

BANK OF UGANDA

OFFICE OF THE DIRECTOR
PROCUREMENT AND
DISPOSAL DEPARTMENT



37-45 KAMPALA ROAD,
P.O. BOX 7120,
KAMPALA

PDD.001

August 3, 2023

DIRECT LINE 256-414- 233715
GENERAL LINE 256-414- 258441
FAX LINE 256-414- 258069
TELEX 256-414- 61059

CABLES UGABANK
Email info@bou.or.ug
Web site www.bou.or.ug

All Bidders

Tender for Provision of a Bank of Uganda National Payments Switch (BNPS)- BOU/NCONS/22-23/003781/C (2nd Response to Requests for Clarifications)

Reference is made to the captioned subject.

In accordance with ITB Clause 7.1, please find attached Bank of Uganda's 2nd response to the bidders' requests for clarifications received.

Please note that the Bid submission deadline is extended to 11:00am EAT of August 24, 2023.

We thank you for your interest in the bidding process and we look forward to receiving your submission.

Pelly R. Mugasi
Director

.../chn



2nd Bank of Uganda (BoU)'s Response to Bidders' Requests for Clarifications

Sr No	Reference	Clarification Questions	Bank of Uganda response
1.	Section 2 - BDS (ITB11.1) - Submission Method	One stage-two envelope submission method requires a Bidder to submit a single envelope containing two sseparately sealed envelopes, labelled technical and financial Proposal. The above clarifies the procedure to send the Bid submission physically. When we come to the email submission, should we group the submission in one email only or we keep the same separation (Technical vs Financial)?	The electronic submissions should be separated and clearly labelled 'Technical' or 'Financial' with separate passwords for each. These bids shall be opened at separate bid openings. Therefore, the passwords for the technical bid shall be provided prior to the technical bid opening while those for the financial bid shall be provided upon request by the Bank following the technical evaluation. Both the technical and financial bids shall be submitted by the deadline of 11:00am EAT on August 24, 2023 (as revised) .
2.	Section 2 - BDS (ITB12.1g) - Bid information	<ol style="list-style-type: none"> 1. We would like to be confirmed that the following list is exhaustive of all the expected documents or declarations to include in the bid submission. 2. We would also like to know in which envelope you expect the documents to be included. I refer in particular to all the documents over and above the Financial Submission Sheet and the Breakdown/price schedule for services and related supplies that go to the Financial part and the Technical Submission Sheet that is clear to be included in the Technical envelope. We would appreciate for each document (1 to 22) to be indicated in which envelope to include it. 	<ol style="list-style-type: none"> 1. Refer to Section 2- BDS (ITB 12.1 (g) #22. 2. All required documents 1-22 shall be included in the technical bid. However, where any pricing is applicable (such as 19. Support and Maintenance and 20. Training and Knowledge Transfer Services) the proposals shall be included in the technical bid while the applicable costs shall be included in the financial bid.

Sr No	Reference	Clarification Questions	Bank of Uganda response
3.	Section 2 - BDS (ITB20.1) - Number of Copies	<p>The Bidder shall prepare one original of each of the documents comprising the bid as described in ITB Clauses 11 and 12 and clearly marked "ORIGINAL". In addition, the Bidder shall submit copies of the bid, in the number specified in the BDS and clearly mark each of them "COPY". In the event of any discrepancy between the original and the copies, the original shall prevail.</p> <p>If we understand correctly, The Bidder should send 1 single envelope containing:</p> <ul style="list-style-type: none"> o 1 envelope Technical Proposal marked as ORIGINAL o 1 envelope Financial Proposal marked as ORIGINAL o 1 envelope Technical Proposal marked as COPY o 1 envelope Financial Proposal marked as COPY <p>Is the above correct or Financial Proposal should contain both Original and Copy - clearly marked but yet in the same envelope?</p>	<p>As indicated in ITB 11.1, the submission method shall be one stage two envelope method. That is, a Bidder shall submit a single envelope containing two separately sealed envelopes labelled technical and financial proposal respectively. Within each envelope, the bidder shall include 1 ORIGINAL and 1 COPY.</p> <p>That is, in the Technical proposal envelope include 1 ORIGINAL and 1 COPY and in the Financial Proposal envelope include 1 ORIGINAL and 1 COPY.</p>
4.	Section 2 - BDS (ITB22.1) - Bid submission & (ITB25.1) - Bid Opening	<p>Request for extension of submission deadline:</p> <ol style="list-style-type: none"> 1. By at least 2 weeks - due to the fact that we got the pre-bid minutes on July 29th coupled with the fact that we are working with an overseas partner on this bid and the complexity of this bid. 2. By 2 weeks - since the complexity of this tender is quite high and responses to the queries are important in arriving at a Technically Superior solution which will benefit BOU immensely. 3. To 7th September - this would help us to organise information and documentation towards Bidder construct, hardware recommendation, resource planning, implementation planning and latest and best proposal. 	<p>Bid Submission Deadline and Bid Opening revised as follows: Bid submission deadline is extended by 2 weeks from 11:00am EAT of August 10, 2023 to 11:00am EAT of August 24, 2023.</p> <p>Accordingly, the opening of bids is extended to 11:30am EAT of August 24, 2023.</p>

