Answer" session. The presentation included:
 - Result and analysis of the received questionnaire responses from key project stakeholders (MNOs, VAS providers and Banks)
 - Proposed class/categories of short code
 - o Proposed harmonization model
 - Proposed short code band per class of service
 - Proposed Harmonized common codes for accessing critical services across all networks
 - Proposed migration plan for migrating the existing short codes to the new short code plan

Key feedbacks from the stakeholders' focus group engagement include:

1. The time frame for migration to the new plan should be extended to 3-years for smooth and effective transition

- 2. Harmonization should commence in phases to enable smooth and effective transition.
- **3.** WASPAN requested NCC permission to carry out internal harmonization amongst their members and communicate the results to the Commission
- 4. The time frame to respond and return the questionnaires sent out to stakeholders should be increased by two weeks to enable more stakeholders turn in their responses
- 5. Banks and large financial institutions should be allowed to retain their existing and active codes for easy access by their customers, and potential financial impact in terms of customer engagement, marketing and re-branding of a new short code
- **6.** Microfinance and cooperatives bank to be included in the classifications and allotted bands
- 12. 26th January 2018, the sixth project meeting between Molcom project team and NCC project team was held at the Commission's headquarters in Maitama. The meeting was to present the project interim final report to the project sponsor and fine tune preparations for the forth coming IWG meeting on short code, scheduled for 1st February 2018 at Commission's Zonal office in Lagos. Molcom project team did a slide presentation of the project interim final report to the project sponsor. Molcom received feedbacks and obtained final acceptance of presented recommendations and proposals from the Commission (project sponsor). The NCC project team for the meeting include:
 - I. Engr. Bako Wakil NCC Deputy Director (Technical Standard and Network Integrity)
 - II. Engr. Edoyemi Ogoh NCC Assistant Director (Technical Standard and Network Integrity)
 - III. Engr. Anthony Ikemefuna NCC Head of Fixed Network

- IV. Engr. Kings Adeyemi
- V. Engr. Mohammed Abubakar Asst. NCC Project Manager (short code harmonization)

Whilst the Molcom project team for the meeting include:

- I. Engr. Paul Dinwoke CEO, Molcom Multi-Concepts Limited
- II. Kelvin Ikediashi Project Manager
- III. Barr. Jennifer Ezeogu Project team member
- IV. Christian Ochiaka Project team member
- office of the Commission. In the meeting, Molcom project manager did a slide presentation of the interim final project report to key project stakeholders (NCC, MNOs and VAS providers) to facilitate a clear understanding of the project recommendations and proposals; and obtain formal acceptance by project stakeholders. The slide presentation included:
 - o Project Recommendations
 - o Proposed Number Bands per Service Class
 - o Proposed Harmonized Common Service Codes
 - o Proposed Migration Plan

Molcom representative at the meeting include:

- I. Engr. Paul Dinwoke CEO, Molcom Multi-Concepts Limited
- II. Kelvin Ikediashi Project manager

3.0 PROJECT IMPLEMENTATION

3.1 INTRODUCTION

To ensure the project achieved the desired results flowing from the project background presented in section 1.1 (page 5), it was imperative the project consultant considered the following key points:

- 1. Have a clear understanding of the expectations of the project sponsor and other major project stakeholders
- 2. Study and understand the existing short code guidelines, database, and the application/allocation criteria and processes
- 3. Identify international industry best practices and recommendations on short code administration
- 4. Develop a robust system for classifying and categorizing short codes in the industry
- 5. Define a fair, transparent and acceptable harmonization model for cutting over old short codes to new short codes regime with a clear and realistic migration plan

3.2 PROJECT EXECUTION

The project technical approach was aligned to the "traditional waterfall" project management model. This model was adopted as for its implementation simplicity, support for good project life cycle management and control, and clear visibility of each project phase output(s). In conformity to this approach, the project was divided into four (4) pre-planned phases, executed in a pure linear sequential flow. Starting from the first phase to a successor phase, until the last phase was completed mirroring a waterfall. The project execution was aligned to the defined phases, as depicted in figure 1 below.

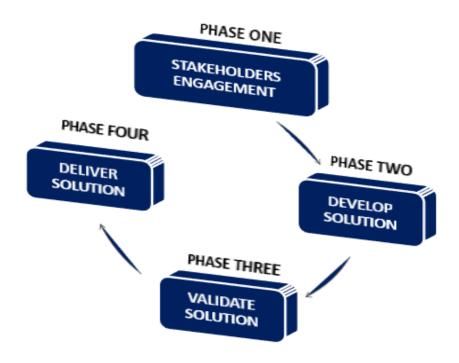


Figure 1: Project Technical Approach

3.2.1 STAKEHOLDERS ENGAGEMENT

The voice of project stakeholders, is key to accomplishing project objectives and expectations for every project. With this in mind, Molcom project team engaged key project stakeholders to gather valuable inputs in the form of opinions, suggestions and concerns in phase one; which helped to align project expectations, and to ensure project objectives are achieved. It involved soliciting, understanding, and documenting the views and suggestions of project stakeholders; while managing their expectations of the project deliverables. This was achieved through face-to-face or electronic interactive sessions with relevant stakeholders, all through the project life cycle – especially at the start of the project. Firstly, an official kick-off meeting was held between the Molcom project team and NCC short code project teams, helping to align objectives and agree general principles. In addition, several project meetings between the Molcom project team and the NCC short code project management team were also held to discuss and track project progress all through the project life cycle. Secondly, the project sponsor (NCC) invited Molcom project team to three (3) IWG engagement meetings on short code where the team interacted and engaged widely with key stakeholders like NCC licenced MNOs and VAS providers on the project.

Thirdly, Molcom project team had phone discussions with some key stakeholders on their expectations and concerns of the project work to encourage acceptability of project deliverables. Lastly, a stakeholders' focus group meeting facilitated by the Commission was held on the 23rd November 2017 in Lagos, where Molcom project team presented key project interim deliverables and recommendations to stakeholders in a slide presentation. These efforts encouraged convergence of project expectations and encourage acceptability of project deliverables by stakeholders.

3.2.2 DEVELOPING THE DELIVERABLES

Phase two of the project which entailed developing key project deliverables, was divided into two parts namely:

- ✓ Research
- ✓ Questionnaire administration
- **1. RESEARCH** The *research* part of this phase involved:
 - Identify standards and recommendations on short code management of bodies like ITU and CTO
 - Identify global best practices in short code planning, administration and allocation in other climes
 - Carry out a comprehensive review and evaluate of the extant guidelines on short codes
 in Nigeria along with the existing short code database.

In achieving this, recommendation like ITU-T E.164 were studied. The team also studied short code administration and management in countries like UK, Canada, USA, Bangladesh and in Africa looking specifically at Ghana and South Africa within the African region.

