



**REPORT OF THE OF THE PUBLIC
CONSULTATION ON THE MOBILE
CELLULAR INFRASTRUCTURE
AND SERVICES PROJECT PHASE 2
UNDER THE UNIVERSAL SERVICE
FUND**

Disclaimer: The information contained in this pack is only indicative and does not necessarily reflect the final contents or conditions that will be reflected in the Final Phase 2 USF Tender Document.

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REPORT OF THE STAKEHOLDERS' CONSULTATIONS ON THE UNIVERSAL SERVICE FUND (USF) PHASE 2 MOBILE CELLULAR INFRASTRUCTURE AND SERVICES (MCI&S) PROJECT IN UN-SERVED & UNDER SERVED AREAS IN KENYA

1. INTRODUCTION

Communications Authority of Kenya (CA) on the 7th April 2020 posted on its website, www.ca.go.ke, and further published in some of the local daily newspapers; the Daily Nation and the Standard, a public notice, inviting comments/responses from key stakeholders as well as the general public on the contents in the Consultation Paper on the planned Phase 2 of the Cellular Mobile Infrastructure and Services Project targeting infrastructure deployment in un-served and under-served areas of the Republic of Kenya through a subsidy incentive arrangements funded through the Universal Service Fund (USF). See annex 4

To supplement the notices CA shared an Information Pack to all 78 Licensed Network Facility Providers (NFP) who are in the categories of NFP Tier 1,2 and 3. Out of the 78 licensees 20 submitted written submissions electronically while 5 indicating that they would not participate owing to various reasons.

The publication and email outreach efforts sought comments and/or inputs with respect to the proposed strategies to guide the implementation of the project. Respondents were given up to 22nd April 2020. Subsequently certain potential respondents requested for additional time to provide their inputs, a request that was subsequently granted based on legitimate justifications.

As indicated in the feedback form, Respondents were guided to make submissions on the following thematic areas;

- i. General comments,
- ii. Challenges and mitigation plans;
- iii. Tender Format and Eligibility and
- iv. Project Component and Bidding Format
- v. Subsidy payment schedule

Written responses were received from 20 individuals, organizations and private firms as listed below;

1. Wilson Kimengich
2. Safaricom PLC
3. iNet Africa (Zeplin Investments LTD)
4. Kenya Electricity Transmission Company Limited (KETRACO)
5. ATC Kenya
6. Liquid Communication
7. Airtel networks Kenya Limited
8. Hanns Munyefu- Masaba Services
9. Dirk-Jan Koeman- Poa Internet
10. Lawyers Hub
11. Huawei Kenya
12. CommCarrier Satellite Services

13. Jamii Telecommunications Ltd
14. Telkom Kenya Ltd
15. Airtel Networks Kenya Ltd
16. Alan Dick E.A.
17. Simbanet
18. Seacom
19. Teleport Communications
20. Seal Towers

Further CA organized for an online dialogue that was held on the 17th April 2020; attended by 73 participants, see *Annex 2*. *Annex 1* is a record of the feedback from respondents while *Annex 3* is the record of the meeting in form of minutes.

The comments and inquiries made during the online dialogue were to the extent possible responded to, albeit on preliminary basis, during the dialogue and captured in the minutes of the online dialogue as indicated in the Annex attached.

The written submissions were grouped in accordance with key thematic areas and expounded to as indicated in *Annex 1*. The grouping was in accordance with the following thematic areas;

- i. General comments,
- ii. Independence of USF to Political Interference
- iii. Supporting infrastructure – Access to Roads and Energy
- iv. Tender Format, Eligibility and Adherence to Tender Specifications
- v. Challenges and mitigation plans;
- vi. Telecommunications Infrastructure ownership
- vii. Competition and Project Components
- viii. Subsidy payment schedule
- ix. Drive up The Demand for Telecommunication Services and Social Investment
- x. Quality of Service
- xi. Standardization of costs
- xii. Spectrum Fee Waiver for USF Project
- xiii. Apportionment of subsidy between Active and Passive Infrastructure components

2. SUMMARY OF FEEDBACK FROM THE RESPONDENTS

Respondents submitted various views and proposals in respect of the strategies proposed for Phase 2 of the voice infrastructure and services project. A summary of the views and proposals are as setout below;

a) General Comments

Based on the introductory presentation respondents did appreciate that Phase 2 of the project shall require closer involvement with other actors such as the local communities and their leadership as well as the security agencies in order to mitigate some of the challenges experienced in Phase 1. Respondents particularly noted that insecurity was a key risk and challenge in some of the targeted areas.

Respondents proposed that CA should play a key role in ensuring provision of security by working closely with relevant government security agencies in order to ensure that the targeted sub-locations are sufficiently safe for infrastructure installation activities. Suggestions were made to the effect that telecommunication infrastructure should be designated as critical infrastructure.

b) Insulation of USF from Political Interference

A number of respondents brought out concerns for possible interference in the management and administration of USF by other Government agencies noting that political interference has negatively impacted the management and administration of such programs in other countries and that Kenya may not be any different.

A proposal was made to the effect that there is need for the establishment of a policy that puts a cap on the amount of involvement a company /entity can get involved in the project that is inversely proportional to the said company's market share.

c) Supporting Infrastructure: Energy and Roads

It was observed that often times remote and difficult to access areas also lack other basic necessities apart from communications infrastructure. The amenities in reference include access roads that can withstand large transport trucks and connection to the national electrical power grid amongst other infrastructure. It was therefore suggested that the Authority should engage County and Central Governments to facilitate provision of such basic infrastructure.

Respondents appreciated the Authority's position to allow bidders to choose the most appropriate power solution rather than prescribing solutions such generators that add extra CAPEX and OPEX costs compared say to Solar power and battery that are more power efficient.

d) Tender Format and Eligibility

Some respondent asserted that separating the passive and active infrastructure might cause delays in situations where blame games may ensue between the different providers. Preference was therefore placed on either a single provider or a consortium to do both the passive and active project components. This notwithstanding respondents sought clarification on the selection criteria in case of multiple bidding for both project components.

A specific proposal was made on bid security such that it reads...*in the form of a bank guarantee or a bankers cheque from a reputable bank in Kenya or insurance from insurance agencies allowed by the Public Procurement Regulatory Authority, valid for 150 days from the date of closing of tender...*”.

A proposal was made on the bid requirements to state that *..each bid documents pages (Original and Copy), must be serialized and paginated. Further proposal was made that the bids should be firmly bound and not contain any loose pages or be of spiral bidding. Any bids submitted in files be they spring or box files should be rejected. A further proposal was made for the certification of all documents for the USF tender, to be done under oath by Commissioner for Oaths or Notaries Public.*

In addition it was proposed that *there is need for an assessment of the firms’ capacity to carry out the assignment.* It was suggested that this could be in the form of *capacity of Financial capability and Technical capability through review of bidders’ certified audited financial statements covering the last 3 financial years (i.e. 2016/17 to 2019/20).*

On the technical capacity assessment, it was suggested that *bidders provide evidence of similar works done elsewhere in the last five (5) years.* Further it was suggested that *bidders should demonstrate compliance with requirements in terms of compliance to other statutory requirements of other Government agencies such as KRA, NEMA, ICTA, KCAA as well as ISO* as these requirements will ensure that only reputable organizations are involved in the project implementation.

It was also recommended that a summary of the bid details such as the evaluation criteria, bidding process, bid prices and bid results should be published on the Authority’s website. Further that project implementation progress as well as monitoring reports should also be published and regularly updated on the Authority’s website.

e) Challenges and Mitigation Plans

Respondents observed that whereas significant success was achieved in the implementation of Phase 1 of the project, which has seen 67 sub-locations completed thus far, a number of challenges have been experienced with respect to the 11 outstanding sub-locations.

Some of the challenges cited include population coverage requirements, poor terrain/topography, insecurity, delays in securing statutory approvals, challenges arising from the technical specifications such as coverage, etc.

Respondents nonetheless commended the Authority on the new approach of emphasizing on population coverage rather than geographical coverage. Despite the shift in focus from geographic to population coverage, respondents recommended that this requirement be stated clearly in the tender document.

Further respondents recommended the extension of the project implementation period for phase 1 in the affected areas to 3 years as they appreciated the provision for a 24-month period for phase 2 in the rest of the areas.

Respondents welcomed the decision to use the 2019 Population and Housing Census data but noted however nomadic pastoralists mainly inhabit that most of the Northern region. Owing to this respondents observed that while the census may have captured population coverage in a given area, the situation changes dynamically since pastoralists keep moving from one place to another.

f) Telecommunication Infrastructure Ownership

It was observed that the issue of ownership of the subsidized infrastructure needs to be clarified. Respondents cited that USF is a subsidy and further indicated that a large percentage of the capital expenditure as well as the operational costs shall be borne by the licensee who wins the bid and consequently should be the ultimate owner of such infrastructure.

g) Bidding Structure for various Project Components

Several respondents sought more clarifications on the selection of bidders given the three options for bidding, namely; active, passive, or combination of active and passive.

Additionally, clarification was sought on the scope of works for the ‘passive components’ vs. the “active components”.

Some respondents proposed a revision of the ratio of subsidy between passive and active from the proposed 73% (Passive) and 27% (Active), which the Authority has set out based on the ratio of the average capital cost for the two distinct components to a ratio of 45% (Active) and Passive (55%). The proposal was however not supported by any specific data save for the assertion that the Authority may not have taken into account the cost structure associated with 3-G. It was however clarified that indeed the data took into account the 3-G technology.

h) Subsidy Payment Schedule

Respondents agreed to the suggested payment based on the project milestones adding that the disbursement be such that 25% be made as advance payment upon signing of the contract against issuance of a performance bond of 5% of the contract value.

i) Drive up of Demand for Telecommunication Services & Social Investment

Respondents observed that the Authority should consider increasing the demand for ICT services in the USF designated areas by ensuring that successful bidders provide connectivity to all primary schools in the designated sub-locations with speed above 10 Mbps through 1 CPE from the 3G network. It was noted that since all the primary schools in Kenya have tablets, it might not be necessary to purchase devices.

It was further observed that providing the capacity to the school would be unlikely to affect the site capacity as local demand will be low, and this will have no significant cost impact on the operator. If effected, this approach will mean the USF will be able to provide connectivity to hundreds of primary schools at no additional cost. This was said to have the effect of driving demand for Internet services and that students will get the experience and interest in using the Internet thereby acquiring digital skills. This will in turn drive demand for mobile Internet, increasing ARPU for the operators.

In addition USF may consider providing 1 tablet and 2 Mbps to any dispensary in the sub-location in order to contribute to the Universal Healthcare Care (UHC) Agenda of the government, thus enabling order and re-order of medical supplies and ensuring that health facilities submit records online.

The stakeholders further observed that Kenya has adopted a mobile first approach to aid in providing Universal access to the Internet. It was therefore observed that that Phase 2 of the USF project should deepen access to mobile infrastructure nationally.

To achieve meaningful ubiquitous access, the respondents echoed the Human Rights Principles for community and Development, stating that; Investment in connectivity should be deployed hand-in-hand with human rights-based capacity building, public access points, and skills development. Thus, the bridging of the persistent digital divide will require more than simply extending infrastructure, but doubling connectivity with other socio-economic aspects such as education which is vital in unlocking the full benefits of connectivity for a population.”

j) Quality of Service (QoS) and NRRD Guidelines

It was observed the Authority should ensure the strict adherence and implementation of Quality of Service Regulations. The standards to be adhered to should mainly be in Voice, SMS and mobile data KPIs that are in the domain of the MNOs. Monitoring of the thresholds should be in the form of regular license compliance monitoring exercises.

It was also clarified that the envisaged approach was to work towards complying with the NRRD thresholds rather than bringing down the threshold to ease compliance to the detriment to the quality of services provided. Whatever agreement is reached between MNOs and passive infrastructure providers should be such the overall network meets the NRRD requirements.

k) Standardization of Costs

Comments were made to the effect that there was need to link the geographic coverage to the budget based on the three technical parameters namely; tower (antenna) height, BTS TRX transmitter power and Mobile device sensitivity. That the height of the tower is also decided by the requirement of Line of Sight (LOS) from the nearest transmission hub of the MNOs. As there may be bidders for only passive infrastructure, some of the stakeholders noted that they needed to know the variable parameters based on which the towers would be designed.

This standardization of input will mitigate the hazard of MNOs or the passive infrastructure holders finding the tower heights not suitable to them after the design and building of such towers. Therefore, it was stated that;

- a) Tower heights be fixed for each sub-location in the tender document as per estimates of CA or
- b) Standard inputs for link budget be provided for simulation of coverage analysis to decide on the tower heights

l) Spectrum Fee Waiver Proposal for USF subsidized Sites

Some Respondents indicated that spectrum is an important resource in the provision of fixed wireless and mobile communication services including voice and data. The resource is allocated to designate operators based on their respective license categories. In the case MNOs that hold Network Facilities Provider (NFP) Tier 1 Licenses, the license enables them to acquire spectrum licenses on a nation-wide basis to provide voice and data services.

It was indicated that though the allocated spectrum is dedicated to each licensee, a fee is levied for its utilization per transmitter deployed. It was therefore noted that during Phase 1 USF Tender, there was a request made to the Authority for waiver on microwave and TRX fees for sites developed subsidized using USF funds. It was argued that the ability to continue providing communication services to un-served areas for prosperity is highly dependent on the ability to sustainably meet the OPEX for maintaining the infrastructure and services in the identified areas.

It was therefore proposed that the Authority considers the proposal to waive spectrum fees for microwave and TRX, as this will be a huge contribution towards the initiative. It was observed that the spectrum fee, which is a factor of the Operational Expenses (OPEX) and Capital Expenses (CAPEX) accounts for a significant proportion of the total cost of a telecommunication installation. It therefore is expected that by waiving the spectrum fees, the operators shall be incentivized to extend infrastructure in the high cost areas since the overall expenditure of an installation would be lowered significantly.

m) Apportionment of subsidy between Active and Passive Infrastructure components

It was observed that the proposal to have separate bids for Active and Passive infrastructure while encouraging joint bids for both components was lauded. However, it was observed that in order to enhance feasibility the Active Infrastructure (AI) should receive reasonable portion of the subsidy considering that reaching some of the optimal sites will require multiple repeaters.

It was further observed that the split for Active Infrastructure to be set at 60% and Passive Infrastructure (40%). It was observed that the PI providers will after all be assured of rental revenue and hence the need for greater subsidy for AI providers.

n) OPEX Subsidy Proposal

A respondent observed that the operating expenditure (OPEX) is a key determinant in enabling USF coverage yet it had not been factored in the proposed subsidy model. The respondent further observed that the increased operating cost is driven by the remoteness of the USF sites and distances to be covered which results in high maintenance of the AI

equipment coupled with the increased transmission costs. The respondent therefore proposed reconsideration of the subsidy arrangement to incorporate OPEX matters.