Sr No	Reference	Clarification Questions	Bank of Uganda response
5.	Section 2 - BDS (ITB22.1) - Bid submission	<ol style="list-style-type: none"> 1. What is the maximum email size that you can receive? 2. In case it is not possible to send all the bid submission in one single email due to sizing, can multiple emails be sent, indicating in the subject "Provision of a Bank of Uganda National Payments Switch (BNPS) - Ref No: BOU/NCONS/22-23/00378/C – Technical Proposal – PART 1 OF n"? 	Refer to BoU's 1st Responses - #80.
6.	Section 3. Administrative Compliance Criteria 4.1 subsection (iii) (d)	Does this provision mean that the JV should be registered entities/companies that operate local accounts together or can this requirement be waived for the JV to officially nominate and communicate the account to be paid to?	In line with 4.1 (iii) (d) any Joint Venture / Consortium / Association is expected to operate a Bank Account in the name of the Joint Venture / Consortium / Association Agreement and advise the Bank of the authorised signatories to that account. This account may be opened in any of the permissible jurisdictions defined in Section 5 (Eligible Countries) of the bidding document.
7.	Section 3 - Administrative Compliance Criteria 4.1 (n) and Section 4 - Format of Curriculum Vitae for Proposed Project Staff	As part of the CV's are you expecting to receive the certifications or is it enough to list them?	Bidders are required to list the certifications in the CV and also submit copies of the certifications as required under Section 3 - Technical Criteria, Experience and Qualifications of Key Personnel (6.5).
8.	Section 3 - Administrative Compliance Criteria 4.1 (p) - Confirmation of project team and declaration on staff bonding at least for the entire project duration, with relevant explanatory notes.	We would be able to provide the declaration that staff with requested educational and technical qualification, as well as requested experience would be part of the project. We shall also provide the declaration that replacement of the resource would be upon mutual consent. Hope this is agreeable to management.	Refer to BoU's 1st Responses - #16.

Sr No	Reference	Clarification Questions	Bank of Uganda response
9.	Section 3 - Experience and Qualifications of Key personnel	The staff in any Technology Organization keep changing due to Attrition which is at the highest levels globally. No one will be able to guarantee if the same person will exist in the same Organization at the time of Future Implementation. Hence, we request you to consider equivalent Person with similar experience, Skill Sets and Certifications at the time of Implementation.	Refer to BoU's 1st Responses - #16
10.	Section 3 - C -Detailed Evaluation Criteria - 6. Technical Criteria 6.3	<ol style="list-style-type: none"> 1. How should we respond to questions where the requirement is 'partially' covered? Is this considered as a non-compliant response? 2. Does this mean that if a Vendor complies with all requirements except one, they get disqualified immediately? 	<ol style="list-style-type: none"> 1. Yes. Partial responses are considered non-compliant. 2. Yes.
11.	Section 3 -C -Detailed Evaluation Criteria - 6. Technical Criteria 6.4	This criterion is very limiting for the vendors. Can we provide references for implemented projects of similar scope that were done internationally (not necessarily in Africa) and qualify for this criterion?	Refer to BoU's 1st Responses - #17
12.	Section 3 -C -Detailed Evaluation Criteria - 6. Technical Criteria 6.4	Request to group Middle East and Africa (MEA) as single region for capability demonstration. Most of the new innovations, interoperability with the fintechs and financial players are in progress in MEA as a region.	Refer to BoU's 1st Responses - #17
13.	Section 3 -C -Detailed Evaluation Criteria - 6. Technical Criteria 6.4	Please disclose the specific criteria or benchmarks that the national switch platform in the African Countries should meet to be deemed successfully supplied and implemented, as well as acceptable and appropriate for the tender.	Refer to Section 3 - Technical Criteria, Relevant Experience of the Bidder (6.4).