For instance, Ghana in 2014 [National Communications Authority (Ghana), 2014] successfully harmonized and implemented common (uniform) service short codes for accessing key network services across all mobile networks in Ghana as shown below

S/N	HARMONISED SERVICE	HARMONISED CODE
1	Call Centre	100
2	Credit Recharge	134
3	Check Balance	124
4	Porting Services (Mobile	600
4	Number Portability)	000
_	Verification Of SIM	400
5	Registration	400
6	Voice Mail Deposit	108
7	Voice Mail Retrieval	109
8	Sim Fraud Report	419

[Adapted from National Communications Authority (Ghana) website, 2014]

This action was initiated and driven to a logical conclusion by the country's industry regulating authority - *National Communication Authority* (NCA) - not without challenges. Remarkably, the initiative was taken following the widespread abuse, confusion, disparity and inefficiency (wastefulness) in the use of short codes in Ghana by players in industry - similar to the situation the industry in Nigeria finds herself currently. Inspired by the success achieved in the common service code harmonization, in January 2015 [National Communications Authority (Ghana), 2014], NCA also harmonized all short codes used for mobile value-added services across all telecom networks in Ghana. This facilitated easy activation of short code for value-added services across all networks, and greatly enhanced the regularization of existing and active short codes across all networks in Ghana. As a consequence, all network operators are required by NCA post-short code harmonization regulations, to activate any short code allocated by the authority to any VAS provider for the specified service.

Similarly, South Africa in March 2016, the Independent Communication Authority of South Africa (ICASA) started a mandatory new harmonized common service code regime that required all cellular networks to standardize certain network service short codes that include: *customer care, voice mail deposit/retrieval and prepaid credit recharge/balance amongst others*. Like in Ghana, this new regime will enhance customer experience and facilitate number portability across network. The implementation is currently ongoing with 100% migration targeted by 24th March 2018.

S/N	HARMONISED SERVICE	HARMONISED CODE
1	Voice Mail Retrieval	132
2	Voice Mail Deposit	134
3	Customer Care Centre	135
4	Prepaid Credit Recharge/Balance	136
5	Account Enquiry	137

[Adapted from Independent Communication Authority of South Africa (ICASA) website, 2016]

2. QUESTIONNAIRE ADMINISTRATION – Using questionnaires to solicit and gather valuable inputs from project stakeholders, was considered the most suitable method to articulate the voice of stakeholders for this project. This was because of the large number of identified project stakeholders (included all NCC licensed MNOs and VAS providers) and their geographical spread. In addition, there was a compelling need to use statistical analysis as a tool to effectively converge the likely divergent views and opinions of stakeholders in this kind of population sample mix. Hence, two questionnaires containing written sets of targeted questions, relevant to achieving the project objectives and deliverables, were developed by Molcom project team and approved by the Commission. Copies of the approved questionnaires where electronically transmitted to relevant project stakeholders like MNOs, NCC licensed VAS providers and banks by the Commission soliciting their responses. One questionnaire was developed solely for NCC licensed MNOs and VAS providers, while the other was exclusively developed for commercial banks.

final Report February 28, 2018 These were used to solicit their opinions and suggestions on certain project deliverables that would have significant impact on their operations; as well as understand their concerns. Copies of the approved questionnaires are presented in the report appendices, while the analysis and results of the responses gotten for the questionnaires are presented in section 4.0. Page **20** of **57** Molcom Multi-Concepts Limited

4.0 QUESTIONNAIRE DISTRIBUTION, RESULTS AND ANALYSIS

As highlighted in section 3.2.2, two questionnaires comprising of targeted questions relevant to accomplishing the project scope, and defined objectives were developed by the project consultant, in conjunction with NCC short code harmonization project team, and were approved by the Commission. The developed questionnaires were tools, used to collect the opinions and suggestions of key project stakeholders on certain project deliverables, that could possibly have considerable impact on their businesses and operations. It was also a means to understand their concerns regarding the effect of the project on their businesses, with the view of considering genuine concerns in the project implementation and recommendations. The set of questionnaires developed for MNOs and VAS providers comprised of eleven (11) questions in total, while that for banking institutions had eight (8) questions in all.

4.1 QUESTIONNAIRE DISTRIBUTION

A total of one hundred and fifteen (115) questionnaires were sent out to key stakeholders (MNOs, VAS providers and Banking Institutions) through the Commission. Respondents were give a time frame of two weeks (2) in the first instance (from 3rd to 17th November, 2017) to submit their feedbacks to the Commission. However, the Commission graciously extended the time frame for submission by an additional three weeks (3) [27th November to 15th December, 2017] following the feedback received from the Stakeholders' focus group engagement held in Lagos, on the 23rd November, 2017. This was done to encourage an all-inclusive participation of project stakeholders. However, out of the 115 questionnaires sent out to stakeholders, only thirty-one (31) of these number sent in their responses, while eighty-four (84) did not respond at all as at 5th January, 2018. In terms of percentages, 27% responded, while 73% did not respond. The tabular and pie chart distributions are presented in table 1 and figure 2 below.

	SENT	RESPONSES	YET TO RESPOND
NCC LICENSED MNOs	5	5	0
VAS LICENSED PROVIDERS	90	22	68
BANKS	20	4	16
TOTAL	115	31	84

Table 1: Total Questionnaire Tabular Distribution

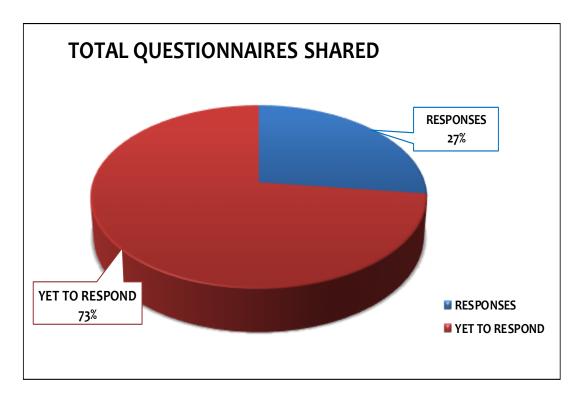


Figure 2: Total Questionnaire Pie Chart Distribution

4.1.1 MNOs AND VAS PROVIDERS QUESTIONNAIRE DISTRIBUTION

A specific focus on the questionnaire distribution for MNOs and VAS providers indicates that, a total of ninety-five (95) questionnaires were sent to MNOs and VAS providers combined. While MNOs were sent five (5), the VAS providers were sent ninety (90) questionnaires. All the five (5) MNOs responded, while only twenty-two (22) VAS providers turned in their responses – a total of twenty-seven (27) combined responses. This represents 24% of the total sent out to MNOs & VAS providers combined. Presented below is the tabular and pie chart distribution.