3. CONSIDERATION OF THE FEEDBACK AND THE CORRESPONDING RESPONSES

Annex 1 below presents a detail analysis of the written submissions received and the associated preliminary responses.

4. ANNEX1: ANALYSIS OF RESPONSES TO THE FEEDBACK FROM STAKEHOLDERS' WITH RESPECT TO PROPOSED STRATEGIES FOR PHASE 2 OF THE USF SUPPORTED CELLULAR MOBILE NETWORK INFRASTRUCTURE PROJECT IN UN-SERVED AND UNDER SERVED AREAS OF KENYA

Respondent/ Organization	Subject Matter	Respondents' Comments/ Proposals	CA's Consideration/Responses
Safaricom PLC	<ul style="list-style-type: none"> • 1) Bid Security of Kshs 10 million must be in form of Bank Guarantee from a reputable bank 	<ul style="list-style-type: none"> • 1) CA should include this statement <i>...in form of a bank guarantee or a banker's cheque from a reputable bank in Kenya or insurance from insurance agencies allowed by Public Procurement Regulatory Authority valid for 150 days from the date of closing date of the tender</i> • 6) That bid response document (Original and Copy) - Pages must be serialized and paginated. • 7) The bids shall be firmly bound and should not have loose page spiral binding and files (spring and Box) are not ACCEPTABLE (mandatory). All certification of documents shall be executed by a Commissioner for Oaths or Notaries Public 	These proposals are noted and shall be considered appropriately
	<ul style="list-style-type: none"> • Holders of Network Infrastructure Providers licenses shall be required to submit their bids alongside relevant documentation to ascertain their status, compliance, capacity and eligibility. 	<ul style="list-style-type: none"> • CA should ask bidders specific documents that operationalize the variables mentioned. On Capacity they should break it down into: <ul style="list-style-type: none"> i) Financial capacity (bidders provide 3 year Certified Audited financial statement 2016/2017/2018/2019) ii) Technical Capacity – a) bidders must provide works done of similar nature for the last 5years. <ul style="list-style-type: none"> • On Compliance CA should break it down into: <ul style="list-style-type: none"> i) Compliance with ICTA (bidders must provide Certified valid ICTA certificate) ii) Compliance on Occupational Health and Safety 	

Respondent/ Organization	Subject Matter	Respondents' Comments/ Proposals	CA's Consideration/Responses
		Management (bidders must provide certified Policy documents)/or Provide ISO Certifications; These will help CA to develop a sound evaluation criterion.	
<p>Samson Kamau, Kenya Electricity Transmission Company Limited (KETRACO)</p>		<p>2)You did not include component of fiber build up cost as it is an integral component especially for those like KETRACO who wish to work with others</p> <p>KETRACO have very high towers, other countries have collocated on such towers, its an opportunity to have active equipment on these towers. The tender might not have envisaged such a situation, instead of building in some areas, Options of stepping down power to solve that problem, engage with land owners for any construction since land has already been acquired thus solving way leave issues. This arrangement might however not allow for many operators as it carries power, nor can they be transferred to the operators</p> <p>KETRACO indicated that it has power transmission with fiber running within the cables and any invited interested parties to join in consortium.</p> <p>KETRACO sought clarification on what constitutes the active component and if the fiber cable is a part of.</p>	<p>The backhaul system weather in form of Optic Fiber Cable (OFC) or Microwave Link (ML) is part of the Active Component of the infrastructure.</p> <p>We encourage entities such as KETRACO that have existing infrastructure to consider infrastructure sharing and colocation opportunities that exist within the ICT sector through business partnerships even without the need for USF support.</p>
<p>Lorna Nyandat ATC Kenya</p>		<p>Are bidders allowed to make two parallel bids, one bid as part of a consortium and a second bid individually?</p>	<p>Yes on condition that a particular entity or a particular consortium does not submit multiple bids for the same specific scope of work.</p> <p>For example ATC on its own can bid for Passive infrastructure in a particular Lot/Sub-Location and</p>

Respondent/ Organization	Subject Matter	Respondents' Comments/ Proposals	CA's Consideration/Responses
			similarly bid for consolidated Active and Passive in the same Lot/Sub-Location in a Consortium with an MNO. The two bids will be treated separately.
Adam Lane, Deputy CEO, Public Affairs Huawei Kenya		<p>Separating the passive and active infrastructure may cause more delays, and make it challenging to identify where the delay is between different providers. Therefore, if one provider or one consortium can do passive & active together it should be preferred as it will likely speed up delivery and reduce risks.</p> <p>Clarify the selection process of which bidder will be selected depending on if there are bidders for all three options (active only, passive only, active & passive).</p>	<p>This observation is noted. Please note however that the decision to separate the two components was informed by the experiences in Phase 1 and is aimed at ensuring a wider participation subject to eligibility thereby fostering competition.</p> <p>The overriding consideration in the selection of bids will be the overall cost of bringing a site to live, i.e. the result of a combined bid for Active and Passive where applicable. In situations where bids are not made for Active components, the bids for Passive components will be considered on their own.</p>
Safaricom PLC	<ul style="list-style-type: none"> Bidders are expected to make submissions that demonstrate compliance with the following: The network configuration and supporting facilities that meet the set network Redundancy, Reliability and 	<ul style="list-style-type: none"> This project comprises of two components Active and Passive, and none can exist in isolation, the NRRD requirements need to be expanded to cover Passive Components like the generators, Rectifiers and Battery banks as important network elements as the BTS cannot work without them. In addition, the metrics of availability of Critical, Major and Minor elements is not the same at 99.999 	<ul style="list-style-type: none"> We support and encourage the proposal for industry consultations towards coming up with specific availability thresholds for different network components where the same belongs to different plays but within the overall NRRD

Respondent/ Organization	Subject Matter	Respondents' Comments/ Proposals	CA's Consideration/Responses
	<p>Diversity guidelines to ensure maintenance of the highest service quality at all times.</p> <ul style="list-style-type: none"> The network to be established shall adhere to the Network Redundancy, Resilience and Diversity (NRRD) guidelines as published by the Authority. The network shall specifically adhere to section 4 of NRRD Guidelines for Mobile Network Operators (MNO), which requires 99.999 % availability of Critical, Major and minor network elements. 	<p>%. We need to agree on the % availability of the various elements.</p> <ul style="list-style-type: none"> The NRRD guidelines are yet to be agreed between the CA and the industry stakeholders. The imposition of NRRD metrics in the project implies that the industry has approved the framework. How will the NFPT2s and T3s be made to adhere to the NRRD guidelines to responsible for the Passive Components. Need to have a stakeholder workshop to re-look the NRRD framework and refine some of the thresholds. This is because if all operators are required too adhere to these thresholds, none of the operators would be able to meet. This will be based on the submissions for the last 3 years 	<p>Guidelines. CA is ready to facilitate such consultations.</p> <ul style="list-style-type: none"> The NRRD Guidelines are industry wide noting however that the applicability of the same may need to be further clarified among certain players. CA will in due course initiate consultations on the application of the NRRD Guidelines within different ICT network components. It is however to be noted that this process shall aim at working towards complying with the NRRD thresholds rather than lowering the threshold to the detriment of service quality.
	<ul style="list-style-type: none"> The Towers shall be designed and built in a manner that shall accommodate colocation and infrastructure sharing arrangements with multiple players (minimum 3) in the future. The Tower should accommodate colocation of antennas, 	<ul style="list-style-type: none"> Since all MNOs will be required to install their active infrastructure on the towers, and in some cases government agencies, therefore, the towers and power capacity should be able to accommodate a minimum of four (4) players. 	<p>Yes the Towers shall be such it they can accommodate a minimum of four (4) players</p> <p>We thank the respondent for correcting this oversight.</p>
	<p>To this end the MNOs may be eligible for a share of the subsidy in respect of the active component (i.e. 30%), which will be shared in specified ratios depending on the speed of</p>	<ul style="list-style-type: none"> The entitled subsidy (%) in the above table adds to 28% and not 30%. Also, what happens when two or all MNOs install their active infrastructure at the same time? Active component amount (27%) should be revised as 	<p>We apologize for this was an arithmetical error. The subsidy entitlements depending on responsiveness shall be as indicated</p>

Respondent/ Organization	Subject Matter	Respondents' Comments/ Proposals	CA's Consideration/Responses								
	<p>responsiveness of the MNO (i.e. speed of service commission on the tower) as indicated in Table 6 below. This structure is intended to incentivize faster responsiveness before expiry of the 6 months grace period.</p>	<p>the Authority could have used analysis that did not look at 3G and other technologies which are important in this phase since the 1st Phase only required 2G connectivity</p>	<p>below:</p> <table border="0" data-bbox="1549 402 1892 602"> <tr> <td>1st Respondent</td> <td>15%</td> </tr> <tr> <td>2nd Respondent</td> <td>7%</td> </tr> <tr> <td>3 Respondent</td> <td>5%</td> </tr> <tr> <td>Total</td> <td>27%</td> </tr> </table> <p>The ranking shall be based when the active component goes live with data on the 1st call that goes through the network successfully. Machine timestamps will be the basis of this decision. It is unlikely to have simultaneous go live situation, but if in the unlikely event it happens such operators will share 50/50 the combined amount that would otherwise have been applicable to both.</p> <p>It is to be noted that 3G was the basis of the consideration in the study that arrived at the capital cost distribution for the establishment of a BTS Tower.</p>	1st Respondent	15%	2nd Respondent	7%	3 Respondent	5%	Total	27%
1st Respondent	15%										
2nd Respondent	7%										
3 Respondent	5%										
Total	27%										
	<ul style="list-style-type: none"> In addition to the general requirements set out above, as 										

Respondent/ Organization	Subject Matter	Respondents' Comments/ Proposals	CA's Consideration/Responses
	applicable, the passive infrastructure should meet the following additional requirements.		
	i. The BTS site shall have adequate space (at least 15m by 15m) and antenna capacity to host at least 3 network operators.	i. The dimensions of the site should be left to the bidder to decide as long as it is adequate for four MNOs. This is due to the facts that BTS equipment have continued to be smaller and smaller and the power plant is shared.	This is well noted and shall be considered as appropriate
	ii. The BTS site shall have adequate and uninterrupted power supply sufficient for at least 3 network operators. Power generator of at least 16KVA, Solar canopy of at least 10KW and 48Vx 2 DC battery.	ii. The BTS site should have a minimum capacity to accommodate at least 4 network operators (the MNOs and Government agencies). Also, power supply sufficient for 4 network operators. Lithium Batteries are recommended with autonomy of 8 hours.	This is well noted and shall be considered as appropriate
	<ul style="list-style-type: none"> • viii. The Tower should be insured against any kind of damage. 	<ul style="list-style-type: none"> • viii. The CA should look for a better way to ensure the sites based on the number of terrorism incidents in this region, which have made the insurance companies to shy off from covering the sites. • If possible, part of the USF fund could be set aside to insure these sites. • How does the authority plan to assist service providers in ensuring that the sites are insured and also engaging with other government agencies to improve security in those volatile regions? 	<p>CA has sought and obtained assurance from the security agencies that security shall be provided during the establishment and subsequent use of the Towers. CA will continue coordinating the provision of sufficient level of security of Towers to the extend possible.</p> <p>CA is also open to any initiatives and discussions that would lead to enhancing the appetite of Insurance Companies in provision of insurance services for the Towers</p>

Respondent/ Organization	Subject Matter	Respondents' Comments/ Proposals	CA's Consideration/Responses
		<p>If the consortium or an MNO wins, is it mandatory for the other MNOs to collocate? and if they do, will they get any subsidy?</p>	<p>It is a requirement that all Towers subsidized by the fund shall host all MNOs. This is in consideration of consumers and competition requirements. In a situation where an MNO or a consortium of MNO and T2/T3 such bid will be entitled to the full subsidy for both Active and Passive Component of the network. The subsequent collocation while mandated it shall not be subsidized. MNOs are therefore advised to be as competitive as possible with respect to the active component given this situation.</p>
		<p>The bid is silent on the power solution. Kindly clarify what is the power solution, availability and rating</p>	<p>The envisaged power requirements are vide commercial power with necessary backup to ensure the required level of service availability. Alternative power backup include Diesel Generator and/or Solar power sources. The Authority is however open to any other viable proposals.</p>
<p>Lorna Nyandat ATC Kenya</p>		<p>It's been mentioned that the tower shall be free to government for utilization, does this mean that the tower maintenance costs and all other related costs shall be borne by the CA?</p>	<p>The tower maintenance costs shall be borne by the winning bidder.</p> <p>The consideration for provision of collocation of any Government</p>

Respondent/ Organization	Subject Matter	Respondents' Comments/ Proposals	CA's Consideration/Responses
			network infrastructure, should this be required, is in consideration of the principle of public good and in recognition that the infrastructure was partly funded using a public funds.
Adam Lane, Huawei Kenya		<p>Do not require infrastructure sharing as it requires high expense for tower and power. Instead encourage operators to provide a solution such as MOCN (Multi-Operator Core Network) solution, RAN sharing or roaming agreements. This will allow for simpler towers and less power reducing the cost of the passive infrastructure, only require one set of active infrastructures (including transmission, which also makes it easier), and yet enable all operators to provide service. This will be a much more efficient use of USF funds.</p> <p>Do not require land coverage, instead focus only on population coverage (suggest: 80% of population coverage).</p> <p>Allow for flexibility in split of funds amongst different components depending on actual site situations. Do not make any specific requirements for each component.</p> <p>Allow for possible OPEX subsidy for some sites if business model shows revenue will not cover OPEX.</p> <p>Do not require power generator; allow the bidder to choose whatever power solution they wish (i.e. maybe solar power with battery can meet all the needs). Power generators add a lot of extra CAPEX and OPEX especially.</p>	These suggestions have been taken note of for further consideration.
Joel Obooka,		1. A major part of cost of building a telecom site is the cost of the tower. The cost of tower varies exponentially based on	The number and heights of the Towers is dependent on factors