Sr No	Reference	Clarification Questions	Bank of Uganda response
14.	Section 4 - Bidding Forms, Format for confirmation of availability of Proposed Project Staff	<p>We are prohibited by compliance including GDPR to share personal details of the resources until the project commencement. We shall, however, provide the generic information towards the project team capability and experience to manage project of such dimensions and scale.</p> <p>We would commit to deliver the project based on the scope and timelines as part of the SOW (Statement of Work).</p> <p>Request to allow us to submit our format for "Format for confirmation of availability of Proposed Project Staff".</p>	Refer to BoU's 1st Responses - #20 Bidders are required to complete the formats provided to the extent possible.
15.	Section 6 - Statement of Requirements - Subsection 1.2	<p>In accordance with Clause 1.2 of the Bidding Document, Settlement shall be done at the Central Bank through the RTGS.</p> <ol style="list-style-type: none"> 1. What kind of integration with RTGS or SWIFT should the BNPS provide, considering the change of the cross-border payments and reporting (CBPR+) standards to ISO20022 announced by SWIFT? 2. In 2025, when ISO15022 is no longer supported by SWIFT, will BNPS need to update its integration with RTGS? 	The proposed solution should be ISO20022 compliant.
16.	Section 6 - Statement of Requirements - Table 2: FMI Integration to BNPS Model	Please clarify what is KACH? Interswitch? And their roles as described on page 73.	<p>KACH - Kampala Automated Clearing House which is operated by Bank of Uganda.</p> <p>Interswitch - Private switch providing ATM services among Uganda Commercial Banks.</p>

Sr No	Reference	Clarification Questions	Bank of Uganda response
17.	Section 6 - Statement of Requirements – Sub-section 2.3 - FMI Integration	<p>Can you please clarify the following:</p> <ol style="list-style-type: none"> 1. Integration with Mobile Money - what kind of API is used for integration? Will the Switch perform only transaction processing or payments to merchants as well? 2. Uganda government/agencies - what kind of API is used for integration? Can you provide a description of the possible transactions to be supported? 3. ATM/POS Terminal Management Switches - How many switches will connect to the National Switch and what kind of protocol will be used? 4. BOU RTGS/ACH - Do you expect online integration with the RTGS or a batch file interface? Could you provide a description / specification for this? 5. Licensed fintech aggregators - How many aggregators will integrate with the National Switch and what kind of API will be used? 6. KACH Commercial Bank / ABCS Commercial Bank / Interswitch - Does the national switch need to integrate with these banks? If yes what kind of interface is required (i.e., H2H)? 7. RTGS Commercial Banks - Do you expect online integration with the RTGS or a batch file interface? Could you provide a description / specification for this? 	<ol style="list-style-type: none"> 1. Bidders shall provide the API that fulfils the Bank' interoperability requirements and shall have a secure API management. The Switch shall perform only transaction processing. 2. Bidders shall provide the API that fulfils the Bank's requirements and shall have a secure API management. Possible transactions include - Tax collection among others. 3. Refer BoU's 1st Responses - #46. The system shall support the <u>ISO20022</u> messaging protocol as a default. For backward compatibility the support for <u>ISO8583</u> can be enabled as and when required. 4. Refer to requirements BNPS-SET001 & BNPS-SET002. 5. Bidders shall provide the API that fulfils the Bank' interoperability requirements and shall have a secure API management. All licensed Aggregators should be eligible to integrate with the Switch. The number of aggregators is anticipated between 50 to 100. 6. All Commercial Banks and Aggregators like Interswitch will integrate with the Switch. 7. Refer to requirements BNPS-SET001 & BNPS-SET002.
18.	Section 6 - Statement of Requirements -Figure 3: Process flow (Mobile Money – P2P), Figure 4: Process flow (Mobile Money – P2M)	Can you please provide distinguishable diagrams from p 76 and 80? Current is not clear.	Refer to Figure 3 and Table 3 on Process Flow (Mobile Money - P2P) on pages 19 - 21 below.