	SENT	RESPO	ONSES	VET TO DECDOND
	SEINI	MNOs	VAS	YET TO RESPOND
NCC Licensed VAS/MNOs	95	5	22	68

Table 2: MNOs and VAS Providers Questionnaire Tabular Distribution

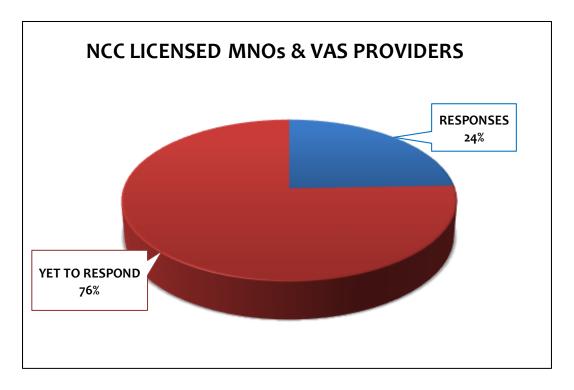


Figure 3: MNOs and VAS Providers Questionnaire Pie Chart Distribution

4.1.2 COMMERCIAL BANKS QUESTIONNAIRE DISTRIBUTION

A total of **Twenty (20) questionnaires** were sent out to commercial banks, out of which only **four (4) responded** representing **20% of the total sent to commercial banks**, while **sixteen (16) representing 80% did not respond to the questionnaire.** Presented below is the tabular and pie chart distribution.

	SENT	RESPONSES	YET TO RESPOND
BANKS	20	4	16

Table3: Commercial Banks Questionnaire Tabular Distribution

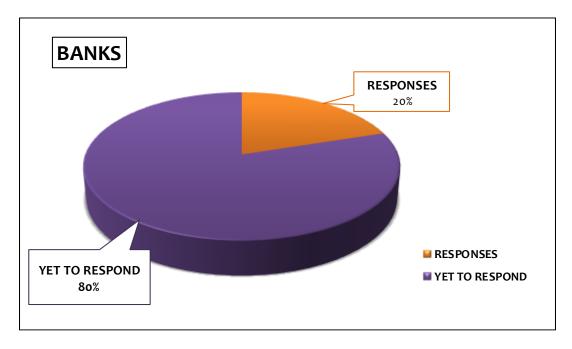


Figure 4: Commercial Banks Questionnaire Pie Chart Distribution

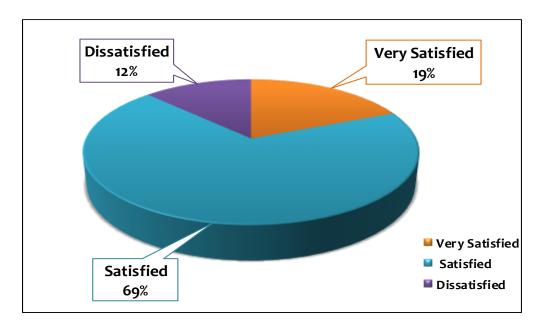
4.2 QUESTIONNAIRE FEED-BACK ANALYSIS

As noted in section 4.0 a written set of targeted questions were included in the questionnaires development with a view to soliciting, understanding, documenting and considering where appropriate, the valuable inputs (opinions, suggestions, observations and concerns) of key project stakeholders in the project execution. The key questions and responses from NCC licensed MNOs and VAS providers are itemized below:

Q3. How satisfied are you overall with the current short code numbering plan?

A total of twenty-seven (27) responses were received. Five (5) respondents indicated they were very satisfied with the current short code numbering plan representing 19% of the total responses. Twenty (20) respondents indicated they were satisfied, representing 69% of the total responses, while two (2) respondents indicated they were dissatisfied, representing 12% of the total responses. This is expected because of stakeholders' initial reservations about the objectives of the project and their concerns of some probable impact on their businesses.

Very Satisfied	Satisfied	Dissatisfied
5	20	2



- Q4. From the proposed listed short code harmonization criteria, rank these in your preferred order of importance. If others, please specify.
 - 1. License age (date of first issuance)
 - 2. Traffic frequency statistics (Short code usage per annum)
 - 3. Network spread
 - 4. Date of first activation

1, 2, 3, 4	1, 3, 2, 4	2, 3, 4, 1	2, 4, 1, 3	1, 4, 2, 3	4, 3, 1, 2
3	2	4	2	4	2

Table 4: Stakeholders Free Ranking of the Listed Harmonization Criteria

Four (4) short code harmonization criteria were developed by Molcom project team in consultation with key project stakeholders. These were listed in no particular order in the questionnaires. Stakeholders were asked to freely rank these criteria in their own preferred order of importance starting from the most important to the least important criteria, in a descending order. Many combinations were suggested in their responses as presented above, with only the most prevalent listed in the table 4 above.

Q6. Suggest the best time frame for migration (cut-over) to the new harmonized short code plan.

A total of twenty-seven (27) respondents responded to this question. Two (2) respondents suggested a 3-months, seven (7) respondents suggested a 6-months, three (3) respondents suggested a 9-months and fifteen (15) respondents suggested a 12-months migration time frame respectively.

3-MONTHS	6-MONTHS	9-MONTHS	12 - MONTHS
2	7	3	15

Table 5: Stakeholders Suggested Time Frame for Migration to New Harmonized Plan

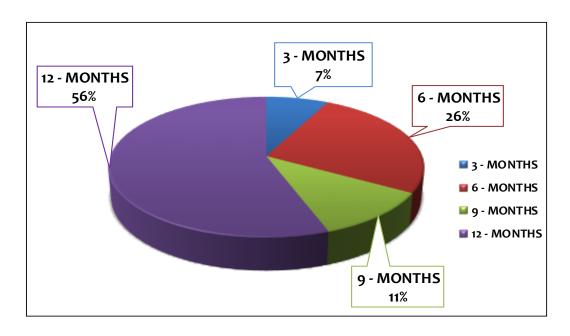
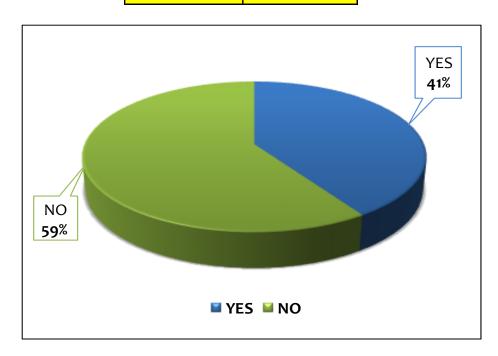


Table 6: Stakeholders Suggested Time Frame for Migration to New Harmonized Plan

Q7. Should there be a limit to the number of short codes allocated to each VAS licensee per application?