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Comm Carrier Satellite Services Ltd.		<p>its height. CA has already made an estimation of the cost of building the passive infrastructure at each sub location. What are the tower heights being considered by CA at each of the sub locations for budgeting for different sub locations? This input has a bearing on the cost and feasibility of the project for us to bid.</p>	<p>such the geographical area to be covered, terrains, and most importantly the coverage parameters measured in terms of population and signal quality. It is for this reason that the Authority has set out the minimum requirements in term of coverage and service quality requirements. Consequently, the network design aspect is left to the bidders' innovativeness and optimization.</p>
		<p>2. For geographic coverage link budget, three technical variable parameters vis-a-vis, tower (antenna) height, BTS TRX transmit power and Mobile device sensitivity. And further the height of the tower is also decided by the requirement of Line of Sight from the nearest transmission hub of the MNOs. As a bidder for only passive infrastructure, we need to know the variable parameters based on which the towers can be designed. This standardization of input will mitigate the hazard of MNOs finding the tower heights not suitable to them after designing and building the towers.</p> <p>a) Can the height of tower be fixed for each sub-location in the tender document as per estimates of CA or</p> <p>b) Can the standard inputs for link budget be provided for simulation of coverage analysis to decide on the tower heights?</p>	<p>Please note however that the winning bidders will be required to submit the network designs (that include the number and heights of the Towers as well as backhaul systems) to the Authority for analysis and approval.</p>
		<p>3. To simulate and analyze percentage of geographic coverage of sub-location, the coverage boundaries for each</p>	<p>The Maps will be sourced and</p>

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		<p>sub-location need to be fixed. Can the Authority provide the maps for sub locations with boundary polygons and population clusters?</p>	<p>provided as soon as they are available</p>
		<p>4. Tower design is also dependent on the number of GSM/3G/4G antennas and area of microwave antennas the MNOs would collocate on the tower. The MNOs have the option of using single band antennae for each technology (to reduce cost on antennae) or they can also use one dual band/triband antenna (per sector) for all technologies. With these considerations, the sizes of microwave antennae dish for each operator will have a bearing on the design of the tower. Can these design parameters be standardized?</p>	<p>This suggestions are noted for further consideration</p>
		<p>5. All MNOs are mandated to install their active infrastructure within 6 months of completion of the passive infrastructure. Can it be mandated that the winner of the passive infrastructure bid receive rentals from MNOs even if MNO's installations are delayed beyond six months of passive infrastructure completion?</p>	<p>This suggestion may present a challenge, as it is a contractual matter. The time limits for placement of the active infrastructure have however been set from a regulatory perspective</p>
		<p>6. Are the rental amounts for colocation fixed? How do we ensure MNOs do not use their position of advantage to negotiate down the rental amounts, which can be detrimental to the bid winner's operational feasibility?</p> <p style="padding-left: 40px;">a) Can an industry benchmark of rental amount be mandated?</p> <p>7. Will CA facilitate colocation agreements with MNOs after declaring the bid winners and before the implementation commences at the sites?</p>	<p>The colocation framework and charges shall be subject to regulatory approval thus addressing these concerns</p>
		<p>8. There is a 6 months window by which MNOs are</p>	<p>Bidders will be encourage to submit</p>

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		<p>mandated to collocate on the towers from the date of completion of passive infrastructure. Is there any provision for meeting maintenance cost of the passive infrastructure for these six months or till MNOs come on board, whichever is earlier?</p>	<p>regular construction reports in order to harmonize with the plans of the MNOs for procurement of the active infrastructure in the timely manner hence mitigating this risk to some extent. Wining bidders will also be encourage to establish close working relationships with the MNOs in this regard.</p> <p>There is no provision for subsidy for maintenance/ OPEX, as it is believed the rental revenues will more than sufficient for this purpose.</p>
<p>b) Is there any subsidy for meeting Maintenance/OPEX Cost for passive infrastructure?</p>	<p>All matters pertaining to the procurement law and attendant regulations shall be considered as provided therein and in a manner that does not disfranchise the bidders and/or subsequent contractors. Appropriate guidance shall be provided in the bid document.</p>		
<p>9. Instead of a blanket 10M-bid bond, can the Authority allow bid bonds to be determined as a percentage of the total of subsidy of the number of sub-locations for which the bidder is submitting the bid?</p>	<p>CA has sought and obtained assurance from the security agencies that security shall be provided during the establishment</p>		
<p>10. We request CA to allow bidders to submit bid bonds from an insurance company that is authorized by the Public Procurement Regulatory Authority (PPRA).</p>	<p>11. Insurance for high-risk areas, can this be facilitated without</p>		

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		extra premium due to their high-risk nature by coordinating through relevant authorities?	and subsequent use of the Towers. CA will continue coordinating the provision of sufficient level of security of Towers to the extend possible.
		12. Regarding security for high-risk areas, can the Authority provide guidance on security for these areas?	CA is also open to any initiatives and discussions that would lead to enhancing the appetite of Insurance Companies in provision of insurance services for the Towers
		13. On statutory, can all approvals be facilitated through a single window?	CA has engaged with the agencies to ensure fast tracking of the applications for approvals for infrastructure rollout
		14. Allocation of sites (sub locations) it would only be fair if it is based on equitable distribution of subsidy among all winning bidders. Can this be assured?	The proposal is noted to be considered within the confines of the PPADA
		15. It is mandated by CA now that 3 MNOs shall co-locate on the passive infrastructure built by the T2/T3 providers. There is an impending merger of Airtel and Telkom and industry will be left with only 2 MNOs. The co-location revenue will be reduced drastically due to this and will impact the commercial operational feasibility of these sites. How will this be mitigated?	This concern has been noted. Please however that new players and applications that require such infrastructure have and shall continue to emerge noting further that Towers are long-term investments

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John JTL		<ol style="list-style-type: none"> 1. As a New Licensee, were not able to participate in phase I therefore they need to get to commercial agreements with those who implemented phase I, collocation charges will be regulated, what are the terms and costs? 2. Subsidy will be split in passive and active for T1, T2 and T3, building tower is a one off and the complicated issue is actual operation of the tower, from building, operating, getting licenses and then charge another operator who might want to co locate. Arrangement might not be best as T3 might not operate the towers to the standards MNO might want to be operated at 3. Phase I was impossible for JTL as they lacked transmission and lack of subsidized active equipment; proposal that Active proponents be granted to vendors who can provide active equipment open to all technologies and frequencies to enable plug and play for operators. Given it's a Government subsidy not to lock out T1, T2 or T3 operators 4. Transmission, most locations are in remote areas, transmission to be brought in a location that can be accessed by all SP, e.g. Nearest NOFBI point or CA centre so that SP can just plug in and make provisions 	<p>Tariff regulation will be undertaken based on the well-recognized costing and tariff principles. These include cost recovery and allowable return on investment margin.</p> <p>The Authority as setout the Tower construction guidelines and will intervene where there are disagreement between the Tower service provider and the MNOs as may be appropriate.</p> <p>The Authority is eager to seeing the realization of sharing of active infrastructure such as the Radio Access Network (RAN). It is however the view of the Authority at this point this should ideally be driven by industry and CA will be more than willing to facilitate the development of any requisite arrangements beyond the infrastructure sharing regulations already in place in the event of such need. Additional comments from other players are invited to guide CA on appropriate initiatives.</p>
Allan Muhalia		<ol style="list-style-type: none"> 1. The subsidies have been prepared in terms of Active and Passive infrastructure, is there an option for running an OPEX infrastructure since the biggest challenge would be to run the infrastructure for the next say 10- 15 years 2. Is there room to look at a tiered service level agreement because in the locations provided, you realize even if you give a subsidy around TX you 	

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		perhaps have only one way to get these locations and when the service goes down, then you'll meet the SLA. Look at options of a tiered SLA and use of solar system, a service would run for 12 hours and during the night a flexible SLA	
Adam Kipkemei Telkom Kenya		<p>Provision for power points for locals to charge phones. The proposal is not clear as to where the power point will be located and how many points will be required</p> <p>Provision of maps so as not delay the process</p>	<p>There are no considerations presently to provide for subsidies for OPEX. It is believed at this point that the derived value for network and service extension to these new market and attainment of universal access will be far higher than the additional OPEX attributable to the expansion. CA will however be open to discuss this matter in future guided by empirical data and analysis on costs vs benefits</p> <p>The QoS assessment framework provides for mechanisms for addressing this concern and indeed insulates MNOs from penalties arising from situations that are entirely beyond their control.</p> <p>This said the Constitution of Kenya as well as the Kenya Information and Communications Act prohibits discrimination of any Kenyan citizen on all accounts. It would therefore be against this noble principle to sanction any arrangements that may be construed to directly or indirectly promote</p>

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			<p>such discrimination.</p> <p>CA's initial thoughts were that providing the device charging points at the Tower sites would promote the feeling of community inclusivity, acceptance, and ownership. However other way of facilitating the same can be found say through CSR, CA would be willing to consider. The point however is that provision of Community charging points shall remain a requirement in the Tender.</p> <p>Efforts are being made secure the requested maps and will be shared as soon as they are availed.</p>

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Tony		<p>Is the Unit of tendering a Lot, Sub-location or county?</p> <p>Is there a minimum or maximum number of lots one bidder can bid for?</p> <p>The imbalance in the lot, e.g. One sub-location has about Kshs. 25 Million subsidy for 1,000 people and another a subsidy of only Kshs 2 Million for 1000 people, how will you mitigate that if everyone bids for the lots perceived to have the fewest no. of people and maximum amount of money and some lots end up not being tendered for?</p>	<p>Units will be lots associated with the sub-locations</p> <p>There shall be no limit of the number of lots to bid for.</p> <p>As indicated earlier, in coming up with the subsidy levels, several coverage factors were taken into account besides population numbers. We believe there no direct correlation between the population and the cost of the subsidy neither is there undue advantage in bidding for lower population areas compared to higher population areas vs the subsidy amount..</p>
		<p>If one MNO bids for everything will the Authority balance give the MNO or balance among all the bidders?</p>	<p>There are no such considerations at this point for possible balancing as such need hasn't presented itself.</p>
Bradley Shaw		<p>Does that mean a T2/3 cannot bid for the active infrastructure without an MNO partner?</p>	<p>This said such considerations may only be made where justifiable and if so allowable under the Public Procurement & Asset Disposal Act, 2015.</p> <p>Suffice to note however that bidding will be open to all that are</p>

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			eligible to the particular category and the overriding intention is to promote competition and efficiency in the use of the Fund.
Dirk-Jan Koeman	•	<p>1. Any limitations/minimum requirements to generation of GSM (2G, 3G, 4G)any limitation/minimum requirements in type of service (voice, SMS, data) any limitation/minimum requirements in baseband (900MHz, 1800Mhz, 2100MHz, 450MHz, 700MHz, etc.) how do you envisage bidding by T2/3 while MANDATING MNO presence? what do you mean by that? let me split them up for convenience</p> <p>1. any limitations/minimum requirements to generation of GSM (2G, 3G, 4G)</p> <p>2. any limitation/minimum requirements in type of service (voice, SMS, data)</p> <p>4. how do you envisage bidding by T2/3 while MANDATING MNO presence? what do you mean by that?</p>	There is no limitation on the technology used However, the minimum service threshold as dictated by the tender document must be met. <i>The network shall at minimum be established based on 3G standard</i>
Hanns Munyefu		<p>Can the bid bond be made lower than the current stipulated?</p> <p>Can options of insurance be used other than banks? can the duration before release of bond after completion be reduced from the nearly 3 yrs?</p>	<p>Lowering of the bid bond amount</p> <p>Shall be considered and where deemed appropriate shall be reflected in the Tender document.</p>
Safaricom PLC	• It is considered appropriate a more flexible payment schedule. It is proposed that disbursement be made after every 30% completion and verification of the Lots.	• Based on the project Milestones the CA should disburse 25% as advance payment after signing the contract and supplier issuing performance bond (5% of Contract Value).	This proposal shall be considered and where deemed appropriate shall be reflected in the Tender document.
Lorna Nyandat		Who owns the deployed infrastructure during and after the period of the subsidy payment?	The winning bidder will own and operate the infrastructure

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ATC Kenya		ANNEX 6: Bidding Lots, Population and offered maximum Subsidies. Lot 43, TKN-10 should include four sub-locations but only three are named and the fourth one left blank. Please update with the fourth sub-location of the lot.	This is noted with thanks. Appropriate rectification will be made
		Provision of power points should be looked at from a security perspective as the public can damage the equipment. This proposal could be looked at as a separate CSR project in line with charging pints.	The Authority will not prescribe the manner in which operators facilitate provision of power points as CSR or otherwise for as long as it is provided. In principle the idea is to connect with the community and promote positive community ownership and support of the project.
		Giving Government access to utilize the towers at no cost and considering maintenance costs for the tower how will that arrangement be done Also, the Authority will regulate the collocation charges yet government will have access on the site, the CAPEX cost and subsidy does not have a correlation with the actual maintenance cost of the site	In principle the idea is to connect with the community to mitigate challenges as in Phase I, also for fostering utilization of service.
		Who owns the towers, it is presumed that the tower is owned by the licensee who put up the tower	In principle collocation of government network on any such Towers shall be unhindered on account of commercial consideration.
		Statutory approvals, Will CA be involved in obtaining the relevant permits for building the sites and are these costs also part of the costs being subsidized	There shall be opportunities to discuss and agree on site maintenance arrangements. CA shall facilitate such discussions taking into account the overall circumstances at play at that point.

