

Ref. No: CA/SCM/OT/05/2025-2026

March 10th, 2026,

Addendum No. 1

To All Bidders,

**OPEN NATIONAL TENDER FOR SUPPLY, INSTALLATION AND MAINTENANCE OF QUALITY-OF-SERVICE NETWORK PERFORMANCE SYSTEM, QUALITY OF SERVICE DATA ANALYTICS TOOL AND QUALITY OF EXPERIENCE (QOE) MOBILE APPLICATION
TENDER NO: CA/SCM/OT/05/2025-2026**

This has reference to the above-mentioned tender.

Pursuant to ITT 9.1 of the tender document shared with bidders, the Authority wishes to respond to the clarifications sought out as follows:

NO.	INQUIRY OR CLARIFICATION QUESTIONS	CA RESPONSE
1.	Number of Vendors Could you please specify the total number of telecom vendors currently operating in the Kenyan market that this system will need to interface with?	Approximately. Seven(7) telecommunication vendors. Majority of the MNOs use Huawei, Nokia and Ericsson technology. Others are ZTE, Baicells, Airspan Networks and Rakuten Symphony solutions.
2.	Number of OSS Systems What is the total number of existing OSS (Operations Support Systems) that the proposed solution will need to integrate with?	Refer to response (1) above
3.	Number of MNOs Please confirm the number of Mobile Network Operators (MNOs) that will be under the scope of this monitoring system	Four (4) MNO's
4.	Covered Domains Regarding the "Covered Domains," could you provide a more detailed breakdown of the specific network elements required under Radio, Transmission, and IP/MPLS?	Network elements as deployed by operators in their networks
5.	Data Granularity What is the required granularity for the performance data? (e.g., 15-minute intervals, hourly, daily?)	Hourly, Daily, Monthly
6.	Retention Period What is the mandatory retention period for the raw and aggregated performance data?	1 year
7.	Integration Protocols	All protocols supported by vendor equipment in 1 above and meet the relevant ITU standards

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	What are the standard integration protocols used by the MNOs and vendors that the system must support?	
8.	Real-time Connections Are real-time connections currently available from the vendors' OSS, or will the data be provided via batch files?	Hybrid Approach preferred (Both realtime and batch)
	Scope: Data Analytics Tool for QoS Monitoring System	
9.	Offline or Online For the Data Analytics Tool, please clarify if the requirement is for "Online" (real-time streaming) processing, "Offline" (batch processing), or a hybrid architecture (supporting both Lambda/Kappa designs)?	Hybrid Approach preferred.
10.	Drive Test Data Source Who will be responsible for providing the Drive Test data? Will it be provided by CA, the MNOs, or is the vendor expected to conduct and supply this data as part of the scope?	Drive Test Data is provided by CA, Not the operators
	Scope: QoE Mobile Measurements	
11.	Drive Testing vs. Crowdsourcing Regarding QoE Mobile Measurements, do you require a solution based on traditional Drive Testing, a Crowdsourcing approach, or a hybrid solution that combines both methodologies?	Crowd sourcing approach
12.	E. Fault Management & Alerting Considering that modern multi-vendor mobile networks can generate thousands to tens of thousands of alarms per hour, could the Authority clarify whether the system is expected to ingest raw equipment alarms, or only alarms that have a direct impact on service availability and subscriber experience?	The alarms anticipated are alerts for service availability, KPI degradation, service outage, service quality, OSS data unavailability, over other equipment alarms.
13.	E. Fault Management & Alerting Does the Authority anticipate filtering or prioritizing alarms at source (operator OSS/NOC level), given that many equipment alarms (e.g., minor hardware warnings, temperature thresholds, transient transmission alerts) may not affect service quality?	Not at the source. The Authority will prioritize service impacting alarms, alarms on service KPI degradation, service outages that affect network availability, network quality.

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14.	E. Fault Management & Alerting Would processing large volumes of vendor-specific alarm streams introduce operational noise and reduce the regulator's ability to focus on service- impacting events?	The alarms are expected to be KPI specific and on service- impacting events, not operational.
15.	E. Fault Management & Alerting Since operators already maintain Network Operations Centers (NOCs) for real-time fault supervision and hardware alarm handling, should the Authority's platform focus primarily on service impact visibility rather than duplicating operator fault monitoring functions?	The fault tracking is for purposes of monitoring service interruptions during downtimes Alerting referred to here is not for hardware alarms, but for service outages, service quality degradation and performance on specific KPI's.
16.	E. Fault Management & Alerting Could the Authority confirm whether visibility into service degradation and outage impact is considered more relevant for regulatory oversight than root-cause equipment fault tracking?	Alerts on service degradation and outage impact take precedence as it impacts Network Performance (NP).
17.	E. Fault Management & Alerting Given that operators may resolve equipment faults internally without immediate service impact, would tracking time to service restoration provide a more meaningful regulatory indicator than hardware repair timelines?	Monitoring time taken to restore service takes precedence
18.	E. Fault Management & Alerting Should restoration be considered complete when performance KPIs return to compliant thresholds, even if underlying maintenance activities continue?	Restoration is considered complete when KPIs return to compliant thresholds. It is not possible to restore service while underlying maintenance activities continue
19.	E. Fault Management & Alerting To avoid alert fatigue, should real-time notifications be triggered only for service outages, KPI threshold violations, persistent degradation, rather than transient equipment alarms? Would the Authority prefer configurable severity thresholds to ensure alerts reflect user-impacting conditions rather than technical warning states?	Yes
20.	GIS&GEOSPATIAL VISUALIZATION	The purpose of the map windows is for