Sr No	Reference	Clarification Questions	Bank of Uganda response
19.	Section 6. Statement of Requirements - Subsection 3.2 Internet Banking [P2B, B2P]	Please clarify the role of BNPS switch for Internet Banking (p 84)	The switch should support internet banking in addition to Mobile Money, Mobile Banking and others as specified in the bidding document.
20.	Section 6. Statement of Requirements - Subsection 3.8 Findings from Use Cases - #4	Will USSD/SMS gateway be required for the scope of project, or we will use existing one BoU has?	Bidders should advise if their proposed solution requires USSD/SMS gateway.
21.	Section 6. Statement of Requirements - Subsection 3.8 - Key Characteristics - # 3	Can you please clarify if the Switch should support only Visa, AMEX, Diners and Mastercard payment schemes? If additional International Schemes/Brands should be supported, please define.	The switch should have the capability to support other future innovations in addition to those specified in the requirements.
22.	Section 6 - Statement of Requirements- 3.8 Findings from Use Cases #5	For payment types that are not yet in place, will the specifications of such payment flows and processing be provided?	The switch should have the capability to support other future innovations in addition to those specified in the requirements.
23.	Section 6. Statement of Requirements - Subsection 4 - Functional Requirements - 4.1 - ID BNPS-SET001	Can you please clarify the role of the Switch as far as the settlement in RTGS is concerned. As per our understanding, the settlement with the beneficiaries will be done on RTGS. The switch should provide the fees and transactions to RTGS in a file for processing. Please confirm if our understanding is correct.	The switch shall send net settlement positions to RTGS. Yes, the settlement of transactions and associated fees will be done in RTGS.
24.	Section 6. Statement of Requirements - Subsection 4 - Functional Requirements - 4.2.1- ID BNPS-SCA001	<ol style="list-style-type: none"> 1. Will BNPS system drive POS directly or integration with other systems will be done? How will local POS be driven? 2. Will white label mobile app/internet/mobile banking be required? So that BNPS can offer it to participants requiring it. 	<ol style="list-style-type: none"> 1. The BNPS shall drive POS directly. 2. Yes

Sr No	Reference	Clarification Questions	Bank of Uganda response
25.	Section 6. Statement of Requirements - Subsection 4 - Functional Requirements - 4.2.1BNPS-SCA001	Is direct ATM/POS driving included in the scope of the project? Or Switch will only connect to other POS/ATM acquiring systems?	Refer to 24 above.
26.	Section 6. Statement of Requirements - Subsection 4 - Functional Requirements - 4.2.1 - ID BNPS-SCA003 / SCA004	Can you please clarify how many institutions (direct/indirect) will integrate with the switch? Will they adapt the switch standard Interfaces for integration, or will there be custom H2H integration?	Refer to 17 (5) above. Yes, they will adapt the switch standard Interfaces for integration.
27.	Section 6. Statement of Requirements - Subsection 4 - Functional Requirements - 4.2.2 - ID BNPS-PAY009	Do you expect to manage dispute resolution for all participants including local and international schemes (i.e., Visa/MasterCard)?	All participants will be handled under the same dispute resolution as shall be laid out on the participation rules.
28.	Section 6 - Statement of Requirements- Subsection 4.2.2 Payments Processing – ID BNPS-PAY031	Fast payment: is this referring to a scenario where the payment is instantly cleared between banks?	Fast payment refers to receipt of instant credit for the beneficiaries even when the senders are from different financial institutions.
29.	Section 6 - Statement of Requirements- Subsection 4.2.2 Payments Processing – ID BNPS-PAY033	The system shall support the ISO2022 messaging protocol as a default. For backward compatibility the support for ISO8053 can be enabled as and when required. Does ISO2002 mean ISO20022 and ISO8053 mean ISO8583?	Requirement BNPS-PAY033 is revised as follows: The system shall support the ISO20022 messaging protocol as a default. For backward compatibility the support for ISO8583 can be enabled as and when required.
30.	Section 6 - Statement of Requirements- Subsection 4.2.2 Payments Processing – ID BNPS-PAY058	Should BNPS be an intermediary between Banks and other financial service providers to provide exchange financial data?	Yes, if the account holder's consent is obtained and in accordance with Section 7 of the Data Protection and Privacy Act, 2019.