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			<p>CA has already established a close working relationship with the relevant entities that will be involved in issuing approvals i.e. NEMA, KCAA, Counties, etc. It is believed that this will ease the process of securing such approvals by the operators. CA will therefore be at hand to intervene as and when necessary.</p>
<p>Michael Onyango ATC Kenya</p>		<p>The subsidy offered to MNOs to install at all the USF sites, is the 30% part of the 27% or an addition to the 30% CAPEX that the MNOS receive. How will the subsidy be allocated?</p> <p>If its mandatory that MNOs install active equipment at all USF sites, why have bidding for active infrastructure while all MNOs will install and be entitled to subsidy, simplify the bids and have bidding for only passive infrastructure so as not to disadvantage those who only bid for certain categories and not others</p> <p>Would bidders be allowed to submit parallel bids for all categories. I.e. bid for passive only and also bid for both active and parallel in consortium with T1</p>	<p>For purposes of promoting consumer interest, diversity as well as promoting competition among service providers, all MNOs will be required to have presence on all USF supported Towers within 6 months from completion irrespective of whether they win the subsidy bid or not.</p> <p>The subsidy attributable to the Passive infrastructure component is 73% and that for Active component is 27% of the total subsidy offered.</p> <p>In a situation where MNOs or a consortium involving an MNO and T2 or T3 fails to secure a site bid for both Passive and Active component, the winning T2 or T3</p>

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			<p>for the Passive component will be awarded 73% of the total subsidy. The remaining 27% of the total subsidy will be shared between the 3 MNOs depending on their responsiveness in placing their active infrastructure as follows:</p> <ul style="list-style-type: none"> • 1st respondent will receive 15% of total subsidy • 2nd respondent will receive 7% of total subsidy • 3rd respondent will receive 5% of the total subsidy <p>Give that the infrastructure components have been distinctively separated between Passive and Active Components; bidders are free to bid for the components separately as individual entities or collectively through consortia.</p>
Keith Manogo		Had never considered the pylons as a tower	Pylons can be used for provision of services as brown sites; in cities we have buildings and street lampposts acting as towers.
Ben Roberts		<p>It is a good idea, we looked at rural Botswana and found 600,000 people lived within +- 20km of a linear power line</p> <p>Do bidders have to provide solutions for all levels of coverage i.e. 2G, 3G & 4G it understood that in rural areas this is necessary due to the handsets available but is it possible to</p>	The tender is for provision of a minimum of 3G. This was informed by the identified demand and the philosophy of catering for basic services. There are however no restrictions towards leapfrogging to

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		<p>provide 4G &5G.</p> <p>Whether T2s with spectrum can go ahead and provide the 4G and 5G connectivity</p>	4G or 5G.
<p>Linda Bonyo CEO, Lawyers Hub</p>	<p>1. Wayleaves:</p>	<ul style="list-style-type: none"> The ICT policies 2019 as well as the recommendation by the National Assembly ICT committee recommend the need to consult with county Governments to develop guidelines and harmonize charges on way leaves. Though we recognize this as a comprehensive and consultative process, we urge you to hastily develop the above guidelines. This will facilitate continuous and affordable access to land to set up base transmission stations satisfactorily. 	<p>The proposal is well noted. Indeed the Authority has a stakeholder management framework for the project that has recognized County Governments as a key stakeholder. It shall be through just avenues that requisite guidelines and consultations shall take place.</p>
	<p>2. Adherence to tender specifications</p>	<p>1 GSMA,</p> <ul style="list-style-type: none"> While the procurement process is informed by Public Procurement Laws, there is need for adherence to set standards and specifications set in the Tender advertisement. This includes the checklist, personnel, and Confidential Business etc. This ensures only operators with necessary experience; expertise and technology are awarded tenders reducing chances of subcontracting. Subcontracting is a situation where inexperienced bidders who win the contract bid seek help from operators capable of delivering work. Chances of projects failing from subcontracting are extremely high and can't be overlooked. 	<p>These very detailed and useful suggestions have been taken note of for further consideration</p>
	<p>3. Adherence to USF principles:</p>	<p>Procurement of phase 2 project should strictly adhere to USF principles which include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> open and transparent process, this include providing a summary report of the bid evaluation containing bidding process, bid prices and bid results and criteria for decisions at the end of the process. 	

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		<input type="checkbox"/> Open and competitive procurement which provides adequate information on bidding processes. <input type="checkbox"/> Proper monitoring and evaluation. <input type="checkbox"/> Technological Neutrality- this allows bidders of USF project to propose any current or new technology to deliver on the project without penalty. <input type="checkbox"/> Infrastructure sharing – project must promote sharing of infrastructure that is recognized to ultimately lower the cost of infrastructure. The authority should promote the fast adoption of national and county integrated Infrastructure plans as advised in the ICT policy.	
	<ul style="list-style-type: none"> <li data-bbox="296 786 630 813">• 4. QoS Regulations 	<p>The Authority shall ensure the strict enforcement and implementation of Quality of Service Regulations.</p>	
	<p>5. Competition and Independence of USF:</p>	<p>Political interference has hindered the progress of USFs in other nations such as Mali and Kenya is proving to be no different⁶. The origin of this is the absence of implementation of competition laws prior to and posts the establishment of the USF. We recommend the enactment of a policy that puts a cap on the amount of investment a company/entity can place on the project that is inversely proportional to the said company's market share. While this might be met with concerns about the sufficiency of the contributed funds, it would lead to higher amounts of independence and consequently accountability and transparency when it comes to the implementation of such projects.</p>	

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	<ul style="list-style-type: none"> 6. Social Investment: 	<p>Phase 2 of the project deepens access to mobile infrastructure nationally. Kenya has adopted a mobile first approach to aid in providing Universal access to the Internet. However, to achieve meaningful ubiquitous access, we echo principle 2 of The Human Rights Principles For community and Development “Investment in connectivity should be deployed hand-in-hand with human rights-based capacity building, public access points, and skills development7. Thus, to bridge persistent digital divides will require more than simply extending infrastructure; education is vital for unlocking the full benefits of connectivity for a population.”</p>	
	<p>7. Absence of Facilities to Drive up The Demand for Telecommunication Services:</p>	<p>It is believed that creation of ICT infrastructure automatically leads to social-economic development, a cause -effect approach when to the contrary, its symbiotic with both factors feeding into each other. Investments in ICT is extremely infrastructure is highly capital intensive and thus to drive demand of ICT services we recommend Make use of a Training of Trainers (ToT) system. Some of the challenges that are met with technological advancement are rooted in cultural pushback. Going down to the community level and training some of the locals to become trainers would go a long way in ensuring that the people fully embrace and trust technological advancements in the telecommunications sector.</p>	
<p>Adam Lane, Huawei Kenya</p>		<p>Suggests that the solutions are able to support future network evolution and upgrades, e.g. LTE.</p>	
		<p>Recommend requiring the successful bidder to provide connectivity to (at minimum) any primary school in the sub-location with speed of 10 Mbps through 1 CPE from the 3G</p>	

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		<p>network. Because all the primary schools in Kenya have tablets so it will not be necessary to purchase devices. Meanwhile providing the capacity to the school will be unlikely to affect the site capacity as local demand will be low, and this will have no significant cost impact on the operator. It will mean the USF is able to provide connectivity to hundreds of extra primary schools for no additional cost.</p> <p>This will also help drive demand for internet as students will get experience and interest in using the internet, and some digital skills from the teachers. This will in turn drive demand for mobile internet, increasing ARPU for the operators.</p> <p>In addition, USF may continue also mandating 1 tablet and 2 Mbps through CPE to any dispensary in the sub-location in order to contribute to the Universal Healthcare Agenda of the government enabling ordering of medical supplies, submitting records online and telemedicine</p>	
Ganson Lawela. Airtel networks Kenya Limited		<p>We also kindly request for the following if available: -</p> <ul style="list-style-type: none"> a) The 2019 populations Land scan data; b) The table for the sub locations in excel format <p>We wish to request for more time to review the consultation document before submission especially during this time of the COVID-19 pandemic where certain limitations are being experienced and work is being focused to critical activities especially by our network team who are key in responding to this consultation document.</p> <p>We therefore request that we be allowed to respond by 15th May 2020.</p>	<p>The request is noted for facilitation</p>

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Safaricom PLC	1) Phase 2 will also involve stakeholder mapping management activities with local communities, leadership and security agencies to address all relevant issues before, during and after project implementation phase.	<ol style="list-style-type: none"> 1) Need to cover for reconstruction after terrorist attacks; 2) Government to cover security costs/ location to be protected by Government operations; 3) Support on protection to and from site locations; 4) Government to grant peppercorn lease based on their secure facilities; 5) Free way leave for transmission in road reserves. 6) Exemption from frequency usage (both TRX and Microwave) costs for these sites until specific traffic levels are reached 1) CA should take full responsibility of providing security to the proposed contractors and mapping stakeholders in the area/site of interest. 	<p>This matter is being addressed in liaison with other relevant agencies of Government.</p> <p>The request on possible concessions with respect to frequency fees has been taken up for further consideration.</p> <p>As indicated earlier CA is making all efforts to address the issue of insecurity in liaison with other government agencies.</p> <p>In addition the following key stakeholders have been looped into the project program for timely interventions; Council of governors, KCAA, NEMA, County administrations and local Communities</p>
	3) The subsidy division shall be based on a ratio of 73% Passive and 27% Active which reflects the average cost of constructing the two distinct components of a BTS.	<ul style="list-style-type: none"> • 3) The subsidy for Active Component should be revised upwards to 45% since the analysis being used by the Authority does not include 3-G and other data centric technologies. 	

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			Please refer to the response given above
Samson Kamau, (KETRACO)	•	Please share map of the targeted sub-locations so that we can map our fiber network.	The Maps will be shared in due course once secured.
iNet Africa (Zeplin Investments LTD)		<ol style="list-style-type: none"> 1) The options available to tender for Tier 3 providers are items we tend to outsource anyway and would not be much help in this process. 2) The tendering options seem to be focusing more on provision of mobile services in these areas, which is mainly the domain of tier 1 providers and therefore viable mainly to them. I would like to point out that mobile connectivity is significantly more expensive to roll out and as a recurrent cost turns out to be more expensive for customers in the long term via bundles. While, deployment of fixed wireless services to provide cheap and unlimited internet access. For 1,000/- a month for 1Mbps a customer can use fixed wireless services in their home with unlimited calls via WhatsApp, access to informative content via YouTube, access to government services and as an added benefit the ability to access entertainment via social medias as well. My humble request for a discussion point for the next meeting is providing an avenue for fixed wireless providers or tier 3 providers already operating to provide the connectivity as well vs just implementation of the infrastructure. This will help smaller businesses gain access to government incentives and finance as well as promote innovation, growth and fair competition. 3) By limiting it to tier 1 providers alone, the majority of innovators with new and upcoming businesses that have a 	The valuable comments have been noted.

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		<p>need for these incentives are completely shut out or relegated to provision of purely infrastructure works with no growth of their own networks. Further, fixed wireless providers generally tend to work within less developed areas and rather than promoting existing infrastructure built by these businesses already it will introduce bigger players as competition stifling the smaller entrepreneurs. In addition to the very noble and commendable goal of providing every area of Kenya with connectivity, we should endeavour to use these incentives to also grow and push younger companies to the forefront.</p>	
<p>Wilson Kimengich</p>		<p>IV, Item 14, Table 2 (page 4 of 17)</p> <p>1) The component of Civil Works and Security.</p> <p>If for example the best location for site is on a hill top that has no access road to it, how is it catered for in the capex distribution?</p> <p>Remote Radio Units (RRUs) It is not listed anywhere on the table.</p> <p>IX, Clause 36 vii (page 10 of 17)</p> <p>3) What would be considered as the "appropriate" height?</p> <p>2) 4)Any limitations on height of tower?</p>	<p>The cost of opening the access road is factored in the total infrastructure cost.</p> <p>The RRUs is part of BTS electronics</p> <p>The height of the Tower shall such that it optimizes on the coverage subject to any limitations as my be given by either KCAA or NEMA</p>

Respondent/ Organization	Subject Matter	Respondents' Comments/ Proposals	CA's Consideration/Responses
		<p>Annex 1</p> <p>5) Where is Lot No. 59?</p>	<p>That was s a typographical error to be corrected.</p>
<p>Airtel Networks Kenya Ltd</p>		<p>Propose apportionment of CAPEX subsidy assumes that the cost of putting up the active infrastructure to the BTS site is at the range of 27% as compared to the passive infrastructure. Based on previous evaluations, we noted that in order to reach the most optimal site locations that guarantee maximum coverage one requires multiple repeater stations, which need to be accounted for as part of the active infrastructure CAPEX cost. Based on this reality, we propose the Authority to consider apportioning the CAPEX subsidy into 60% Active Infrastructure and 40% passive infrastructure</p> <p>We propose that the subsidies be separated into CAPEX and OPEX so that both aspects are carefully considered and catered for while ensuring sustainability of the project</p> <p>Waiver of annual spectrum fees for USF sites so as to reduce OPEX and apportion a larger part of these costs to the maintenance of infrastructure and services in the identified areas. Waiver of the spectrum fees would be taken as a contribution of the Authority and Government to USO initiatives</p>	<p>Whereas no data was provided to back this proposal, the same has been noted for further consideration. Please note however that the ratio being proposed for active vs. passive is an average of several topological scenarios.</p> <p>The proposal for possible spectrum concession is under consideration.</p>

5. ANNEX 2: LIST OF PARTICIPANTS AT THE ONLINE CONFERENCE

	Member	Organization/Contact	Role in Meeting
1	Mercy Wanjau	Ag. DG, Communications Authority of Kenya	Chairperson
2	Anthony Kangethe	anthony.kangethe@gmail.com	participant
3	Arnold Kiage	joeakiage@gmail.com	participant
4	Ben Roberts		participant
5	Bhavik Patel	bhavik@adcea.com	participant
6	Bradley Shaw	me@bradleyshaw.co.za	participant
7	Bryan Kariuki	bryankariuki@gmail.com	participant
8	Caroline J		participant
9	Christopher Kemei	Communications Authority of Kenya	Moderator
10	Clifford Beta	betaclifford@gmail.com	participant
11	Darius Mobe	darius.mobe@inteluni.ac.ke	participant
12	David Biama	Telkom Kenya Ltd.	participant
13	Derick Khamali	Communications Authority of Kenya	participant
14	Dirk-Jan Koeman	dj@poainternet.net	participant
15	Edwin Ombega	Communications Authority of Kenya	participant
16	Emma Otieno	Communications Authority of Kenya	participant
17	Eric Mwazo	Simbanet	participant
18	Erick Njuri	enjuri@gmail.com	participant
19	Eunice Thumbi	Communications Authority of Kenya	participant
20	Florence Keino	Communications Authority of Kenya	participant
21	Francis Ndegwa	Seacom	participant
22	Fred Ongaro	Communications Authority of Kenya	participant
23	Fredrick Kabusia	Safaricom PLC.	participant
24	Goerge Adeka	Safaricom PLC.	participant
25	Geoffrey Muhatia	Communications Authority of Kenya	participant
26	Geoffrey Nyapola	Telkom Kenya Ltd.	participant
27	George K		participant
28	Hanns Munyefu	hmunyefu@masabaservices.com	participant
29	Hirbo Ahmed (savenet limited)	hshalleh36@gmail.com	participant

	Member	Organization/Contact	Role in Meeting
30	Ignatius Kibaba	kibaba68@gmail.com	participant
31	Irene Wanderi	shironicole@gmail.com	participant
32	Janet Imunya	Communications Authority of Kenya	participant
33	Jecinta Kosen	jkosen@masabaservices.com	participant
34	Joel Obooka	CommCarrier Satelite Ltd.	participant
35	John Kamau	gituewater@gws.co.ke	participant
36	Joseph Njogu	joseph.n.njogu@gmail.com	participant
37	Joseph Nzano	Communications Authority of Kenya	participant
38	Kariuki Njamwitha	Communications Authority of Kenya	participant
39	Keith Manogo	kmanogo123@gmail.com	participant
40	Kiage Joe	joeakiage@gmail.com	participant
41	Kipngetich	barbrarowroow@gmail.com	participant
42	Kui Kinyanjui	Safaricom PLC.	participant
43	Linda Georgina	Georgina.lindah@gmail.com	participant
44	Lorna Nyandat	ATC	participant
45	Maina David Wang'ombe	davwan08@yahoo.com	participant
46	Mark Lavi	markmuia@gmail.com	participant
47	Martha Njuguna		participant
48	Adam Kipkemei	akipkemei@gmail.com	participant
49	Michael Onyango	michael.o.onyango@gmail.com	participant
50	Miriam Maina		participant
51	Miriam Mutuku	Communications Authority of Kenya	participant
52	Muhalia Allan	muhaliaa@gmail.com	participant
53	Mumbua Giati	Ketraco	participant
54	Munish Sharma		participant
55	Nicholas Ngolo	nicholasngolo@gmail.com	participant
56	Paul Kiage	Communications Authority of Kenya	participant
57	Priscah Motogwa	Communications Authority of Kenya	participant
58	Rebecca Kabugu	Communications Authority of Kenya	participant
59	Rebecca Wanjiku		participant
60	Roba Tabs	robtabut@gmail.com	participant
61	Rosalind Murithi	Communications Authority of Kenya	participant