A sixteen (16) respondents representing 59% of the total responses received, suggested they do not support placing limits to the number of short codes allocated to each VAS licensee per application. While eleven (11) respondents representing 41% of total responses received would like to see a cap to the limit of the number of short codes allocated to each VAS licensee per application. This is expected as majority of the industry players would prefer complete freedom. However, this would most likely lead to number hoarding and poor utilization of short codes, which are hallmarks of the current regime.

YES	NO
11	16



4.3 POSSIBLE IMPACTS AND CHALLENGES OF HARMONIZATION ON BUSINESSES

Deduced from the responses received, the following are the possible impacts of harmonization on businesses as expressed by respondents:

- o Increased marketing cost (cost of customer education, enlightenment and re-branding)
- o Possible post harmonization service disruptions and network instability
- o Significant network equipment re-configuration
- o Possible customer losses

4.4 BENEFITS OF HARMONIZATION

- 1. Visibly promote transparency and accuracy of short code allocation
- 2. Ensure accountability of short codes usage in the industry
- 3. Encourages healthy competition amongst stakeholders in the industry
- 4. Significantly enhanced customer experience
- 5. Makes information less confusing to potential customers
- 6. Streamlines marketing efforts drastically
- 7. Stimulates easier and faster launch of new of services across all network

5.0 PROJECT ACHEIVEMENTS

Notable achievements were made during the execution of the project, in line with the approved project scope that included:

- o A proposed short code harmonization model
- o Proposed short code classification and categorization
- o Proposed number band per short code category
- o Proposed harmonized common short code for accessing critical network service across networks
- o Proposed migration plan for migrating all existing short codes to the new short code plan
- o A clean short code database with clear allocation detail of all short code assignments

5.1 PROPOSED SHORT CODE HARMONIZATION MODEL

In developing this proposed harmonization model, we were mindful of the concerns and possible resistance from some stakeholders, that could result from competing interests of stakeholders, as well as natural resistance to change. We also recognize the discomforts and likely impacts the harmonization process may cause on most businesses – need to re-brand, network equipment reconfiguration, increase marketing cost on customer awareness and education, possible customer losses and temporary network instability amongst others. Hence, we have developed a model that would be **encompassing**, fair, transparent and acceptable to stakeholders so as to mitigate the impacts on businesses and end-users. This model was developed after several interactions with key project stakeholders and subject matter experts. In implementing this model, consideration of the listed criteria would start from the first criterion (traffic analysis) to the last criterion (license age). In a situation where more than one short code licensee has same statistics, it would trigger consideration of the next criterion on the ladder (network spread) in a downward cascade, until the last criterion (license age). This approach was strategically developed, to reflect fairness, transparency and to reward utilization.

The proposed model is premised on four core criteria listed in descending order of importance and consideration, from the most significant to the least significant:

- 1. Traffic Analysis
- 2. **Network Spread**
- 3. Date of Activation
- 4. License Age (Date of First Issue)
- 1. **Traffic Analysis** This criterion is premised on the facts that short code is limited; hence, confronts the need to properly utilize available codes. This criterion looks at:
 - utilization (frequency of use) of the specified short code under consideration within a specified period (last three quarters) on the network(s)
 - number of end users utilizing the specified short code under consideration within the specified period (e.g. last three quarters) on the network(s)

It is appropriate to put into consideration, the potential number of customers that may be lost by each allotee, with the aim of reducing to the barest minimum possibility of these losses. The allotee with better utilization and/or higher number of users utilizing the specified short code would be considered more likely to retain the code, if only it falls within the same class/category in the new short code class/category. Other allotee (s) that use that same short code would be migrated to another short code within the new class/category based on its class of service. If two or more allotees using a specific short code have similar traffic statistics as specified above, the next criterion (network spread) would then be considered.

2. Network Spread – This criterion is intended to help reduce potential customer losses by considering how many mobile network operators have the specified short code on their network for the same service, when considering which allotee keeps the existing code or is cut-over to another code. Thus, the allotee with the highest preponderance (network spread) across networks would stand a better chance of retaining the short code, if the service class falls into the same short code band in the new class/category. Other allotee(s) that use that short code would be migrated to another short code within the new class/category based on its class of service.

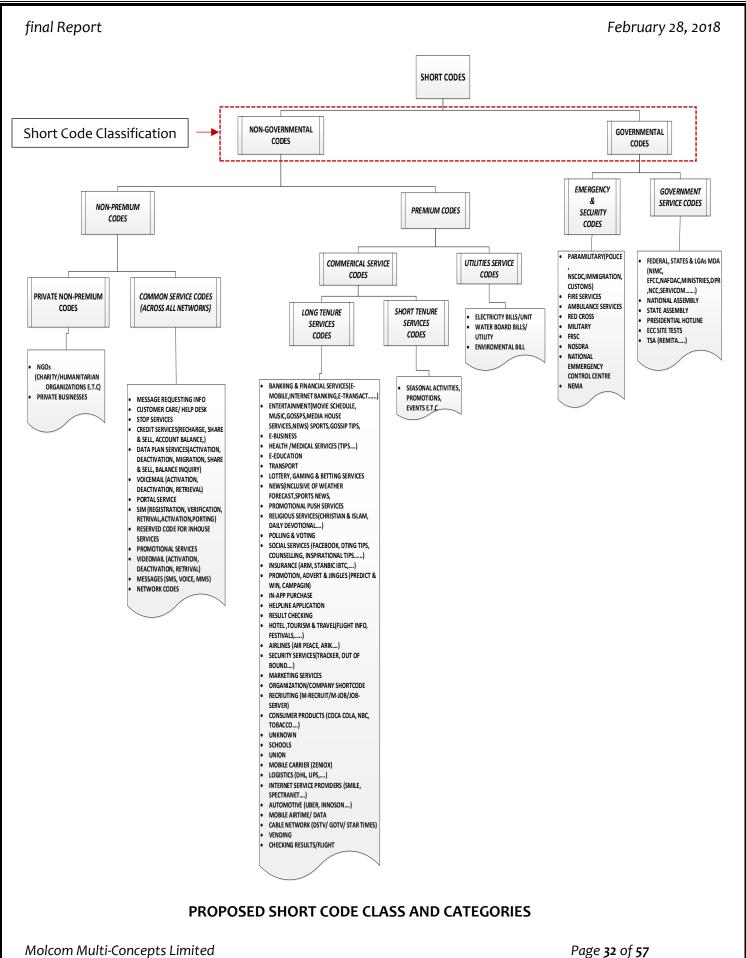
3. Date of Activation - This criterion takes into account the date the specific short code under consideration initiated/Commissioned traffic on the network(s). Thus, this criterion considers which allotee was first to activate the said code on a network.