Sr No	Reference	Clarification Questions	Bank of Uganda response
31.	Section 6 - Statement of Requirements- Subsection 4.2.2 Payments Processing - ID BNPS-PAY060	Is Agent banking functionality required or BNPS is to integrate to ABCS that will do agent banking? Is ABCS a dedicated banking agent system BNPS switch needs to integrate with? Please provide a description of ABCS.	BNPS should integrate with Agent Banking Company (ABC) or the Shared Agent Banking Platform.
32.	Section 6 - Statement of Requirements- 4.2.3 Non-Payment Messages - BNPS-NOP001	If BNPS is expected to handle the routing of non-payment message, what more is expected in the handling of such messages?	The BNPS shall handle routing and logging of failed messages.
33.	Section 6. Statement of Requirements - Subsection 5.3 - Training - ID BNPS-TRNB003	1. For the training sessions, is it required to have the trainer on-site or remote live sessions is an acceptable means of providing the training? 2. Is it acceptable to offer e-Training sessions (online self-paced training classes)?	Training shall be both physical and virtual as may be applicable.
34.	Section 6 - Statement of Requirements-Subsection 5.5 - Security - ID BNPS-SEC023	There is reference that the system shall not use vulnerable components like Java, Oracle, web server etc... why?	<u>Requirement BNPS-SEC023 is revised as follows:</u> The system shall be delivered and installed with the most recently available firmware, software versions, updates, and patches. The system components such as libraries, frameworks, and other software should not contain any vulnerabilities. Software includes the Operating System, Web browsers, Web servers, Application Servers, and Database technologies. The system should be developed using the implementation of Java supported by RedHat.
35.	Section 6. Statement of Requirements - Subsection 5.5 - Security - ID BNPS-SEC025	Can you please provide more information related to the Database Audit and Protection Systems? What software are you using? What kind of integration needs to be supported?	The Database Audit and Protection Systems (DAPS) Agent shall be installed by BoU and supported by Oracle.

Sr No	Reference	Clarification Questions	Bank of Uganda response
36.	Section 6. Statement of Requirements - Subsection 5.5 - Security - ID BNPS-SEC026	Can you please provide more information related to the SIEM System you already deployed? What software are you using? What kind of integration needs to be supported?	The methods of integration are - Secure Syslog and text files with a structure that can be parsed. The files should not have dynamic names.
37.	Section 6. Statement of Requirements - Subsection 5.5 - Security - ID BNPS-SEC027	Can you please provide more information related to the Privilege Access Management System you already deployed? What software are you using? What kind of integration needs to be supported?	The solution should be able to integrate with the Privilege Access Management System using the following protocols: RDP, SSH, and HTTPS.
38.	Section 6 - Statement of Requirements-Subsection 5.5 - Security - ID BNPS-SEC038	Will BOU indicate the encryption standards to be used, or will be left to the vendor's digression?	The recommended encryption standard to be used is AES-256.
39.	Section 6 - Statement of Requirements- Subsection 5.5 - Security- ID BNPS-SEC062	What are the specifications for API access by payment providers, will it make part of the API management?	Bidder shall provide the API that fulfils the Bank' interoperability requirements and shall have secure API management.
40.	Section 6 - Statement of Requirements- Subsection 5.5 - Security- ID BNPS-SEC063	Does bidder require to build an entire processing centre, with servers, wiring, cooling, regular compliances, etc. or the scope is only providing of required application and associated hardware?	BoU will provide the Data Centre access with Rack space, wiring and cooling.
41.		Should the BNPS be developed on these technologies or can others be used (C++, GoLang, PostgreSQL etc)?	The technologies used are up to the vendor but must be supported on the RedHat Operating System. The acceptable database shall only be Oracle.