	Member	Organization/Contact	Role in Meeting
62	Ruth Kariuki	Communications Authority of Kenya	Secretary
63	Sam Kipngetich	sammyrotich.sr@gmail.com	participant
64	Sammy Weya	sammy.weya@gmail.com	participant
65	Samson Kamau	Ketraco	participant
66	Samuel Andati	Communications Authority of Kenya	participant
67	Silas Maina	Communications Authority of Kenya	participant
68	Teleport Communications	Teleport Communications	participant
69	Thomas Luti	Communications Authority of Kenya	participant
70	Tonny Tugee	Seacom	participant
71	Tony Monda	Sealtowers	participant
72	Antony Godo	Communications Authority of Kenya	participant
73	Willis Odhiambo		participant

6. ANNEX 3: MINUTES OF ONLINE INDUATRY CONSULTATION MEETING ON PHASE 2 CELLULAR MOBILE INFRASTRUCTURE AND SERVICES PROJECT DESIGN BETWEEN COMMUNICATIONS AUTHORITY OF KENYA AND NETWORK FACILITY PROVIDERS (NFP) TIER 1, 2, & 3 LICENCEES

Date: 17th April 2020 at 10.00 AM _ Zoom Virtual Meeting

1.0 IN ATTENDANCE

Member	Organization/Contact	Role in Meeting
1 Mercy Wanjau	Ag. DG, Communications Authority of Kenya	Chairperson
2 Anthony Kangethe	anthony.kangethe@gmail.com	participant
3 Arnold Kiage	joeakiage@gmail.com	participant
4 Ben Roberts		participant
5 Bhavik Patel	bhavik@adcea.com	participant
6 Bradley Shaw	me@bradleyshaw.co.za	participant
7 Bryan Kariuki	bryankariuki@gmail.com	participant
8 Caroline J		participant
9 Christopher Kemei	Communications Authority of Kenya	Moderator
10 Clifford Beta	betaclifford@gmail.com	participant
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14 Dirk-Jan Koeman	dj@poainternet.net	participant
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16 Emma Otieno	Communications Authority of Kenya	participant
17 Eric Mwazo	Simbanet	participant
18 Erick Njuri	enjuri@gmail.com	participant
19 Eunice Thumbi	Communications Authority of Kenya	participant
20 Florence Keino	Communications Authority of Kenya	participant
21 Francis Ndegwa	Seacom	participant
22 Fred Ongaro	Communications Authority of Kenya	participant

23	Fredrick Kabusia	Safaricom PLC.	participant
24	Goerge Adeka	Safaricom PLC.	participant
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44	Lorna Nyandat	ATC	participant
45	Maina David Wang'ombe	davwan08@yahoo.com	participant
46	Mark Lavi	markmuia@gmail.com	participant
47	Martha Njuguna		participant
48	Adam Kipkemei	akipkemei@gmail.com	participant
49	Michael Onyango	michael.o.onyango@gmail.com	participant
50	Miriam Maina		participant
51	Mirriam Mutuku	Communications Authority of Kenya	participant

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62	Ruth Kariuki	Communications Authority of Kenya	Secretary
63	Sam Kipngetich	sammyrotich.sr@gmail.com	participant
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66	Samuel Andati	Communications Authority of Kenya	participant
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72	Antony Godo	Communications Authority of Kenya	participant
73	Willis Odhiambo		participant

2.0 Opening Remarks

- 2.1 Noted Mr. Christopher Kemei, Director/USF opened the meeting by introducing the purpose of the online meeting and thereafter introduced the Ag. DG Mrs. Mercy Wanjau to make her opening remarks
- 2.2 Noted The Ag. DG, Mrs. Mercy Wanjau welcomed the conference participants' by indicating that the COVID-19 pandemic situation in the country had made the Authority look for

alternative methods to enable all participants meet virtually. She explained that the dialogue is to foster a deeper understanding on the bidding strategies that were developed for Phase II USF Voice infrastructure projects. She indicated that the Authority was leveraging on the lessons from phase I and using such experiences to mitigate the risks and challenges in likely to be experienced in Phase 2. She informed participants that Phase I of the project led to successful bidding for 78 sub-locations out of 202 sub-locations of which 67 have been successfully completed while the remaining 11 sub-locations have been delayed due to various challenges that have since been addressed and are now expected to be completed within the next few months.

Noted She indicated that Phase 2 targets about 126 sub-locations in 19 counties. She indicated that the authority in mitigating the identified challenges in Phase 1 has partnered with other government agencies namely; the Ministry of Internal and Coordination of National Government, County Governments, Kenya Civil Aviation Authority (KCAA), the National Environment Management Authority (NEMA) among others to facilitate a conducive implementation environment while addressing the challenges experienced in Phase 1 of the project.

Noted She also indicated that the consultations being undertaken and the feedback from the industry stakeholders would be crucial in securing feedback and also in fostering a common understanding with respect to the project. She indicated that it is in the Authority's view the web dialogue will assist the potential bidders in decision making and in fostering partnerships arrangements in the bidding process. The Ag. DG intimated that the Authority is looking forward for feedback and candid discussions on the matter for the success of the project. She assured participants that the feedback and the comments should be taken into account in the development of the final design of the bid document.

3.0 **Presentation on the Strategies and Plans for the Implementation of Phase II of the USF Funded Cellular Mobile Network Infrastructure and services in Underserved and Un-served Regions of Kenya by Mr. Christopher Kemei**

3.1 Noted A brief presentation was made that covered the implementation strategies for phase II of the project as highlighted below.

3.2 Noted **Part 1: Introduction**

- Universal Service Policy,
- Legal Framework
- Concept of Universal Service
- USF Objectives
- USF Access Intervention Model
- Access Gap Outlook

- USF Circle of Activities Model

Part 2: Universal USF Mobile Network Project Phase II

3.3 Noted

- Challenges Experienced and the proposed Mitigation Measures for Phase 2

Part 3: Outlook of USF Mobile Network Project Phase II

3.4 Noted

- Strategies for successful implementation
- Project Subsidies
- Mandatory requirements
- Project requirements
- Payment schedule
- Conclusion

3.5 Noted

In summary, Phase II will cover about 123 sub-locations in 20 counties across the country at an approximate subsidy cost of Kshs. 1,122 Billion.

3.6 Noted

General Project Specifications

As was in Phase 1, Phase 2 shall involve construction of communication Towers that host Base Transceiver Station (BTS) equipment that facilitate access to telecommunication networks operated by Mobile Network Operators (MNOs) and backhaul transmission links to operators' Base Station Controllers (BSCs) in the core networks

- Construction of Tower and provision of power to support mobile communication systems & services.
- Sites must have capacity to accommodate at least three operators
- Choice of sites that ensure maximum coverage of population
- Provide for security of sites like fencing and guarding
- Provide facilities for charging phones on a 24/7 Basis
- Mobile services are to be provided at prevailing Quality of Service standards

3.7 Noted

Phase 2 Implementation Policies & Strategies

- BTSs shall be split between Passive and Active parts and may be bid for separately.
- The Passive Component shall be open to All Licensed NFPs (NFP T1, T2, & T3).
- The subsidy division shall be based on a ratio of 73% Passive and 27% Active which reflects the average cost of constructing the two distinct components of a BTS.
- The Passive Component shall be open to All Licensed NFPs (NFP T1, T2, & T3).
- Active Component shall be reserved for NFP T1 licensees
- Bidding for both Passive & Active by T1s or Consortia of T1 and T2/T3 shall be encouraged. *(Note: In this case the Consortia to agree on division of subsidy among themselves)*
- To ensure presence of all MNOs on USF funded Towers, it shall be mandatory for all T1s (MNOs) to install their Active infrastructure on all Towers including those constructed solely by NFP T2/T3 within 6 months of completion.

- In circumstances that the NFP T1s don't win the bid for the passive infrastructure
- T1s (MNOs) shall still be required to place their active infrastructure on such Towers with 6 months and may be eligible for a portion of the 30% balance of the subsidy for active component and will be shared in order of their responsiveness (presence on such Towers)

4.8 Noted It was explained that since the infrastructure shall be partly funded using public funds any subsequent sale and/or transfer of the ownership of the Towers shall be regulated in order to safeguard public interests. Similarly, applicable co-location tariffs shall be subject to approval by CA based on justifiable proposals. In addition, the Towers established under this arrangement shall be made available free of charge for colocation with government networks as may be required subject to technical feasibility.

5.0 The director finally invited participants to make any comments and submissions they may have regarding the presentation and the overall arrangement in respect of the project. A summary of the comments and submission is as summarized in the matrix below:

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
1	Samson Kamau, Kenya Electricity Transmission Company Limited (KETRACO)	A) General Comments/ Views	Please share map of the targeted sub-locations so that we can map our fiber network.	The maps shall be shared in due cause
		C) Phase 2 tender format and Eligibility	Ketraco have very high towers, other countries have collocated on such towers, its an opportunity to have active equipment on these towers. The tender might not have envisaged such a situation, instead of building in some areas, Options of stepping down power to solve that problem, engage with land owners for any construction since land has already been acquired thus solving way leave issues. This arrangement might however not allow for many operators as it carries power, nor can they be transferred to the operators	CA remarked that it would appear that with such Towers already in place, it seems that there is already a viable business case and opportunities to lease out the same even without the USF support. From the submission. Its clear that Ketraco presents opportunity to leverage on existing infrastructure. It's a business model that the Authority will consider going forward.
			Ketraco indicated that it has power transmission with fiber running within the cables and any invited interested parties to join in consortium. KETRACO sought clarification on what constitutes the active component and if the fibre cable is a part of.	Fiber has been already been provided for in the active infrastructure component, whether by way of building it or leasing from Ketraco.
2	George Adeka; Safaricom PLC		1. Inquired if a consortium or an MNO wins, is it mandatory for the other MNOs to collocate? and if they do, will they get any subsidy?	It was clarified that it shall be mandatory for MNOs to collocate their active infrastructure in every Towers established in this Phase and that the sharing of the subsidy for active infrastructure only applies to in a situation where an MNOs or a consortium fail to win the bid for both the passive and active infrastructure.
			2. The bid is silent on the power solution. kindly clarify what is the power solution, availability and	The envisaged power requirements is vide commercial power with necessary backup to ensure the required level of service availability. Alternative power backup include Diesel

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			rating	Generator and/or Solar power sources. Authority is however open any other viable proposals.
3	Fredrick Kabusia Safaricom		Thank CA for revising payment terms for Phase II	<i>Noted</i>
	PLC		<p>Reference to application of the Network Redundancy, Resilience and Diversity (NRRD) guidelines. As CA is aware the framework has been under trial with an initial phasing period 3 years from 1st July 2017 with a requirement for submitting quarterly returns, there was a clause for licensees to meet and refine the framework thresholds. The meetings have not taken place since.</p> <p>Need to have a stakeholder workshop to re-look the NRRD framework and refine some of the thresholds. This is because if all operators are required to adhere to these thresholds, none of the operators would be able to meet. This will be based on the submissions for the last 3 years</p>	<p>The proposal was well noted for further consideration</p> <p>It was however clarified that the envisaged approach was to work towards complying with the NRRD thresholds rather than bringing down the threshold to ease compliance to the detriment to the quality of service provided.</p>
			In a case where an MNO has partnered with NFP T2 or T3, in case they agree on NRRD governing their operations, how does this framework affect the Passive infrastructure provider?	Whatever agreement is reached should be such the overall network meets the NRRD requirements.

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			The apportionment of the subsidy for active component at 27%)should be revised upwards in favor of the active component to take into account the 3G technology which is the base standard in phase 2 as compared to 2G in phase 1.	it was clarified that 3G was the basis of the consideration in the study that arrived at the capital cost ratio for the establishment of a Tower which is being used.
			The CA should look for a better way to ensure the sites based on the number of terrorism incidents in this region where sites have had to be rebuilt sometimes up to two times has resulted in the insurance companies to shy off from covering the sites. Part of the USF fund could be set aside to insure the sites How does the authority plan to assist service providers in ensuring that the sites are insured and also engaging with other government agencies to improve security in those volatile regions?	CA has sought and obtained assurance from the security agencies that security shall be provided during the establishment and subsequent use of the Towers. CA will continue coordinating the provision of sufficient level of security of Towers to the extend possible. CA is also open to any initiatives and discussions that would lead to enhancing the appetite of Insurance Companies in provision of insurance services for the Towers
4	Hanns Munyefu		Can the bid bond be made lower than the current stipulated? Can options of insurance be used other than banks? can the duration before release of bond after completion be reduced from the nearly 3 yrs?	This shall be considered and <i>comprehensive response provided in due course</i>
5	Dirk-Jan Koeman		Are there any limitations/minimum requirements to generation of GSM (2G, 3G, 4G)any limitation/minimum requirements in type of service (voice, SMS, data) any limitation/minimum requirements in baseband (900MHz, 1800Mhz, 2100MHz, 450MHz, 700MHz, etc.)how do you envisage bidding by T2/3 while MANDATING MNO presence? what do you mean by that?	<i>The network shall at minimum be established based on 3G standard</i>

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
6	Bradley Shaw		Does that mean a T2/3 cannot bid for the active infrastructure without an MNO partner?	Based on the nature of the service being targeted in this Phase, T2 or T3 may only bid for the passive infrastructure
				T2 or T3 may however choose to partner in a consortium with T1 and bid for both passive and active components
7	Lorna Nyandat, ATC Kenya		It's been mentioned that the tower shall be free to government for utilization, does this mean that the tower maintenance costs and all other related costs shall be borne by the CA?	In principle collocation of government network on any such Towers shall be unhindered on account of commercial consideration. However, there shall be opportunities to discuss and agree on site maintenance arrangements. CA shall facilitate such discussions taking into account the overall circumstances at play at that point.
			Provision of power points should be looked at from a security perspective as the public can damage the equipment. This proposal could be looked at as a separate CSR project in line with charging pints.	The Authority will not prescribe the manner in which operators facilitate this as CSR or otherwise for as long as it is provided. In principle the idea is to connect with the community and promote positive community ownership and support of the project.
			Giving Government access to utilize the towers at no cost and considering maintenance costs for the tower how will that arrangement be done	<i>See response above</i>
			Also, the Authority will regulate the collocation charges yet government will have access on the site, the capex cost and subsidy does not have a correlation with the actual maintenance cost of the site	