4. License Age – This criterion would be our final resort in situations where more than one allotee shares the same statistics, network spread and date of activation. The allotee with the oldest allocation date would retain the current short code provided the current short code falls into that category in the new short code plan; while others would be migrated to another short code with the class/category of service.

5.2 PROPOSED SHORT CODE CLASSIFICATION AND CATEGORIZATION

In conformity to the project TOR, a new classification and categorization of short code was developed based on the class of service. To this end, all short codes were grouped into two broad classes namely:

- **1.** Governmental short codes
- 2. Non-governmental short codes
- 1. Governmental short codes This group of short codes represent those set of short codes exclusively utilized by government offices [ministries, departments and agencies (MDAs)] comprising of both the three tiers (federal, state and local governments) and the arms of government (Executive, legislative and Judicial arms). The governmental short codes are further categorized into two categories base on class of service. The categories are:
 - o **Emergency and security codes** codes exclusive for security and emergency services with agencies like NEMA, police, military, ambulance services, fire service amongst others falling into this category.
 - o **Government service codes** codes exclusive for use by any government MDA other than security and emergency services.



2. Non-governmental short codes - These are short codes exclusive to all other organizations and businesses outside government MDAs. It is further divided into two main categories namely –

- o **Non-premium codes** These are codes that will not attract any tariff for usage (no charges/premium on usage) when used by end-users. These are subdivided into **common service codes** and **private non-premium codes**.
 - a. Common service codes will be used uniformly across all networks by end-users to access common critical network information/services like credit top-up, credit balance check, customer care et al.
 - **b. Private non-premium codes -** will be used by other private organizations/businesses to allow end-users access their information/services without access fees or tariffs.
- o **Premium codes** These are codes that would attract charges/tariffs/premium when used by end-users to access information/services on any network. These codes are further subdivided into:
 - a. Commercial service codes These are codes that would be used for all other commercial services except utilities (water, electricity and sanitary services amongst others).
 - **b. Utilities service codes** These codes would be used for utility services exclusively. Services like water, electricity and sanitary services amongst others.

NOTE – Commercial service code is further subdivided into **long tenure** and **short tenure codes**. **Long tenure codes** are codes that would be allocated to an allottee by NCC for use for a period that would be exceeding <u>six</u> (6) calendar months from the date of activation. Thus, these codes have a twelve (12) calendar months validity period and are subject to continuous renewal at the expiration of their validity period. In sharp contrast, **short tenure codes** are codes that are allocated to an allottee by NCC for use for a period that is <u>equal to or less than</u> six (6) calendar months from the date of activation. Thus, validity period of these codes would be for a <u>minimum of one (1) calendar month</u> and a <u>maximum of six (6) calendar months</u>.

In addition, short tenure codes can **ONLY be used for seasonal/tenured promotions, surveys and short tenured events** that would run continuously for a period not exceeding six (6) calendar months at a stretch. At the expiration of their validity period, the codes are given up by the allottee and withdrawn into the database by the Commission.

NOTE: Short tenure codes issued for less than 6(six) calendar months can be renewed so long as the renewal fall within the validity time frame (six calendar months) for use of short tenure codes.

For example - Company A applies for 25XXX which falls under a short tenure code for a period of 5(five) calendar months. Upon the expiration of the 5(five) calendar months, Company A can only apply for renewal of that short code for an additional 1(one) calendar month. This is premised on the fact that no short tenure code issued can exceed its validity period of 6(six) calendar months. Once the validity period lapses, the short code becomes un-renewable for the same class of service by Company A.

5.3 PROPOSED NUMBER BAND PER SHORT CODE CATEGORY

Another notable achievement of this project is the proposed number band per short code category - a result of the new developed classes and categories of short code as presented in section 5.3. Accordingly, number bands have been proposed per category of short code. While the 3-digit short codes have been reserved exclusively for critical services, the 4-digit short codes have been allocated exclusively for important services. 5-digit short codes have been allocated to non-critical/important services. Harmonized common service codes for accessing common information/services across all networks is also proposed to greatly enhance customer experience. Below are the proposed number bands and common service codes:

PROPOSED HARMONIZED COMMON SERVICE CODES ACROSS NETWORKS

S/N	HARMONIZED SERVICES	HARMONIZED CODES
1	CALL CENTER/HELP DESK	300
2	VOICE MAIL DEPOSIT	301
3	VOICE MAIL RETRIEVAL	302
4	SIM VERIFICATION	304
5	STOP SERVICE	305
6	CREDIT RECHARGE	311
7	DATA PLAN	312
8	BORROW SERVICES	313
9	SHARE SERVICES	321
10	CHECK BALANCE	322
11	DATA PLAN BALANCE	323

NOTE: All harmonized common service codes listed above would be tariff-free (no charge) except "voice mail deposit and retrieval" that would attract tariff on the end-user for usage across all networks. Additionally, it is important to highlight "**Stop service**" - a new initiative introduced and recommended by the project consultant for implementation by MNOs for the growth of industry. This service is to be used by mobile network subscribers to stop any kind of network service(s) they may have voluntarily subscribed to at any specific point in time.

How does it work? For "stop service" to work, the database of the mobile switching centres has to be configured to keep track of all services subscribe to voluntarily by each individual subscriber via their subscriber identification module (SIM).

Thus, when the proposed "stop service code" (305) is sent from a subscriber's mobile phone, the list of all the services subscribed to voluntarily by that specific subscriber is display on the mobile phone by means of unstructured supplementary service data (USSD). From the displayed list of subscribed services, the subscriber can specify the specific service(s) to unsubscribe (stop).

The benefit of these proposed harmonized common service codes initiative includes:

o **Enhanced customer experience** – customers would no longer be required to put to memory different codes to access common critical network services on their network.

- o **Save short codes** since only one code would be required to access or subscribe to common network services, all other short codes previously used to subscribe to different services would be save.
- o **Facilitates mobile number portability** When subscribers port from one network to another, they do not have to learn new short codes to access critical network services on their new network.

