

**ADDENDUM NO.3**

**TENDER NO. ICTA/OT/13/2022-2023**

**DATE: 22<sup>nd</sup> February, 2023**

**TENDER NAME: PROCUREMENT OF DIGITAL SUPERHIGHWAY-BACKBONE & METRO**

S.No	BIDDER'S CONCERNS/OBSERVATIONS/COMMENTS	CLARIFICATION/ RESPONSE
1.	<p><b>Carrier grade Routers</b>            1x 8 Port 40/100G Line Card            For a high-bandwidth line card, it is recommended that interfaces are in different slots. Having all the interfaces in one-line card and it fails means services will be interrupted until it is replaced. For redundancy design can separate line boards with varying port densities per line card be provided with minimum 2 * 40/100G port?</p>	<p>The specification remains as per the tender, also redundant line board to be provided             The configuration shall be designed at implementation stage.</p>
2.	<p><b>Carrier grade Routers</b>            Qos: More than 3 million queues per system            The backbone network carries integrated services and is unaware of specific services. It only needs to perform traffic priority scheduling. Generally, each logical port has eight QoS queues to ensure priority-based traffic scheduling, 100,000 - 200,000 queues per system is often sufficient for the backbone router. Can the bidder provide within the optimal range of above 200K queues per system?</p>	<p>The router must have at least 8 QOS queues per logical port.</p>
3.	<p><b>DWDM Equipment</b>            The configured transmission capacity must be at least 100Gbps. The configured transmission capacity of 100Gbps is sufficient. However, given future scope is not indicated being a framework</p>	<p>The configured transmission capacity must be at least 100Gbps.</p>

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	tender, Future capacity expansion should be supported. What is the required future capacity expansion requirement per wavelength?	
4.	<p><b>DWDM Equipment</b>  Device DWDM / OADM must accommodate ROADM functionality if required and Tenable Transponder.  Device DWDM / OADM must accommodate ROADM functionality if required and Tenable Transponder. To support fast rerouting in case of fibre cuts, is the optical-layer ASON mandatory? If yes this has not been clearly indicated as a requirement. Successful case deployment and implementation of optical layer ASON must be provided?</p>	Yes, optical layer ASON is Mandatory.
5.	<p><b>DWDM Equipment</b>  The offered system shall support any-rate services,  For future multi service support or any rate services such as 2Mbits to 100Gbits, does the system need to support this on one wavelength at the same time? If yes, this has not been clearly defined in the requirement.</p>	Yes, the system needs to support multiplexing any rate on one wavelength.
6.	<p><b>DWDM Equipment</b>  Equipment Expansion card 40G  The 40G capacity expansion card is not conducive to future evolution. Can the 4x10G line card be used to replace the 40G capacity expansion line card?</p>	The 40g expansion cards is required. Detailed configuration design shall be determined at implementation stage
7.	<p><b>DWDM Equipment</b>  Technical requirement for the DWDM equipment  The provided requirement suggests similar equipment will be used for the backbone and metro. To support varied site design requirement, its recommended that the backbone DWDM equipment be separated from the Metro DWDM equipment. Please clarify specifications for each?</p>	The technical requirements for DWDM remain the same as per the tender document. Configurations of DWDM shall be customized to backbone and metro during survey and design.
8.	<p><b>DWDM Equipment</b>  The typical configuration of the Backbone DWDM equipment  To allow complete bid response to the DWDM requirement, a typical configuration of the Backbone DWDM equipment is required, is there a typical configuration such as</p>	The bidder is expected to quote for a typical DWDM configuration that works, provide all functionalities.

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	<p>no of Subrack with power modules.  no of Main control and cross-connection board  no of 10G line side board and x ports any-rate tributary board  no of 100G line side board and 100G tributary board etc?</p> <p>If yes, and since this is only a typical configuration. In the future, will BOMs other than the configuration list be added to adapt to different scenarios?</p>	
9.	<p><b>DWDM Equipment</b>  The typical configuration of the Metro DWDM equipment  To allow complete response to the DWDM requirement, a typical configuration of the Metro DWDM equipment is required, Is there a typical configuration such as;</p> <p>No of Subrack with power modules.  Main control, 10 G Muxponder board, OA, XFIU etc?</p> <p>If yes, and since this is only a typical configuration, In the future, will BOMs other than the configuration list be added to adapt to different scenarios?</p>	<p>The bidder is expected to quote for a typical DWDM configuration that works, provide all functionalities.</p>
10.	<p><b>Quality Assurance, Integration Compliance and Support Guarantees.</b>  Since the project is envisioned to integrate to existing high infrastructure featuring advanced technologies, Quality Assurance is paramount and Integration SLAs need to be guaranteed. Is a reference report for quality control mandatory?  If yes, which such report is required?</p>	<p>The offered active equipment MUST be listed in a relevant category Gartner's magic quadrant in any of the last three year.</p> <p><a href="https://www.gartner.com/en/research/magic-quadrant">https://www.gartner.com/en/research/magic-quadrant</a></p>
11.	<p><b>Warehouse &amp; Hotline</b>  The SLA level of the equipment  Does customer need the manufacturer has the local warehouse and hotline(24h) service ?</p>	<p>Bidder must ensure SLAs as agreed and provide the manufacture proof of support</p>
12.	<p><b>Optical Module</b>  6.46,6.47,6.55,6.56 Single Module Optical Module</p>	

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	If the distance between two sites is longer than 80 km, DWDM devices equipped with coloured optical modules and OAs will be used for transmission. Can the 120 km and 160 km optical modules be removed if the OAs of DWDM devices can meet the requirements?	The SPF specifications remain as per the tender document. Bidders must comply with the specifications and bid for all items in the price schedule.
13.	<b>Optical Module</b> 6.43-6.45, 6.49-6.51 Single Module Optical Module The 1550 nm wavelength is generally used in the industry to transmit signals over a distance longer than 10 km. For distances longer than 10KM, can the bidder provide the Industry recommended 1550nm Single mode SFP?	Yes. The recommendation is agreed, the bidder may use 850nm or 1310nm or 1550 nm SFPs to achieve the specified signal distances.
14.	<b>Optical Module</b> 6.57-6.58 Multi-Module Optical Module The 850 nm wavelength is generally used in the industry to transmit signals for Multimode Transceiver. can the bidder provide the Industry recommended 850 Multi Mode SFP?	Yes. The recommendation is agreed, the bidder may use 850nm or 1310nm or 1550 nm SFPs to achieve the specified signal distances.
15.	<b>Engineering survey and design -Site</b>  Can we have this done per Meter?	This item is shall be quoted per kilometre (KM) under the Backbone and Metro framework.  The price schedule for Backbone and Metro item 5.1 is amended KM
16.	We are an ISP. We have rolled out our network in Mombasa, Nairobi and Thika Over 1,000 KM underground and aerial.	For Internet Service Providers (ISP) undertaking Backbone & metro bids For Internet Service Providers (ISP) is amended as below: a) Maintain a Minimum of 3,000 customers in the last 1 year from the closing date of this tender. OR b) Maintain a Minimum of 1,500 customers each in the last 2 consecutive years

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		Similarity being in complexity and scope. This must involve supporting and implementation of IP network, GPON network and ADSS FOC stringing. (The bidder should provide current certified Communication Authority of Kenya returns showing existing customers, NMS reports and Network Asset Ownership insurance)

The addendum & clarification form part of the bidding document and is binding on all bidders. The tender closing/opening date is on 28<sup>th</sup> February 2023 at 10:00am. All other terms and conditions of the tender remain the same.

Stanley Kamanguya, OGW  
Chief Executive Officer