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			Who owns the towers, it is presumed that the tower is owned by the licensee who put up the tower	The Authority at this point is that the ownership will go to the owner of the infrastructure. However, there is an internal discussion on the issue and further guidance will be provided in due time
			Statutory approvals, Will CA be involved in obtaining the relevant permits for building the sites and are these costs also part of the costs being subsidized	CA has already established a close working relationship with the relevant entities that will be involved in issuing approvals i.e. NEMA, KCAA, Counties etc. It is believed that this will ease the process of securing such approvals by the operators. CA will therefore be at hand to intervene as and when necessary.
8	Michael Onyango; ATC Kenya		<p>The subsidy offered to MNOs to install at all the USF sites, is the 30% part of the 27% or an addition to the 30% capex that the MNOS receive. How will the subsidy be allocated?</p> <p>If its mandatory that MNOs install active equipment at all USF sites, why have bidding for active infrastructure while all MNOs will install and be entitled to subsidy, simplify the bids and have bidding for only passive infrastructure so as not to disadvantage those who only bid for certain categories and not others</p> <p>Would bidders be allowed to submit parallel bids for all categories. I.e. bid for passive only and also bid</p>	<p>For purposes of promoting consumer interest, diversity as well as promoting competition among service providers, all MNOs will be required to have presence on all USF supported Towers within 6 months from completion irrespective of whether they win the subsidy bid or not.</p> <p>The subsidy attributable to the Passive infrastructure component is 73% and that for Active component is 27% of the total subsidy offered.</p> <p>In a situation where MNOs or a consortia involving an MNO and T2 or T3 fails to secure a site bid for both Passive and Active component, the winning T2 or T3 for the Passive component will be awarded 73% of the total subsidy. The remaining 27% of the total subsidy will be shared between the 3 MNOs depending on their responsiveness in placing their</p>

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			for both active and parallel in consortium with T1	<p>active infrastructure as follows:</p> <ul style="list-style-type: none"> • 1st respondent will receive 15% of total subsidy • 2nd respondent will receive 7% of total subsidy • 3rd respondent will receive 5% of the total subsidy <p>Give that the infrastructure components have been distinctively separated between Passive and Active Components, bidders are free to bid for the components separately as individual entities or collectively through a consortia.</p>
9	Ben Roberts		<p>It is a good idea, we looked at rural Botswana and found 600,000 people lived within +- 20km of a linear power line</p> <p>Do bidders have to provide solutions for all levels of coverage i.e. 2G, 3G & 4G it understood that in rural areas this is necessary due to the handsets available but is it possible to provide 4G &5G.</p> <p>Whether T2s with spectrum can go ahead and provide the 4G and 5G connectivity</p>	<p>The tender is for provision of a minimum of 3G. This was informed by the identified demand and the philosophy of catering for basic services. There are however no restrictions towards leapfrogging to 4G or 5G.</p>
10	Joel Obooka, Carrier Satellite Services Ltd.		<p>1. A major part of cost of building a telecom site is the cost of the tower. The cost of tower varies exponentially based on its height. CA has already made an estimation of the cost of building the passive infrastructure at each sub location. What are the tower heights being considered by CA at each of the sub locations for budgeting for different sub locations? This input has a bearing on the cost and feasibility of the project for us to bid.</p>	<p>The number and heights of the Towers is dependent on factors such the geographical area to be covered, terrains, and most importantly the coverage parameters measured in terms of population and signal quality. It is for this reason that the Authority has set out the minimum requirements in term of coverage and service quality requirements. Consequently the network design aspect is left to the bidders' innovativeness and optimization.</p>

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			<p>2. For geographic coverage link budget, three technical variable parameters vis-a-vis, tower (antenna) height, BTS TRX transmit power and Mobile device sensitivity. And further the height of the tower is also decided by the requirement of Line of Sight from the nearest transmission hub of the MNOs. As a bidder for only passive infrastructure, we need to know the variable parameters based on which the towers can be designed. This standardization of input will mitigate the hazard of MNOs finding the tower heights not suitable to them after designing and building the towers.</p>	<p>This said please note that the winning bidders will be required to submit the network designs (that include the number and heights of the Towers as well as backhaul systems) to the Authority for analysis and approval.</p>
			<p>a) Can the height of tower be fixed for each sub-location in the tender document as per estimates of CA or</p> <p>b) Can the standard inputs for link budget be provided for simulation of coverage analysis to decide on the tower heights?</p>	
			<p>3. To simulate and analyze percentage of geographic coverage of sub-location, the coverage boundaries for each sub-location need to be fixed. Can the Authority provide the maps for sub locations with boundary polygons and population clusters?</p>	<p>Efforts are being made to avail the maps as soon as possible</p>

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			<p>4. Tower design is also dependent on the number of GSM/3G/4G antennas and area of microwave antennas the MNOs would collocate on the tower. The MNOs have the option of using single band antennae for each technology (to reduce cost on antennae) or they can also use one dual band/triband antenna (per sector) for all technologies. With these considerations, the sizes of microwave antennae dish for each operator will have a bearing on the design of the tower. Can these design parameters be standardized?</p>	<p><i>See response above under network design issues.</i></p>
			<p>5. All MNOs are mandated to install their active infrastructure within 6 months of completion of the passive infrastructure. Can it be mandated that the winner of the passive infrastructure bid receive rentals from MNOs even if MNO's installations are delayed beyond six months of passive infrastructure completion?</p>	<p>We have mitigated this risk through provision for incentives for early presence within 6 months as well as mandatory regulatory compliance intervention we thus do not foresee delays. The concern will be addressed from a regulatory perspective.</p>
			<p>6. Are the rental amounts for collocation fixed? How do we ensure MNOs do not use their position of advantage to negotiate down the rental amounts, which can be detrimental to the bid winner's operational feasibility?</p> <p>a) Can an industry benchmark of rental amount be mandated?</p> <p>b). Will CA facilitate collocation agreements with MNOs after declaring the bid winners and before the implementation commences at the sites?</p>	<p>As indicated earlier the collocation charges shall be regulated</p>

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			8. There is a 6 months window by which MNOs are mandated to collocate on the towers from the date of completion of passive infrastructure. a) Is there any provision for meeting maintenance cost of the passive infrastructure for these six months or till MNOs come on board, whichever is earlier?	Bidders will be encourage to submit regular construction reports in order to harmonize with the plans of the MNOs for procurement of the active infrastructure in the timely manner hence mitigating this risk to some extend. Wining bidders will also be encourage to establish close working relationships with the MNOs in this regard.
			b) Is there any subsidy for meeting Maintenance/OPEX Cost for passive infrastructure?	There is no provision for subsidy for maintenance/ OPEX as it is believed the rental revenues will more than be sufficient for this purpose.
			9. Instead of a blanket 10M bid bond, can the Authority allow bid bonds to be determined as a percentage of the total of subsidy of the number of sub-locations for which the bidder is submitting the bid?	All matters pertaining to the procurement law and attendant regulations shall be considered as provided therein and in a manner that does not disfranchise the bidders and/or subsequent contractors. Appropriate guidance shall be provided in the bid document.
			10. We request CA to allow bidders to submit bid bonds from an insurance company that is authorized by the Public Procurement Regulatory Authority (PPRA).	
			11. Insurance for high-risk areas, can this be facilitated without extra premium due to their high-risk nature by coordinating through relevant authorities?	
			12. Regarding security for high-risk areas, can the Authority provide guidance on security for these areas?	CA has sought and obtained assurance from the security agencies that security shall be provided during the establishment and subsequent use of the Towers. CA will continue coordinating the provision of sufficient level of security of Towers to the extend possible. CA is also open to any initiatives and discussions that would lead to enhancing the appetite of Insurance Companies in provision of insurance services for the Towers
			13. On statutory, can all approvals be facilitated through a single window?	

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			14. Allocation of sites (sub locations) it would only be fair if it is based on equitable distribution of subsidy among all winning bidders. Can this be assured?	This point remains speculative at this point. However it is noted and will be considered as part of the considerations in the tariff approval process.
			15. It is mandated by CA now that 3 MNOs shall co-locate on the passive infrastructure built by the T2/T3 providers. There is an impending merger of Airtel and Telkom and industry will be left with only 2 MNOs. The co-location revenue will be reduced drastically due to this and will impact the commercial operational feasibility of these sites. How will this be mitigated?	
11	John JTL		1. As a New Licensee, were not able to participate in phase I therefore they need to get to commercial agreements with those who implemented phase I, collocation charges will be regulated, what are the terms and costs?	Tariff regulation will be undertaken based on the well-recognized costing and tariff principles. These include cost recovery and allowable return on investment margin.
			2. Subsidy will be split in passive and active for T1, T2 and T3, building tower is a one off and the complicated issue is actual operation of the tower, from building, operating, getting licenses and then charge another operator who might want to co locate. Arrangement might not be best as T3 might not operate the towers to the standards MNO might want to be operated at	The Authority as setout the Tower construction guidelines and will intervene where there are disagreement between the Tower service provider and the MNOs as may be appropriate.

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			3. Phase I was impossible for JTL as they lacked transmission and lack of subsidized active equipment; proposal that Active proponents be granted to vendors who can provide active equipment open to all technologies and frequencies to enable plug and play for operators. Given it's a govt subsidy not to lock out T1, T2 or T3 operators	The Authority is eager to seeing the realization of sharing of active infrastructure such as the Radio Access Network (RAN). It is however the view of the Authority at this point that industry and CA should ideally drive this will be more than willing to facilitate the development of any requisite arrangements beyond the infrastructure sharing regulations already in place in the event of such request. Additional comments from other players are invited to guide CA on appropriate initiatives.
			4. Transmission, most locations are in remote areas, transmission to be brought in a location that can be accessed by all SP, e.g. Nearest NOFBI point or CA Centre so that SP can just plug in and make provisions	
12	Allan Muhalia		1. The subsidies have been prepared in terms of Active and Passive infrastructure, is there an option for running an opex infrastructure since the biggest challenge would be to run the infrastructure for the next say 10- 15 years	There are no considerations presently to provide for subsidies for OPEX. It is believed at this point that the derived value for network and service extension to these new market and attainment of universal access will be far higher than the additional OPEX attributable to the expansion. CA will however be open to discuss this matter in future guided by empirical data and analysis on costs vs. benefits

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			<p>2. Is there room to look at a tiered service level agreement because in the locations provided, you realize even if you give a subsidy around TX you perhaps have only one way to get these locations and when the service goes down, then you'll meet the SLA. Look at options of a tiered SLA and use of solar system, a service would run for 12 hours and during the night a flexible SLA</p>	<p>The QoS assessment framework provides for mechanisms for addressing this concern and indeed insulates MNOs from penalties arising from situations that are entirely beyond their control.</p> <p>This said the Constitution of Kenya as well as the Kenya Information and Communications Act prohibits discrimination of any Kenyan citizen on all accounts. It would therefore be against this noble principle to sanction any arrangements that may be construed to directly or indirectly promote such discrimination.</p>
13	Adam Kipkemei, Telkom Kenya		<p>Provision for power points for locals to charge phones. The proposal is not clear as to where the power point will be located and how many points will be required</p>	<p>CA's initial thoughts were that providing the device charging points at the Tower sites will promote the feeling of community inclusivity, acceptance, and ownership. However other way of facilitating the same can be found say through CSR, CA will be willing to consider. The point however is that provision of Community charging points shall remain a requirement in the Tender.</p>
			<p>Provision of maps so as not delay the process</p>	<p>Efforts are being made secure the requested maps and will be shared as soon as they are availed.</p>
14	Tony		<p>Is the Unit of tendering a Lot, Sub-location or county?</p>	<p>Units will be lots associated with the sub-locations</p>
			<p>Is there a minimum or maximum number of lots one bidder can bid for?</p>	<p>There shall no limit on the number of lots to bid for.</p>

No	Organization/ Stakeholder	Theme	Stakeholder's Comments or Inquiries	CA Response
			<p>The imbalance in the lot, e.g. One sub-location has about Kshs. 25 Million subsidy for 1,000 people and another a subsidy of only Kshs 2 Million for 1000 people, how will you mitigate that if everyone bids for the lots perceived to have the fewest no. of people and maximum amount of money and some lots end up not being tendered for?</p>	<p>As indicated earlier, in coming up with the subsidy levels, several coverage factors were taken into account besides population numbers. We believe there no direct correlation between the population and the cost of the subsidy neither is there undue advantage in bidding for lower population areas compared to higher population areas vs. the subsidy amount.</p>
			<p>If one MNO bids for everything will the Authority balance give the MNO or balance among all the bidders?</p>	<p>There are no such considerations at this point for possible balancing as such need hasn't presented itself. This said such considerations may only be made where justifiable and if so allowable under the Public Procurement & Asset Disposal Act, 2015.</p> <p>Suffice to note however that bidding will be open to all that are eligible to the particular category and the overriding intention is to promote competition and efficiency in the use of the Fund.</p>

5.1 **Noted** Some of the fielded questions were responded to while others were deferred for later response in writing upon further consideration of the same .

6.0

Ag. DGs Closing Remarks

6.1 **Noted** In he closing remarks the Ag. DG indicated the meeting had greatly enriched the preparatory process of the project and that the Authority will to the extend possible incorporate the views expressed in the review of the strategy is it will respond substantively by way of written feedback.

7.0

Action Points

No.	Action Point	Responsibility	Status
7.1	CA shall share the report of the web dialogue with participants	CA	Closed
7.2	To source and share the site maps with all potential bidders	CA	Open
7.3	Share substantive responses to the issues raised by the stakeholders	CA	Closed

There being no AOB the meeting was adjourned at 12.30HRS.

Name: Mrs. Mercy Wanjau

Ag. DG Communications Authority of Kenya

Signed:Chairman

Name: Christopher Kemei Moderator

Signed:Taking minutes



7. ANNEX 4: PUBLIC NOTICE

MOBILE CELLULAR INFRASTRUCTURE AND SERVICES PROJECT – PHASE 2 UNDER THE UNIVERSAL SERVICE PROGRAM

1. Preamble

Communications Authority of Kenya (CA) is the national regulatory agency established under the Kenya Information and Communications Act, 1998 (as Amended) and is responsible for facilitating the overall development of the Information and Communication Technology (ICT) sector in Kenya. CA's mandate includes licensing of new players, management of scarce resources (frequency spectrum and numbering resources) monitoring compliance of licensees, undertaking competition management, type approval of equipment, broadcasting content monitoring & regulation and implementation of the national cyber security management framework.