PROPOSED 3 – Digit NUMBER BAND WITH ASSOCIATED SHORT CODE CATEGORIES

S/N	3 - DIGIT (CRITICAL SERVICE)	NUMBER BANDS	TOTAL NUMBER
1	EMERGENCY & SECURITY CODES	1xx	100
2	GOVERNMENT SERVICE CODES	2xx	100
3	COMMERCIAL BANKING SERVICES CODES	5xx	100
4	NETWORK / INTERNAL CODE (FOR MNOs)	4xx	100
5	COMMON SERVICE CODES	300 - 324	25
		425	
	RESERVED FOR FUTURE ASSIGNMENT	6xx - 799	200
	RESERVED FOR FUTURE ASSIGNMENT	8xx - 999	200
	RESERVED FOR FUTURE ASSIGNMENT	325 - 399	75
			475

PROPOSED 4 – Digit NUMBER BAND WITH ASSOCIATED SHORT CODE CATEGORIES

S/N	4 - DIGIT (IMPORTANT SERVICES)	NUMBER BANDS	TOTAL NUMBER
1	INSURANCE	1xxx - 1199	200
2	UTILITIES	12xx - 1299	100
3	NGOs	13xx - 1499	200
4	INTERNET / DATA SERVICE PROVIDERS	2xxx - 2499	500
5	HEALTH/ MEDICAL SERVICES	3xxx - 3499	500
6	EDUCATION SERVICES	35xx - 3999	500
7	NETWORK / INTERNAL CODE	4xxx - 4499	500
8	MICROFINANCE BANKS/ FINANICAL SERVICES	5xxx - 5999	1000
9	E-BUSINESS /E- COMMERCE	6xxx - 6999	1000
10	NEWS / INFORMATION SERVICES	7xxx - 7999	1000
			5500
	RESERVED FOR FUTURE ASSIGNMENT	15xx - 1999	500
	RESERVED FOR FUTURE ASSIGNMENT	25xx - 2999	500
	RESERVED FOR FUTURE ASSIGNMENT	45xx - 4999	500
	RESERVED FOR FUTURE ASSIGNMENT	8xxx - 9999	2000
			3500

PROPOSED 5 – Digit NUMBER BAND WITH ASSOCIATED SHORT CODE CATEGORIES

S/N	5 - DIGIT	NUMBER BANDS	TOTAL NUMBER
1	RELIGIOUS SERVICES	10xxx - 10499	500
2	ORGANIZATIONS/COMPANIES	11xxx - 12999	2000
3	ENTERTAINMENT	13xxx - 13999	1000
4	LOTTERY, GAMING & BETTING SERVICES	20xxx - 20999	1000
5	SOCIAL NETWORK	21000 - 21999	1000
6	SHORT TENURE CODES (SEASONAL PROMOTIONS, SURVEY)	25xxx - 25999	1000
7	NETWORK / INTERNAL CODE	44xxx - 44499	500
			7000

5.4 CLEANED SHORT CODE DATABASE SUMMARY

Also achieved with reference to the TOR, is a clean harmonized short code database with clear allocation details of current short code reign. Below is a summary of the database:

PRE-HARMONIZATION STATUS (CURRENT STATUS)

	3-DIGIT		4-D	IGIT	5-DIGIT	
ALLOCATED	705	78%	935	10%	2489	3%
AVAILABLE FOR NEW ALLOCATION	195	22%	8065	90%	87511	97%
TOTAL	900	100%	9000	100%	90000	100%

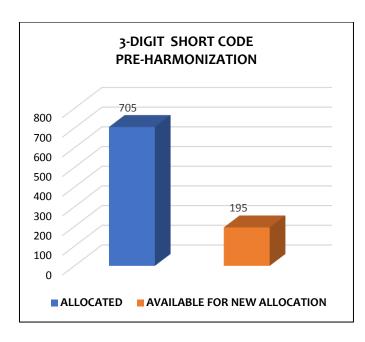
In term of percentages from the table, seven hundred and five (705) are currently allocated - representing 78% of the entire 3-digit codes, leaving only 22% for new allocation. Conversely, only nine hundred and thirty-five (935) representing 10% of the entire 4-digit code are currently allocated; while two thousand four hundred and eighty-nine (2489), representing 3% of the entire 5-digit short codes has been allocated currently.

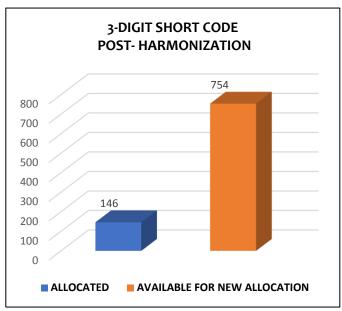
POST - HARMONIZATION STATUS

	3-D	IGIT	4-0	DIGIT	5-DIGIT	
Codes retained from current allocated codes	88	16%	52	2%	24	1%
No of codes that would be free for new allocation post-harmonization	754	84%	8794	98%	89004	99%

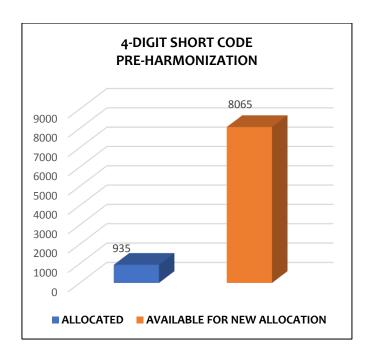
NOTE: From the table above, **84**% **of the currently allocated 3-digit short codes**, **98**% **of the currently allocated 4-digit short codes** and **99**% **of the currently allocated 5-digit short codes** would be free for new allocation post - harmonization.

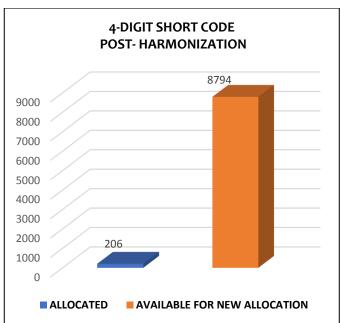
3-DIGIT



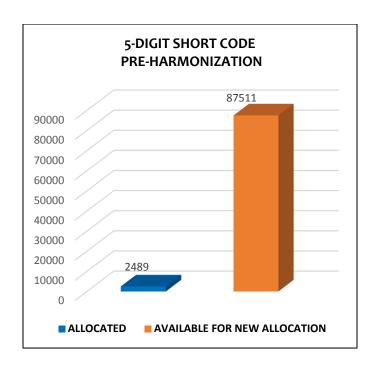


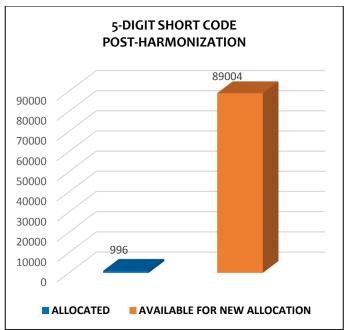
4-DIGIT





5-DIGIT





Furthermore, the class of service of some codes as existing in the current database are <u>unidentifiable</u>. This has made it impossible to appropriately advise (recommend) the correct number band to assign them. These set of codes have been coloured in <u>red</u> in the cleaned short code database with the below summary distribution.