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	<p>Could the Authority clarify the primary operational use cases for displaying up to five synchronized map windows simultaneously, and whether such functionality is expected for daily monitoring workflows or for advanced analytical scenarios?</p>	<p>benchmarking the MNOs KPI performance.</p>
21.	<p>GIS&GEOSPATIAL VISUALIZATION Based on industry usability practices, multi-map synchronization of five views may significantly reduce readability and increase operator cognitive load. Would the Authority consider single map + graphs synchronized views sufficient for comparative analysis?</p>	<p>Synchronized maps for benchmarking MNOs KPI performance are preferred. Innovative ways may be implemented to achieve this.</p> <p>The purpose of Synchronized maps is for benchmarking. E.g. whether an MNO has 4G coverage or not.</p> <p>However, single map graphs can be implemented if they achieve that objective by deploying different colors for different operators for benchmarking purposes</p>
22.	<p>GIS & GEOSPATIAL VISUALIZATION Could the Authority clarify whether maintaining real-time system responsiveness and smooth interactive performance should be prioritized over rendering multiple high-resolution synchronized map views simultaneously, given that concurrent geospatial rendering may introduce latency and affect real-time monitoring efficiency?</p>	<p>The two scenarios are not mutually exclusive. The solution must provide high-resolution synchronized maps for benchmarking without compromising real-time monitoring efficiency.</p>
23.	<p>J. AI / ML & ADVANCED ANALYTICS Would the Authority accept AI/ML techniques that detect anomalies by comparing current KPIs against historical baselines, seasonal patterns, and prior performance periods?</p>	<p>Yes</p>
24.	<p>J. AI / ML & ADVANCED ANALYTICS Would early warning indicators based on historical trend deviation and predictive analytics be considered valuable for proactive regulatory oversight?</p>	<p>Yes</p>
	<p>I. Technical Requirements- Network Performance (NP) Monitoring System</p>	
25.	<p>Could the Authority confirm that configuration details available at drill-down</p>	<p>Yes. The configurations referred to are the site details.</p>

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	level refer to reference network metadata (e.g., site identifiers, sector orientation, frequency bands, technology, and vendor), typically provided by operators for regulatory monitoring purposes?	
26.	Will periodic topology and configuration snapshots provided by operators be acceptable for maintaining site-level and cell-level reference information?	Snapshots combined with site level information details
27.	Could the Authority clarify whether “trouble tickets” refer to operator- provided incident references for regulatory follow-up, rather than integration with internal operator ticketing systems?	Trouble tickets refer to incidents and the resolutions, for regulatory follow ups
28.	Could the Authority clarify whether “QoS management” refers to monitoring, benchmarking, and compliance tracking of QoS indicators rather than active network policy enforcement? Should the system focus on KPI compliance monitoring, degradation detection, and reporting to support regulatory enforcement?	Yes. It includes QoS KPI monitoring, benchmarking as well as KPI compliance monitoring, service degradation and reporting.
29.	Should node history include configuration change summaries and availability-impact events provided by operators, rather than full configuration management logs?	Node history is as per data from the operator’s OSS
30.	Could the Authority confirm that heterogeneous data sources may include OSS performance data, drive test results, crowdsourced measurements, and topology reference datasets?	No. Heterogeneous data sources referred to here is the Operator’s data as sourced from multiple Vendor equipment.
31.	Should performance continuity across site rehomes be preserved to maintain historical KPI trends despite logical network reconfiguration?	Yes. It is desired that the node history remains seamless even after network reconfigurations.
32.	Should underserved area identification be based on coverage, accessibility, throughput, and service availability indicators?	Yes
33.	Some advanced KPIs (e.g., packet loss, jitter, MOS-based voice quality, HTTP completion metrics, and service-layer performance indicators) may require activation of additional counters, probes, or deep measurement features that are not enabled by default in live networks due to processing	Yes. The Authority will mandate the Operators to provide the necessary data streams to facilitate accurate measurement analysis including advanced KPIs.

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	overhead and potential performance impact. Could the Authority clarify whether operators will be required to activate and provide such measurements?	
34.	Will the Authority mandate licensed operators to provide all required performance counters and service-level metrics necessary for KPI computation? What compliance framework will apply if an operator is unable or unwilling to provide specific counters due to technical or operational constraints?	MNOs are mandated to provide specific counters as maybe required for the NPMS.
35.	How should the system treat KPIs for which source data is unavailable: should they be flagged as “data unavailable,” excluded from compliance scoring, or estimated using alternative methods? For example, in case when not all operators provided data for the requested KPI due to technical constraints or vendor equipment differences.	The system should Flag this as data unavailable and generate an alert.
36.	Tender Closing Date In order to ensure that our proposal is fully responsive, technically comprehensive, and aligned with the detailed requirements of the tender documents, we kindly request an extension of two (2) weeks to the submission deadline.	The request to extend the tender submission deadline is granted. The new tender submission deadline is March 25th, 2026, 10:30am EAT.

ALL other terms and conditions of the tender remain unchanged.

This addendum forms part of the tender document and shall be read together with the original tender document.

Yours Faithfully,



Peter Mwangi
FOR: DIRECTOR GENERAL /CEO