The Kenya Information and Communications Act of 1998 also established the Universal Service Fund (USF) managed and administered by CA for purposes of promoting widespread access to ICT services countrywide, promote capacity building in ICTs and support technological innovations within the ICT sector.

The Fund is established through mandatory contributions by ICT licensees of amounts equivalent to 0.5% percent of their gross annual turnover. The said licensees include those providing telecommunications, postal / courier and broadcasting service on commercial basis.

In the year 2015 CA commissioned an ICTs Access Gaps Study that identified specific areas of the country that were either under-served or out rightly un-served and further designed the subsidy model for bridging the access gaps. The study released in 2016 reported that 348 sub-locations had 30% coverage and below. However in view of the prevailing coverage obligations for the existing operators and other consideration the number of sub locations were further rationalized to 202.

Tender for network rollout in the 202 sub-locations were invited in the FY 2016/17 whereupon two Network Facility Providers (NFP) Tier 1 operators were contracted to roll out the network & services in 78 sub locations. In an effort to close the basic communication infrastructure and services gaps in the remaining sub-locations, CA is about to

invite tenders from eligible bidders. Before that happens, the public is invited to note and/or provide comments on the strategies for the implementation of the project as a whole and in particular the framework for engagement of all stakeholders.

2. Request for Contributions

The purpose of this consultative paper therefore is to invite contributions from stakeholders on the above stated strategies. The consultation paper is available on the Authority’s website on the link: <https://ca.go.ke/consumers/public-consultations/open-consultations/>.

3. Submissions

Stakeholders may wish to respond on the context of the six (6) thematic areas as summarized in the provided Feedback Form by 14th April 2020 through Email to: usf@ca.go.ke

Any request for clarifications may also be placed through the above indicated email address, during the consultation period.

Alternatively respondents may submit their written contributions on or before the due date of 14th April 2020 to:

The Director General
Communications Authority of Kenya
CA Center, Waiyaki Way
P.O. Box 14448
Nairobi-00800
Email: usf@ca.go.ke
Website: www.ca.go.ke

**8. ANNEX 5: CONSULTATION PAPER PHASE 2 USF SUPPORTED
CELLULAR MOBILE INFRASTRUCTURE AND SERVICES TENDER**

REF: Doc. No. CA/VIP/Ph.2/A.

COMMUNICATIONS AUTHORITY OF KENYA

**BRIEF TO POTENTIAL BIDDERS FOR PHASE 2 USF SUPPORTED CELLULAR
MOBILE INFRASTRUCTURE AND SERVICES TENDER**

Disclaimer: The information contained in this information pack is only indicative and does not necessarily reflect the final contents or conditions to be reflected in the Final Phase 2 USF Tender Document, as it will be subjected to review after the stakeholder's consultation process and feedback.

I. BACKGROUND

1. The National ICT Policy 2019 has set out aspirations for Kenya to be a globally competitive knowledge based economy through facilitation of Universal access to ICT services countrywide.
2. Section 23 of the Kenya Information and Communications Act, 1998 No 2, mandates the communications Authority to ensure Universal Access to ICT services in Kenya. Presently the approximate population coverage stands at 95%.
3. The Kenya Information and Communications Act KICA also provides for the establishment of the Universal service fund as per section 84J. The objective of the Fund as set out in the Act is to support widespread ICT access, support capacity building and promote innovation in the ICT sector.

4. In efforts to operationalize the fund CA commissioned an ICTs Access Gaps study in 2016 that resulted in identification of the gap areas and a costing model for incentivizing service providers to roll out services in un-served and under served areas.
5. In 2017 CA contracted operators to roll out services in 78 sub locations, which was about 39% of the gap existing in the country. To ensure complete coverage of the identified gaps CA is about to embark on phase 2 of the project by inviting eligible entities to bid for the subsidy for the establishment of ICT infrastructure within the remaining access gap areas.
6. The project involves construction of communication towers that host Base Transceiver Station (BTS) equipment and establishment of backhaul transmission links to operators' Base Station Controllers (BSCs) and the core networks.
7. Duly licensed ICT operators that present the best technical bids and the lowest subsidy requirement as set out in the tender will be contracted to roll out the infrastructure.
8. The tendering for the project is based on a reverse auction where bidders are invited to indicate the lowest subsidy they need to establish and operate the infrastructure.

II. CELLULAR MOBILE INFRASTRUCTURE AND SERVICE PROJECT DESCRIPTION

9. The ICTs Access Gaps study came up with estimated cost for the subsidy requirement to incentivize operators to roll out services in the gap areas. The costs are for a sub location or a group of sub locations.
10. The project involves Construction and operations of Passive elements like tower, power supply and perimeter wall and also provision of the active elements for service provision.

III. PHASE 1 PROJECT CHALLENGES AND ADOPTED MITIGATE CHANGES

11. Below is a summary of the challenges experienced in phase 1 and the adopted mitigation measure for Phase 2.

Challenges	Treatment in phase 2
Part of Phase 1 bid requirements was the attainment of a minimum of 80% geographical coverage led to bidders shying away hence low responsiveness	Phase 2 will focus on population coverage with a minimum geographic coverage threshold lowered to 60% of the sub-location.
Phase 1 population coverage data used was later found to be inaccurate	Phase 2 will incorporate updated population data in the affected sub locations as contained in the 2019 Population and Housing Census Report by the Kenya National Bureau of Statistics
Phase 1 project implementation was delayed due to challenges such as bad weather, harsh environment/terrain and community resistance/demands among others	Phase 2 will also involve stakeholder mapping management activities with local communities, leadership and security agencies to address all relevant issues before, during and after project implementation phase.
Phase 1 provided for project implementation within 12 months. However, due to requisite processes and challenges encountered the project is yet to be fully completed 2 years down the road	Consideration is being made to have the implementation period for Phase 2 extended to 24 months.
Bidding for Phase 1 was restricted to Network Facilities Providers Tier 1s (NFP T1s). This led to lower competitiveness & responsiveness to the tender. Moreover the recent market changes like the merger of two of the 3 NFP T1s and the transfer of tower businesses by NFP T1 to NFP T2 & T1 will most likely worsen the competitiveness.	<p>Phase 2 will be open to other eligible licensed infrastructure providers (i.e. NFP-T2s & NFP-T3s) through the following approaches:</p> <ul style="list-style-type: none"> • Passive & Active Components will be tendered separately. • NFP T1 may bid for both components • Consortia between NFP T1 & NFP T2/T3 may bid for both. <p>NFP T2/T3 may bid individually for Passive Components while Mandating MNOs presence</p>
During Phase 1 project fund disbursement to the contracted required that they first complete 50% of the lots for payment to be processed which exerted financial pressure to the contractors leading to project execution delays	It is considered appropriate that a more flexible payment schedule be provided. It is proposed that disbursement be made after every 30% completion and verification of the Lots

IV. PHASE 2 TENDER FORMAT AND ELIGIBILITY

12. Considering that the infrastructure to be established constitute various components that can easily be unbundled bids from NFP T1, T2 and T3 shall be invited either individually or through consortia.

13. The bidder eligibility matrix is as shown in the table 1.

Table 1: Bidder Eligibility Matrix

Infrastructure Component	Eligible Bidders
Passive Infrastructure	NFP-T1s, NFP-T2s, NFP-T3s
Active Infrastructure	NFP-T1s only
Both Passive & Active Infrastructure	NFP-T1 or Consortium of NFP-T1 & NFP-T2/NFP-T3

14. The subsidy division will be based on a ratio that reflects the cost for the different infrastructure components as indicated in the Table 2 below.

Table 2: Distribution of CAPEX in Construction of BTS:

Components	Category of Component	Share of CAPEX
Antenna and feeder	Active	6%
Microwave backhaul	Active	10%
BTS	Active	11%
Sub-Total		27%
Tower or masts	Passive	24%
Shelter	Passive	10%
Electrical	Passive	19%
Civil works and security	Passive	20%

Components	Category of Component	Share of CAPEX
Sub-Total		73%
Total		100%

V. REQUIREMENTS TO PARTICIPATE IN THE TENDER FOR THE PROJECT

a. Mandatory Requirements

15. Holders of Network Infrastructure Providers licenses shall be required to submit their bids alongside relevant documentation to ascertain their status, compliance, capacity and eligibility.
16. Failure to meet the above requirements will result in automatic disqualification at this preliminary evaluation stage. Table 3 details the documents to be submitted.

Table 3: Mandatory requirements

No	Description of requirement	Pass/Fail
1	Attach copy of certificate of registration/Incorporation	
2	Attach a Valid Tax Compliance Certificate.	
3	Bid Security of Kshs 10 million must be in form of Bank Guarantee from a reputable bank	
4	The bidder must submit a CR12 Form or details of the shareholders	
5	Attach copy of current and valid Network Facilities Provider License	

b. General Project Specification

17. Contractors will be required to build tower sites and provide power for provision of mobile broadband, voice, SMS and other communication services running on a third Generation (3G) network or higher. The project sites and the indicative subsidy amounts are as shown in Annex 1.

18. Transfer of infrastructure and applicable tariffs for colocation shall be strictly regulated bearing in mind that part of the capital expenditure comes from the subsidy.
19. Bidders shall be expected to expound in detail the proposed network topology that include number, location and size/type of base transmitter stations, base station controllers, transmission systems, diagram(s) showing interconnection to the backbone and switching systems of other networks bearing in mind future expansion requirements and needs for network reliability and quality of service standards.
20. Bidders shall demonstrate the choice of BTS sites and configuration that shall ensure maximum coverage of the population and landmass within the set quality of service standards. .
21. The Bidder shall provide a simulation of the coverage indicating the signal strengths for each Lot it responds to. The minimum signal strength as required under the quality of service standards should be -95 dBm or more.
22. Bidders are expected to make submissions that demonstrate compliance with the following:
 - i. Network components based on approved and recognized international standards and accepted for use in Kenya,
 - ii. The network configuration and supporting facilities that meet the set network Redundancy, Reliability and Diversity guidelines to ensure maintenance of the highest service quality at all times. Appropriate considerations in this regard include uninterrupted power source design (configuration of Main supply, backup generator, backup batteries and solar). Also appropriate provision for adequate cooling (either by using air conditioning or by passive air flow design);
 - iii. Demonstrate provision of appropriate physical security such as fencing and guarding;
 - iv. Demonstrate provision for extra capacity for sharing with other providers and meet the environmental and civil aviation requirements both in terms of design and location.
23. Bidders shall provide for and demonstrate provision for future growth and other changes including technological evolution and service demand changes.

24. Bidder shall provide for and demonstrate how it intends to make available facilities for charging end user devices in at least one in each sub-location. The equipment shall support charging of at least ten mobile phones simultaneously and will be available on 24x7 basis.

c. Service Quality (QoS) Requirements

25. The service quality shall meet the minimum QoS standards set in the Framework for the Assessment of service Quality of Telecommunication Systems and Services in Kenya in respect of Voice, SMS and data Services in all the areas for which proposals are submitted. The applicable QoS framework is as provided for in Table 4.

Table 4: Quality of Service (QoS) Assessment framework

Service	Sub KPI	Parameter	Target
Mobile Telephony (Voice)	Network Coverage information i.e. Coverage per (Pop. & Geographic)	Received Signal Level	$\geq -95\text{dBm}$
	Network Availability	Received Signal Level	$\geq -95\text{dBm}$
	Network Accessibility	Unsuccessful Calls	$\leq 5\%$
	Service Integrity	Call Set-up Time	$\leq 12\text{s}$ (4G) $\leq 8\text{s}$ (Others)
		Voice Quality	≥ 3.4 (SWB)
	Service Retain-ability	Handover Success Rate	$\geq 96\%$
		Dropped Calls	$\leq 2\%$
SMS	Network Accessibility	Successful SMS Ratio	$\geq 95\%$
	Service Availability	Completion Rate for SMS	$\geq 95\%$
	Service Integrity	End-to-End delivery time for SMS	$\geq 95\%$ in less than 30s
Data transfer/ Internet access	Network Accessibility	Latency	$\leq 100\text{ms}$
		Jitter	$\leq 50\text{ms}$
	Service Availability	Data transfer failure ratio	≤ 10 for upload

Service	Sub KPI	Parameter	Target
		Throughput of successful data transfer	≤10% for download ≥85% of contractual throughput
	Service Integrity	Ratio of Packet Loss	1/1000
	Network Accessibility	Internet Accessibility	≥98%
	Service Availability	HTTP set-up failure ratio	≤2%
		HTTP set-up time	≥95% in less than 20s
		HTTP Completion failure ratio	≤90%
		HTTP Completion Time	≥95% in less than 20s
		HTTP generic scenario availability	≥85%

Notes: The above parameters are subject to change from time to time on account of formal review of the QoS framework.

26. A least sixty per cent (60%) of the geographic area of each sub-location in the Lot shall have coverage that meets the QoS standards above.

VI. NETWORK REDUNDANCY, RESILIENCE AND DIVERSITY REQUIREMENTS

27. The network to be established shall adhere to the Network Redundancy, Resilience and Diversity (NRRD) guidelines as published by the Authority.
28. The network shall specifically adhere to section 4 of NRRD Guidelines for Mobile Network Operators (MNO), which requires 99.999 % availability of Critical, Major and minor network elements.

VII. INFRASTRUCTURE SHARING REQUIREMENTS

29. The Towers shall be designed and built in a manner that shall accommodate colocation and infrastructure sharing arrangements with multiple players (minimum 3) in the future. The Tower should accommodate colocation of antennas, transmission systems, site space and power requirements among others.

30. It shall be a requirement that all USF subsidized/funded Towers remain available for colocation of Government projects at no cost. This is based on the fact that public money was used to establish the Towers.
31. The BTS sites shall be made available other network operators for colocation and sharing upon completion and not later than 6 months upon completion and on a non-discriminatory basis.

VIII. PROJECT COMPONENTS AND BIDDING FORMAT

32. The project has two components namely passive and active infrastructure. The passive infrastructure takes 73% of the total subsidy available while the active infrastructure takes the remaining 27%.
33. The bidding through a consortium of T1 and T2/T3 shall be encouraged. The division of responsibilities and sharing of the subsidy amongst the consortium entities shall be agreed by the consortia.