	3-DIGIT	4-DIGIT	5-DIGIT
Codes with unidentifiable service class (in red colour)	58	154	1020

	NCC	MTN	GLO	ETISALAT	AIRTEL	VISAFONE	MULTILINKS	STARCOMM
3-DIGIT		15	9	13	20	1	1	3
4-DIGIT	7	35	57	85	50	5	3	4
5-DIGIT	2	213	624	201	363	153	17	32

6.0 RECOMMENDATIONS

Following the results of the analyses on the opinions, suggestions and concerns registered by respondents in their feedbacks, the following are our recommendations:

- 1. Proposed harmonization model ranked based on preferred order consideration start from the most significant to the least significant:
 - 1. Traffic analysis
 - 2. Network spread
 - 3. Date of activation
 - 4. License age (date of first issuance)
- 2. A twenty-four (24) calendar months migration time frame should be stipulated to provide sufficient time for relevant stakeholders (MNOs and VAS providers) to appropriately cope with pre/post harmonization challenges
- 3. Existing and active codes used by commercial banks currently, should be retained by allocated banks; and should all be exempted from the proposed harmonization. However, any subsequent application(s) by any financial institution for new short code(s) (post harmonization), must be within the new proposed short code number band dedicated to them in the new plan
- **4.** All short code allotees must submit to the Commission utilization statistic of all assigned short codes at the point of renewal or new application by existing allotee(s). The would assist the Commission to keep valuable short code utilization data for the industry.
- 5. A maximum of two (2) short codes per service and a maximum of ten (10) service class per VAS provider in each application.

6.1 PROPOSED MIGRATION PLAN

The proposed migration plan of old short codes to the new short code regime include:

✓ All old short codes with subsisting validity period will remain valid and active for a period of twenty-four (24) months (migration period) from the date of official commencement of the harmonized codes. However, all old emergency/national interest short codes are exempted and would remain active after the migration period

- ✓ Old short codes with subsisting validity period will run in parallel with their new harmonized codes for a period not exceeding twelve (12) months from the date of official commencement of the harmonized codes; provided the new codes is not currently existing as an active short code on any network
- ✓ After harmonization, existing subscribers on the old short codes will be migrated automatically to the new harmonized short codes without having to deactivate the service/subscribers where impossible
- ✓ All old short codes except emergency/national interest and commercial banks short codes would become invalid after twenty-four (24) months from the date of official commencement of the harmonized codes. Any violation would attract a penalty
- ✓ NCC should champion and lead pre-harmonization customer sensitization and enlightenment campaign on a regulatory footing, to underscore the importance of harmonization to the industry and the end-users. This would help lessen the cost implication for customer education/enlightenment on MNOs and VAS providers amongst others. Besides, it would inspire confidence in the industry and would greatly encourage full/actively participate of all MNOs and VAS providers alike in pre/post harmonization customer education/enlightenment.
- ✓ All applicants would be required to pay an application/renewal fee for any new application/code renewal from the date of official commencement of the harmonized codes
- ✓ WASPAN should be permitted by the Commission to carry out internal harmonization
 amongst their members aligning it to the new short code plan and communicate the
 results to the Commission to help reduce possible customer losses

✓ The Commission should use the IWG as a vehicle to supervise and enforce compliance of the approved NSCP and migration plan.

✓ The migration from the existing plan to the new short code plan shall be in 2(two) phases:

PHASE	SHORT CODE CATEGORY	TIME FRAME
Phase One	Only the Proposed Harmonized Common Service Codes	First twelve Months
Phase Two	All other existing Short codes	Last Twelve Months

- a) **PHASE ONE** In the first phase only the migration of the new harmonized common service codes across all networks (MNOs) would be implement in the first twelve (12) months of the 24 months proposed migration time
- b) **PHASE TWO** In the second first, all other existing short codes would be migrated to the new short code plan in the last twelve (12) months of the proposed twenty-four (24) months migration period.

7.0 CONCLUSION

The project scope is 100% completed with all specified project deliverables formally accepted by the NCC short code harmonization project team. This project report has proposed a series of innovative and far reaching recommendations and plans agreed by key project stakeholders, that would assist in tackling current challenges in short code administration within the industry particularly, *regularization of short codes* and *inefficiency in short code usage*. These recommendations and plans have taken into account the divergent views, suggestions and concerns of stakeholders. The work also considered the possible discomforts and likely impacts the harmonization process may cause on most businesses within the industry. As a consequence, the recommendations and plans were hinged on fairness, transparency and general acceptability of all stakeholders, with a passionate desire to strengthen the existing regulatory frame work and practice standards for the advancement of the industry.

Notable achievements of this project work in line with the approved project scope include:

- o A proposed short code harmonization model
- o Proposed short code classification and categorization
- o Proposed number band per short code category
- o Proposed harmonized common short code for accessing critical network service across all networks
- o Proposed migration plan for migrating all existing short codes to the new short code plan
- o National Short Code Plan (contained in a separate document)
- o A clean short code database with clear allocation detail of all short code assignments
- o Other recommendations

BIBLIOGRAPHY

- Bangladesh Telecommunication Regulatory Commission . (2010). Retrieved November 2017, from Bangladesh Telecommunication Regulatory Commission (BTRC): http://www.btrc.gov.bd/sites/default/files/short_code_allocation_procedure.pdf
- Canadian Wireless Telecommunications Association. (2015, November). Retrieved November 2017, from Canadian Wireless Telecommunications Association (CWTA): http://www.txt.ca/wp-content/uploads/2015/11/Canadian-Common-Short-Code-Application-Guidelines-Version-3-1.pdf
- Communications Authority of Kenya. (2017, August). *Telecommunication Numbering Plan for Kenya*.

 Retrieved November 2017, from

 http://www.ca.go.ke/images/downloads/NUMBERING/Telecommunication%20Numbering%20Plan%20for%20Kenya%20August%202017.pdf
- Independent Communication Authority of South Africa. (2016, March 24). Retrieved November 2017, from Independent Communication Authority of South Africa (ICASA): https://www.icasa.org.za/Portals/0/Regulations/Regulations/NumberingPlanReg.pdf
- National Communications Authority (Ghana). (2014, September). Retrieved September 2017, from National Communications Authority (NCA): https://nca.org.gh/assets/Uploads/NCA-SNR-Administrative-Framework-Guidelines-Final-Version-without-Si3....pdf
- National Communications Authority (Ghana). (2014, March). Retrieved September 2017, from National Communications Authority (NCA): https://nca.org.gh/assets/Uploads/Consumer-Watch-Edition-2.pdf
- Nigerian Communications Commission. (2011, April). Retrieved September 2017, from Nigerian Communications Commission (NCC): https://www.ncc.gov.ng/docman-main/legal-regulatory/guidelines/141-guidelines-on-shortcode-operation-in-nigeria/file
- Short-Codes.com. (2006, October). *Code of Practice for Service Delivery of Common Mobile Shortcodes in the UK for all Communications Media*. Retrieved September 2017, from http://www.short-codes.com/media/Co-regulatoryCodeofPracticeforcommonshortcodes170206.pdf

APPENDIX 1

COPY OF THE NCC APPROVED QUESTIONNAIRE DEVELOPED FOR MNOs AND VAS PROVIDER





INSTRUCTIONS TO FILL FORM 01

- 1. Completed forms should be summitted **ONLY** in PDF format
- 2. Completed form should be inserted in a folder, with your **company name** as folder label.
- 3. The list requested in "SECTION D" of FORM o1 should be in PDF format and inserted in folder as stated in instruction 2.
- 4. For enquires, see contact details

E-mail: sayyadi@ncc.gov.ng (Project Manager); aikemefuna@ncc.gov.ng

Mobile number: 08024211885 (Project Manager)

DISCLAIMER

The views, opinions, data and or information expressed and collected in this survey form are going to be used solely for the purpose of the harmonization of short codes. We value your response and assure you, all responses provided will be kept confidential.