Sr No	Reference	Clarification Questions	Bank of Uganda response
42.	Section 6 - Statement of Requirements 5.6.1 Technology Standards / BNPS-STA002	In accordance with the requirement (clause b), the solution should provide tools to facilitate monitoring with relevant laws, regulations, and supervisory requirements. 1. What is the format of data which should be sent to the supervisory authorities? 2. Are there any requirements for processing possibilities of that data?	1. Formats are CSV, Excel. 2. Solution should have the capability to extract the data for further analysis.
43.	Section 6 - Statement of Requirements 5.6.1 Technology Standards / BNPS-STA002	In accordance with the requirement (clause l-o), it is provided that the solution should establish fair and open criteria for access and participation, conduct appropriate due diligence on participants, ensure the transparent and effective process for admission. As far as the solution can provide the mechanics of the access process, but not the criteria of such assessment – 1. What are the exact criteria of assessment and due diligence, which should be included in the system? 2. How many stages of the process of admission, suspension and removal should be included in the solution? How many roles should be developed in this system?	1. Bidders should demonstrate that the proposed solution meets the PMFI IOSCO principles and is able to facilitate compliance with the same. 2. The solution should require the use of the 4-eye principle for admission, suspension, and removal of participants.
44.	Section 6 - Statement of Requirements 5.6.2 Connectivity & Security Requirements / BNPS-CONSEC-001	Will the bidder be responsible for integrating participants over MPLS links?	Integrating participants over MPLS links will be handled by the BoU.
45.	Section 6. Statement of Requirements - Subsection 5.6.4 - Hardware/ Database etc. - ID BNPS-HRD001	Do we need to support Red Hat Open Shift v4.12 for both application and database servers?	Yes, the solution shall be deployed on Red Hat Open Shift Platform for both application and database servers.

Sr No	Reference	Clarification Questions	Bank of Uganda response
46.	Section 6. Statement of Requirements - Subsection 5.6.4 - Hardware/ Database etc. - ID BNPS-HRD001	As an international company operating outside of Uganda, we are encountering challenges in finding a trustworthy local partner to handle hardware procurement and implementation. Could you kindly confirm whether it is feasible for us to submit a bid without including hardware?	BNPS-HRD001 is a mandatory requirement and will not be waived.
47.	Section 6. Statement of Requirements - Subsection 5.6.4 - Hardware/ Database etc. - ID BNPS-HRD001 (Clause a)	<ol style="list-style-type: none"> 1. The tender document does not explicitly state whether the development of a data centre, where all the equipment should be stored is a necessary component of the BNPS. Please confirm and provide the details of the existing data centre which should be used to deploy the infrastructure of the specifications and standards that the suggested Bidder Data Centre must meet. 2. Should the cost of the construction or renting the Data Centre be included as part of the bidding amount for the development of the BNPS? 3. If the Data Centre cost is not included in the bidding amount, kindly advise on how it should be accounted for in the financial proposal. 	<p>Refer BoU's 1st Responses - #37.</p> <p>BoU will provide the Data Centre and supporting infrastructure i.e., Racks, power, connectivity between the primary and secondary sites, and participant connectivity to the switch etc.</p>
48.	Section 6. Statement of Requirements - Subsection 5.6.4 - Hardware/ Database etc. - ID BNPS-HRD004- Active-Active Design Architecture	Active-Active Architecture---Block diagram shown in the document is illegible. Request you to share a better Diagram which can be read and understood properly.	Refer to Figure on page 22 below.

Sr No	Reference	Clarification Questions	Bank of Uganda response
49.	Section 6. Statement of Requirements - Subsection 5.6.4 - Hardware/ Database	Kindly confirm that the current Data Centre at BoU will be able to accommodate the new hardware for this project. Kindly clarify the Warranty for these Hardware and Software. Is it 1 Year or 3 years?	Refer to 47 above. The Warranty for the Hardware and Software shall be 3 years. Refer to Section 3 - Technical Criteria, Support and Maintenance (6.7).
50.	Section 6. Statement of Requirements - Subsection 5.6.4 and 5.6.6	In accordance with the requirements, the solution should procure the resistance to external threats and reliability of infrastructure: 1. Are there any requirements for the location of the hardware (servers) where the BNPS software is stored? 2. Could the servers be located outside of Uganda and be dependent on foreign cable or internet providers?	The entire solution (both hardware and software) shall be installed in the BoU Data Centres.
51.	Section 6. Statement of Requirements - Subsection 5.6.5 - Integration - ID BNPS-INT001	Please define the type of integration expected with each of the following platforms: - RTGS - SIEM/SOC - Data Warehouse	The Bidder shall advise the available integration options for RTGS, SIEM/SOC and Data Warehouse. In addition, the proposed solution should support ISO20022 integration with RTGS.
52.	Section 6. Statement of Requirements - Subsection 5.6.5 - Integration - ID BNPS-INT001	While the National Switch Infrastructure shall be isolated and independent from the BCNet, there are certain BCNet services that shall require integration with the Switch. What is BCNET in the context of the project?	BCNET is the local BoU Network services such as the DAPS, SIEM which are detailed in the bidding document.