Table 5: Project components and Eligible bidders

Components	Eligible Bidders
Passive Infrastructure	NFP-T1s, NFP-T2s, NFP-T3s
Active Infrastructure	NFP-T1s only
Both Passive & Active Infrastructure	NFP-T1 or Consortium of NFP-T1 & NFP-T2/NFP-T3

34. In order to ensure universal presence of all MNOs in areas where USF funded Towers have been established and hence promote consumer choice, it shall be mandatory for all T1s (MNOs) to install their Active infrastructure on all USF supported towers, including those constructed solely by NFP T2/T3, within a period of 6 months upon completion of the passive components.
35. To this end the MNOs may be eligible for a share of the subsidy in respect of the active component (i.e. 30%), which will be shared in specified ratios depending on the speed of responsiveness of the MNO (i.e. speed of service commission on the tower) as

indicated in Table 6 below. This structure is intended to incentivize faster responsiveness before expiry of the 6 months grace period.

Table 6: Subsidy Division for Colocation of Active Infrastructure on NFP-T2/T3 constructed Towers

Ranking in Installation Completion	Entitled Subsidy (%)
1 st Respondent	15%
2 nd Respondent	7%
3 rd Respondent	5%
Total for Active Component	27%

IX. REQUIREMENTS SPECIFIC TO BIDDERS FOR PASSIVE COMPONENTS

36. In addition to the general requirements set out above, as applicable, the passive infrastructure should meet the following additional requirements
- i. The BTS site shall have adequate space (at least 15m by 15m) and antenna capacity to host at least 3 network operators.
 - ii. The BTS site shall have adequate and uninterrupted power supply sufficient for at least 3 network operators. Power generator of at least 16KVA, Solar canopy of at least 10KW and 48Vx 2 DC battery.
 - iii. Provision for and publicly accessible mobile phone charging facility capable of charging at least 10 devices simultaneously.
 - iv. Aviation warning lights system on the tower and a canopy shelter for all active and passive ground components
 - v. Perimeter wall accessorized with razor wire and or electric fencing.
 - vi. Appropriate electric grounding/earthing of the tower lattice and other elements including power supply sources.
 - vii. The Tower shall be of appropriate height with adequate mechanical strength to withstand strong wind loading. The Tower must achieve antenna height sufficient for maximum population coverage that meets the QoS standards and a minimum of 60% geographic coverage.

viii. The Tower should be insured against any kind of damage.

X. REQUIREMENTS SPECIFIC TO BIDDERS OF BOTH ACTIVE & PASSIVE COMPONENTS (I.E. NFP T1 OR CONSORTIUM OF NFP T1 & NFP T2/3)

37. In addition to the above requirements specific to Passive components of the network, bidders for both Active and Passive components are required to meet the following requirements.

- i. Bidders shall be expected to expound in detail the proposed network topology that include number, location and size/type of base transmitter stations, base station controllers, transmission systems, diagram(s) showing interconnection to the backbone and switching systems of other networks bearing in mind future expansion requirements and needs for network reliability and quality of service standards.
- ii. Bidders shall demonstrate the choice of BTS sites and configuration that shall ensure maximum coverage of the population and landmass within the set quality of service standards. .
- iii. The Bidder shall provide a simulation of the coverage indicating the signal strengths for each Lot it responds to. The minimum signal strength as required under the quality of service standards should be -95 dBm or more.
- iv. Bidders are expected to make submissions that demonstrate compliance with the following:
 - Network components based on approved and recognized international standards and accepted for use in Kenya,
 - The network configuration and supporting facilities that meet the set network Redundancy, Reliability and Diversity guidelines to ensure maintenance of the highest service quality at all times. Appropriate considerations in this regard include uninterrupted power source design (configuration of Main supply, backup generator, backup batteries and solar). Also appropriate provision for adequate cooling (either by using air conditioning or by passive air flow design);
 - Demonstrate provision of appropriate physical security such as fencing and guarding;
 - Demonstrate provision for extra capacity for sharing with other providers and meet the environmental and civil aviation requirements both in terms of design and location.

38. Bidders shall provide for and demonstrate provision for future growth and other changes including technological evolution and service demand changes

XI. SUBSIDY PAYMENT SCHEDULE

39. The release of the subsidy payment will be as per the following schedule towards the contracted entities.

Table 7: Subsidy Payment Schedule

NO	TARGET (MONTHS)	MILESTONE	TRANCHE PAYABLE	CUMULATIVE (PERCENTAGE)
1	1	Site designs	10%	10%
2	6	1 site or 30% of sites	30%	40%
3	12	1 Site or 60% of sites	30%	70%
4	18	1 site or 100% of sites	20%	90%
5	24	Continuous operation	10%	100%
6	61	Continuous operation	Release of performance security	

40. Payments against achieved and certified milestones shall be made within 30 Business Days upon issuance of a Construction Milestone Certification as indicated above.

9. ANNEX 6: BIDDING LOTS

LOT	COUNTY LOT NO.	COUNTY	SUB-LOCATION	UNSERVED POPULATION	OFFERED SUBSIDY FOR BOTH PASSIVE & ACTIVE COMPONENTS	OFFERED SUBSIDY FOR PASSIVE COMPONENTS
					100%	73%
1	BAR-3	Baringo	Mukutani	2755	8,042,996.87	5,871,387.72
		Baringo	Arabal			
2	BAR-6	Baringo	Ngoron	4522	18,374,956.92	13,413,718.56
		Baringo	Kulal			
3	BAR-5	Baringo	Akoret	5365	11,653,623.93	8,507,145.48
		Baringo	Kapedo North			
		Baringo	Moron			
4	BAR-4	Baringo	Kaptuya	1135	3,053,183.74	2,228,824.13
5	BAR-2	Baringo	Radad	1190	2,651,736.36	1,935,767.54
6	BAR-1	Baringo	Mugurin	1003	3,029,720.41	2,211,695.90
7	GAR-4	Garissa	Bour-Algi	4185	8,625,813.02	6,296,843.50
		Garissa	Karakora			
8	GAR-5	Garissa	Sankuri	3448	16,286,214.21	11,888,936.38
		Garissa	Balich			
9	GAR-6	Garissa	Urgaad	4742	11,093,288.87	8,098,100.88
		Garissa	Kone			
10	GAR-1	Garissa	Korisa	2547	15,873,487.14	11,587,645.62
		Garissa	Quramadha			
11	IS-1	Isiolo	Lenguruma	2221	18,185,883.18	13,275,694.72
12	IS-2	Isiolo	Korbesa	2200	14,914,836.97	10,887,830.99
13	KAJ-1	Kajiado	Singiraine	3329	22,627,709.54	16,518,227.96
		Kajiado	Kilonito			
14	KAJ-2	Kajiado	Enkaroni	3296	9,140,941.62	6,672,887.37
		Kajiado	Isiait			
		Kajiado	Loodokilani			
15	KAJ-3	Kajiado	Pelewa	1405	2,215,110.34	1,617,030.55
16	KAJ-4	Kajiado	Emarti	1046	7,217,466.87	5,268,750.82

17	KAJ-5	Kajiado	Emotoroki	3731	17,269,341.20	12,606,619.08
		Kajiado	Olmolelian			
18	KAJ-6	Kajiado	Ruanche	5829	14,996,458.75	10,947,414.88
		Kajiado	Kumpa			
19	KAJ-8	Kajiado	Oldepe	1353	2,320,934.92	1,694,282.49
20	KAJ-9	Kajiado	Najile	3944	3,783,021.98	2,761,606.04
		Kiambu	Nachu			
21	KIL-1	Kilifi	Karimani	1438	5,049,939.96	3,686,456.18
		Kilifi	Goshi	1206		
22	KIL-3	Kilifi	Dakacha	6551	19,126,197.25	13,962,123.99
23	KIT-2	Kitui	Kavutei	1105	2,824,074.96	2,061,574.72
24	KIT-1	Kitui	Ndilili	10570	12,185,271.77	8,895,248.40
		Kitui	Mivune			
		Kitui	Kituvwi			
		Kitui	Mwanianga			
		Kitui	Kyanyaa			
		Kitui	Ilamba			
25	KIT-4	Kitui	Nyanyaa	5193	4,659,725.21	3,401,599.41
		Kitui	Katitika			
		Kitui	Thonoa			
26	LAIK-1	Laikipia	Sieku	1880	10,505,221.40	7,668,811.62
27	LAIK-2	Laikipia	Luoniek	3088	12,095,168.08	8,829,472.70
		Laikipia	Kariwo			
28	MAN-3	Mandera	Qalanqalesa	22310	20,875,593.71	15,239,183.40
		Mandera	Shimbir Fatuma			
29	MAN-6	Mandera	Oda	2686	1,679,510.45	4,972,652.56
		Mandera	Bambo		5,132,342.37	
30	NAR-1	Narok	Mosiro	2865	7,212,219.90	5,264,920.52
		Narok	Enkoireroi			
31	NAR-2	Narok	Enaibor Ajjik	1872	1,267,796.06	925,491.12
32	NAR-5	Narok	Enturoto	2306	3,630,140.53	2,650,002.59
33	NAR-8	Narok	Tendwet	2188	9,796,623.58	7,151,535.21

34	SAM-1	Samburu	Loibashae	4346	8,046,201.75	5,873,727.27
		Samburu	Seketet			
		Samburu	Mugur			
35	SAM-2	Samburu	Nonkeek	4940	14,780,449.39	10,789,728.06
		Samburu	Ltirimin			
		Samburu	Lpus			
36	TTV-1	Taita-Taveta	Nyolo	1857	4,712,997.67	3,440,488.30
37	TTV-2	Taita-Taveta	Kishushe	1377	10,230,269.55	7,468,096.77
38	TANR-1	Tana River	Odowan	2177	2,839,163.67	2,072,589.48
39	THN-2	Tharaka-Nithi	Twanthanj	3782	2,247,955.30	1,641,007.37
40	THN-1	Tharaka-Nithi	Kamanyaki	1033	2,969,633.58	2,167,832.51
41	TKN-8	Turkana	Lorengelup	2428	4,313,026.53	3,148,509.37
42	TKN-11	Turkana	Puch	12002	60,716,839.33	44,323,292.71
43	TKN-10	Turkana	Lodwat	5408	19,658,106.38	14,350,417.64
		West Pokot	Lotukum			
		West Pokot	Kola			
44	TKN-18	Turkana	Kachoda	5388	18,022,563.04	13,156,471.02
		Turkana	Napeikar			
45	TKN-13	Turkana	Lokipoto	18956	18,690,589.21	13,644,130.12
46	TKN-15	Turkana	Oropoi	5927	37,424,472.31	27,319,864.79
47	TKN-16	Turkana	Loiemiet	1293	2,441,806.11	1,782,518.46
48	TKN-2	Turkana	Kangitit	31279	82,178,880.23	59,990,582.58
		Turkana	Lotubae			
		Turkana	Ngilukia			
49	TKN-4	Turkana	Katilia	39181	226,217,820.01	165,139,008.60
		Turkana	Parkati			

		Turkana	Kalapata			
		Turkana	Loperot			
50	TKN-3	Turkana	Lokwamosing	3405	6,067,492.26	4,429,269.35
51	WAJ-7	Wajir	Adadijole	4398	1,218,050.28	889,176.70
52	WAJ-8	Wajir	Sake Gamatha	5111	6,669,899.70	4,869,026.78
53	WAJ-3	Wajir	Tarbat	7486	37,741,191.90	27,551,070.09
54	WAJ-1	Wajir	Lolkuta South	5669	12,746,644.80	9,305,050.70
55	WPOK-5	West Pokot	Emboasis	3258	4,277,288.61	3,122,420.68
		West Pokot	Chesra			
56	WPOK-3	West Pokot	Kamayech	1300	2,428,353.83	1,772,698.30
57	WPOK-8	West Pokot	Tamugh	1681	1,655,196.71	1,208,293.60
58	WPOK-6	West Pokot	Shalpogh	4248	5,916,829.60	4,319,285.61
60	WPOK-10	West Pokot	Kaptolomwo	3076	27,600,629.99	20,148,459.90
		West Pokot	Ompolion			
		West Pokot	Chepropogh			
61	WPOK-9	West Pokot	Kachawa	3403	13,111,162.08	9,571,148.31
		West Pokot	Korpu			
		West Pokot	Kshot			
62	WPOK-7	West Pokot	Soka	4466	6,134,941.70	4,478,507.43
		West Pokot	Wakorr			
		West Pokot	Yaw Yaw			
63	WPOK-8	West Pokot	Akiriamet	7444	14,052,262.03	10,258,151.28
		West Pokot	Amaler			
64	WPOK-1	West Pokot	Pusol	4070	6,938,266.80	5,064,934.77
		West Pokot	Meshau			
		West Pokot	Sinna			
65	WPOK-2	West Pokot	Kokwositot	8196	7,814,551.79	5,704,622.80
		West Pokot	Kokwoptorir			
		West Pokot	Marus			

		West Pokot	Pkopogh			
		Elgeyo-Marakwet	Kipchumwa			
66	ISI-1	Isiolo	Lonkopito	3262	17,952,500.67	13,105,325.49
67	ISI-2	Isiolo	Kipsing	4,142	7,478,632.60	5,459,401.80
68	MARS -1	Marsabit	Elle Borr	73	18,633,700.00	13,602,601.00
69	MARS -2	Marsabit	Banale	383	15,198,000.00	11,094,540.00
70	MARS -3	Marsabit	Bododha	1,011	29,976,100.00	21,882,553.00
71	MARS -4	Marsabit	Amballo	1,706	35,566,200.00	25,963,326.00
	TOTAL	20	123	343,666	1,122,065,221.48	819,107,611.67



10. ANNEX 7: FEEDBACK FORM

REF: Doc. No. CA/VIP/Ph.2/C.

FEEDBACK FORM: PHASE 2 CELLULAR MOBILE INFRASTRUCTURE AND SERVICES PROJECT DESIGN MATRIX

Following the completion of the Phase I USF voice infrastructure & services in 78 sub-locations, the Authority has embarked on the rollout of Phase II voice infrastructure and services in 123 sub-locations spread across 19 counties in Kenya. In order to ensure stakeholders involvement and participation in the design and implementation of USF projects, the Authority has prepared a Project Brief (*Refer to Doc. No. CA/VIP/Ph.2/A*) and will subsequently hold a virtual potential bidder conference on **17th April 2020**. The virtual conference will provide the participants an opportunity to again a deeper understanding of the project, having interacted with the Project Brief and a platform to share contributions on the proposed tender format, eligibility, bidding processes / format, procedures payment schedule among other pertinent issues.

The template below provides you with an opportunity to raise comments / queries or seek for any further clarification on the brief provided in **Doc. No. CA/VIP/Ph.2/A**.

No	Theme	Comments & Inquiries	CA Response
1	Phase 1 challenges and mitigation plans		
2	Phase 2 tender format and Eligibility		
3	Project Components and Bidding format		
4	Subsidy Payment schedule		
5	Any other concerns and comments		

Email Feedback to: usf@ca.go.ke