STAKEHOLDERS QUESTIONNAIRE ON HARMONIZATION OF SHORT CODE IN USE IN THE INDUSTRY

Molcom Multi-Concepts Limited is an engineering servicing firm currently engaged by Nigerian Communications Commission (NCC) to harmonize short codes in use in the industry. The goal is to carry out a comprehensive review and harmonization of all existing and active short codes in use in Nigeria. This includes the categorization of codes into classes based on type of service; recommend common short codes to be used across networks for network services; develop a comprehensive short code plan and recommend a migration date. This may involve organizations relinquishing their current code(s) and migrating to a new harmonized short code(s). We seek to understand the challenges/limitations associated with the current process/operation whilst collating stakeholders' opinions for the new short code harmonization plan.

SECTION A

Molcom Multi-Concepts Limited

I am a/an
NCC Licensed Mobile Network Operator
NCC Licensed Value-Added Service Provider
Others
her, please specify:
When last did your organization apply for and receive a short code number resource(s) from NCC? 1 month ago
3 months ago
4 - 6 months ago
Over 6 months ago
How satisfied are you <u>overall</u> with the current short code numbering plan? Very satisfied
Satisfied
Dissatisfied (Short-Codes.com, 2006)

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SECTION B	
Q4. From the proposed listed short code harmonization criteria, rank these in your primportance. If others, please specify.	referred order of
 License age (date of first issuance) Traffic frequency statistics (Short code usage per annum) Network spread Date of first activation 	
Others	
Q5. Subsequent to Q4 above, outline the impact of harmonization on your business,	organization.
Q6. Suggest the best time frame for migration (cut-over) to the new harmonized sh	ort code plan.
3 months 9 months 12 months	S
Q7. Should there be a limit to the number of short codes allocated to each VAS licen	see per application.
Yes No	
Q8. If yes to Q7 above, suggest the maximum number of short codes to be allocated per application.	d to each VAS licensee
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SECTI	SECTION C						
Q10.	Suggestions/observations on harmonization of short code in the industry.						
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SECTION D									
Q11.	Q11. Using the format below, list all your existing short codes, their dates of issuance, date of activation and service.								
S/N	SHORT CODE	DATE OF ISSUANCE	DATE ACTIVA		*NAME OF CODE USER	SERVICE			
1	122	20/3/2017	5/4/20	017	XYZ Nigeria Limited	Bible quote, Education, Weather info, News			
1. 2.	Attach a For inte name.	rnal/service/th	iling all inf		on using the above format. please indicate the specific ty	pe of service and the third-party			
	e of Comp								
	•	pany Represe	entative						
Emai		-							
Pnon	ne Numbe	r 							
I declare that all information and data that I shall submit in relation to this survey are true and correct									
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APPENDIX - 2

COPY OF THE NCC APPROVED QUESTIONNAIRE DEVELOPED FOR COMMERICAL BANKS





INSTRUCTIONS TO FILL FORM 01

- 5. Completed forms should be summitted ONLY in PDF format
- **6.** Completed form should be inserted in a folder, with your **company name** as folder label.
- 7. The list requested in "SECTION D" of FORM o1 should be in PDF format and inserted in folder as stated in instruction 2.
- **8.** For enquires, see contact details

E-mail: sayyadi@ncc.gov.ng (Project Manager); aikemefuna@ncc.gov.ng

Mobile number: 08024211885 (Project Manager)

DISCLAIMER

The views, opinions, data and or information expressed and collected in this survey form are going to be used solely for the purpose of the harmonization of short codes. We value your response and assure you, all responses provided will be kept confidential.

STAKEHOLDERS QUESTIONNAIRE ON HARMONIZATION OF SHORT CODE IN USE IN THE INDUSTRY

Molcom Multi-Concepts Limited is an engineering servicing firm currently engaged by Nigerian Communications Commission (NCC) to harmonize short codes in use in the industry. The goal is to carry out a comprehensive review and harmonization of all existing and active short codes in use in Nigeria. This includes the categorization of codes into classes based on type of service; recommend common short codes to be used across networks for network services; develop a comprehensive short code plan and recommend a migration date. This may involve organizations relinquishing their current code(s) and migrating to a new harmonized short code(s). We seek to understand the challenges/limitations associated with the current process/operation whilst collating stakeholders' opinions for the new short code harmonization plan.

SECTION A

Q1.	I was assigned current short code by				
	Nigerian Communications Commission				
	NCC Licensed Value-Added Service Provider				
	Others				
If other, please specify:					
Q2.	When last did your organization apply for and receive a short code number	resource(s)			
	1 month ago				
	3 months ago				
	4 - 6 months ago				
	Over 6 months ago				
Q3.	How long has your current code(s) been in use?				
	1 - 5 months ago				
	6 - 12 months ago				
<u>SECT</u>	Over 12 months ago				
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Q4.	Should a single common code be used across all banks? Yes No			
Q5.	Flowing from your response to Q4 above, state your reason(s) reflecting housiness/organization	now it impacts on your		
Q6.	If YES to Q4 above, suggest the best time frame for migration (cut-over) t code plan. 3 months months months months			
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SECTION C		
Q7. St	uggestions/observations on harmonization of short code in the industry.	
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SECT	SECTION D					
Q8. Using the format below, list all your existing short codes, their dates of issuance, date of activation name of organization and service.						
S/N	SHORT CODE	DATE OF ISSUANCE	DATE OF ACTIVATION		SERVICE	
1	122	20/3/2017	5/4/20	17	XYZ Bank PLC	Bible quote, Education, Weather info, News
 NOTE: 3. Attach a PDF file detailing all information using the above format. 4. For internal/service/third-party codes, please indicate the specific type of service and the third-party name. 						
	e of Comp		_			
Name Emai		pany Represe	entative			
Phone Number						
I declare that all information and data that I shall submit in relation to this survey are true and correct						
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