Sr No	Reference	Clarification Questions	Bank of Uganda response
53.	Section 6. Statement of Requirements - Subsection 5.6.5 - Integration - ID BNPS-INT001	<ul style="list-style-type: none"> • RTGS: The RTGS shall be used for settlement purposes in conformity with the DNS rules and operational procedures that the Bank shall establish. • SIEM/SOC: Collect and analyse security and event data from the Switch for real-time monitoring, alerting, and reporting. • Data Warehouse: Switch data that is older than six (6) months shall be moved to the Bank's Data Warehouse to store and manage it in a structured and organized manner enabling data-driven decision-making. • Microsoft Exchange: To provide email messaging services. <p>It's assumed all listed solution are not in scope of vendor's project. Please confirm.</p>	This is Correct. Implementation of these solutions is not part of the scope of this project. However, integration of the switch with these different solutions as indicated in the bidding document is part of the scope of this project.
54.	Section 6. Statement of Requirements - Subsection 5.6.5 - Integration - ID BNPS-INT002	Is there a specific type of integration that should be used, or the vendor can propose our own standard interfaces and the participants will adopt?	The Bidder shall advise the available standard API integration options. In addition, the proposed solution should support ISO20022 integration.
55.	Section 6. Statement of Requirements - Subsection 5.6.5 - Integration - ID BNPS-INT003	Please provide details with the integration that should be supported. Which vendors database should we integrate with? Which applications?	Refer to 54 above.

Sr No	Reference	Clarification Questions	Bank of Uganda response
56.	Section 6. Statement of Requirements - Subsection 5.6.7 - Implementation and Operations - ID BNPS-OPS002	Please provide details of the functionality expected to be provided by the online web portal.	The proposed solution is expected to come with a web portal out of the box. The portal acts as a user-friendly interface that empowers participants to interact with the application. Expected functionality includes but not limited to: Account Management, Transaction Monitoring, Payment Services, Message Dashboard, Transaction Search, Transaction Reconciliation, Settlement Instructions, Reporting and Analytics, System Notifications, Support and Helpdesk, User Management, Integration and interoperability management, etc.
57.	Section 6. Statement of Requirements - Subsection 5.6.7 - Implementation and Operations - ID BNPS-OPS003	This criterion is very limiting for the vendors. Can we provide resources for implementing projects of similar scope that with banks (not central banks) or processors internationally and qualify for this criterion?	Refer to BoU's 1st Responses - #19
58.	Section 6 - Statement of Requirements	Please assist with sizing information.	The bidder is expected to derive sizing information from the already proved specifications. Refer to Section 6 - Statement of Requirements, Sub-section 5.6.4.
59.	Section 6 - Statement of Requirements	The RFP is not mentioning if the infrastructure (hardware) will be provided by your own current provider. If the infrastructure shall be provided as part of the bid, could you please share with us the names/references of the preferred provider?	Refer to requirement BNPS-HRD001.
60.	Section 6 - Statement of Requirements -Subsection 3.8, Table 15, #3 A Single Interface	What are the limitations for simplifying such interface, considering that it will constitute all card payment processors?	The switch should have an interface with global card payment processors. The switch should have the capability to support other future innovations in addition to those specified in the requirements e.g., a domestic card scheme.

Sr No	Reference	Clarification Questions	Bank of Uganda response
61.	Section 6 - Statement of Requirements -Subsection 3.8, Table 15, #1 Consolidation of all electronic transactions	Will there be any grouping for consolidating the payment e.g., ATM and POS are grouped together while Mobile and eCommerce payments are also grouped together. Or are we looking at all in one group?	The Target is Consolidation of all electronic transactions as detailed in Section 6 - Statement of Requirements, Subsection 3.8, Table 15, Line item #1.
62.	Section 6 - Statement of Requirements -Subsection 5.6.1 BNPS-STA002 Operational Efficiency and Resilience	Does this extend to national-wide disruptions, which will warrant business continuity systems to reside out of the borders of the country?	Both Primary and Secondary sites shall be within Uganda.
63.	Section 6 - Statement of Requirements	The tender document does not explicitly state whether the fibre-optic between the place where the performance infrastructure is located (Datacentre) and government institutions and the other participants of the BNPS is a necessary component of the BNPS. 1. What are the requirements for such connections? 2. Please provide further details on the specifications and standards that must be met.	Refer to 47 above.
64.	Section 6 - Statement of Requirements	Please provide detailed explanation of FMI, it's not clear from RFP vocabulary. What constitute FMI (Financial Market Infrastructures)? Kindly clarify.	Refer to the principles for Financial Market Infrastructure (FMI). This includes the KACH, RTGS.
65.	Section 6 - Statement of Requirements	Does BNPS require build operate and transfer? In other words, will vendor be required to operate implemented solution for certain time before handing over to BOU? If yes, we would like to know the Time Period?	No, the proposed solution should be off shelf.
66.	Section 6 - Statement of Requirements	Does BNPS require to build payment scheme or national switch only?	National switch only.

Sr No	Reference	Clarification Questions	Bank of Uganda response
67.	Section 6 - Statement of Requirements	Will Hosted processing for members that don't have their own CMS, merchant management be required, or all CMS/merchant management activities will be handled by external banks-members and processors? If yes, please provide the scope.	The switch should have an interface for Card Management Schemes (CMS).
68.	Section 6 - Statement of Requirements	Is Ecommerce gateway part of the scope?	The E-commerce gateway is part of the scope. Evidence of scalability of the solution to easily on-board new transaction types/use cases in a cost-effective manner should be demonstrated in your response to the RFP.
69.	Section 6 - Statement of Requirements	Will any other local/regional payment networks have direct interface with BNPS switch or Interswitch only?	Any other local payment network may have direct interface with the BNPS on condition it meets the eligibility criteria.
70.	Section 6 - Statement of Requirements	Is e-wallet management part of scope? Or only switching of external wallet transactions?	E-Wallets will be hosted by the participants, but the switch should provide for interoperability and should have the capability to support other future innovations.
71.	Subcontracting	<ol style="list-style-type: none"> 1. What documents BOU needs to be included in the Bid submission from subcontractors? 2. Does BOU need a side letter to mention the subcontractors and what information should be included? 	Refer to BoU's 1st Responses - #74.

Sr No	Reference	Clarification Questions	Bank of Uganda response
72.	Section 7 - SCC (GCC20.1) Completion period	The assignment is expected to be completed within 12 months from the commencement date. 1. What should be considered as final and proper completion of the services? 2. Should BNPS be integrated before the end of the completion with all banks and operators in Uganda? 3. Should BNPS be integrated with Uganda Revenue Authority (URA), Financial Intelligence Authority (FIA) and other Governmental bodies or only with BoU and RTGS?	1. Final and proper completion will entail among other things - duly signed satisfactory User Acceptance Test (UAT) Report and Go-live checklist. 2. The BNPS will be rolled-out in a phased manner with an initial onboarding of a number of participants as shall be decided upon between BoU and the winning bidder. 3. Refer to Section 6 - Statement of Requirements, Sub-section 3.8 (Findings from Use Cases) #3.
73.	Section 7 - SCC (GCC25.1) Advance payment Guarantee	What is the maximum period of validity of the Guarantee to be considered?	Refer to BoU's 1st Responses - #78.
74.	Section 7 - SCC (GCC31.1) Insurance to be taken out by the Provider	What is the maximum amount of loss and damages to be insured?	There is no maximum specified amount, and this will be finalised during contract signing. However, as stated in SCC (GCC31.1), the desired minimum policies to be submitted by the bidder are listed.
75.	Page Numbering	In the RFP document, after the page number 59, the next page number mentioned is 67. Would like to know any missing pages in the RFP or is it a Typo error? Kindly clarify.	Refer to BoU's 1st Responses - #86.
76.	Mutual NDAs	As we provide details of our Product / IP and best practices, would you be kind to sign our attached Mutual NDA. This is global standard terms we use for engagement.	Refer to BoU's 1st Responses - #83.

Response to #18 above

Figure 3: Process Flow (Mobile Money – P2P)

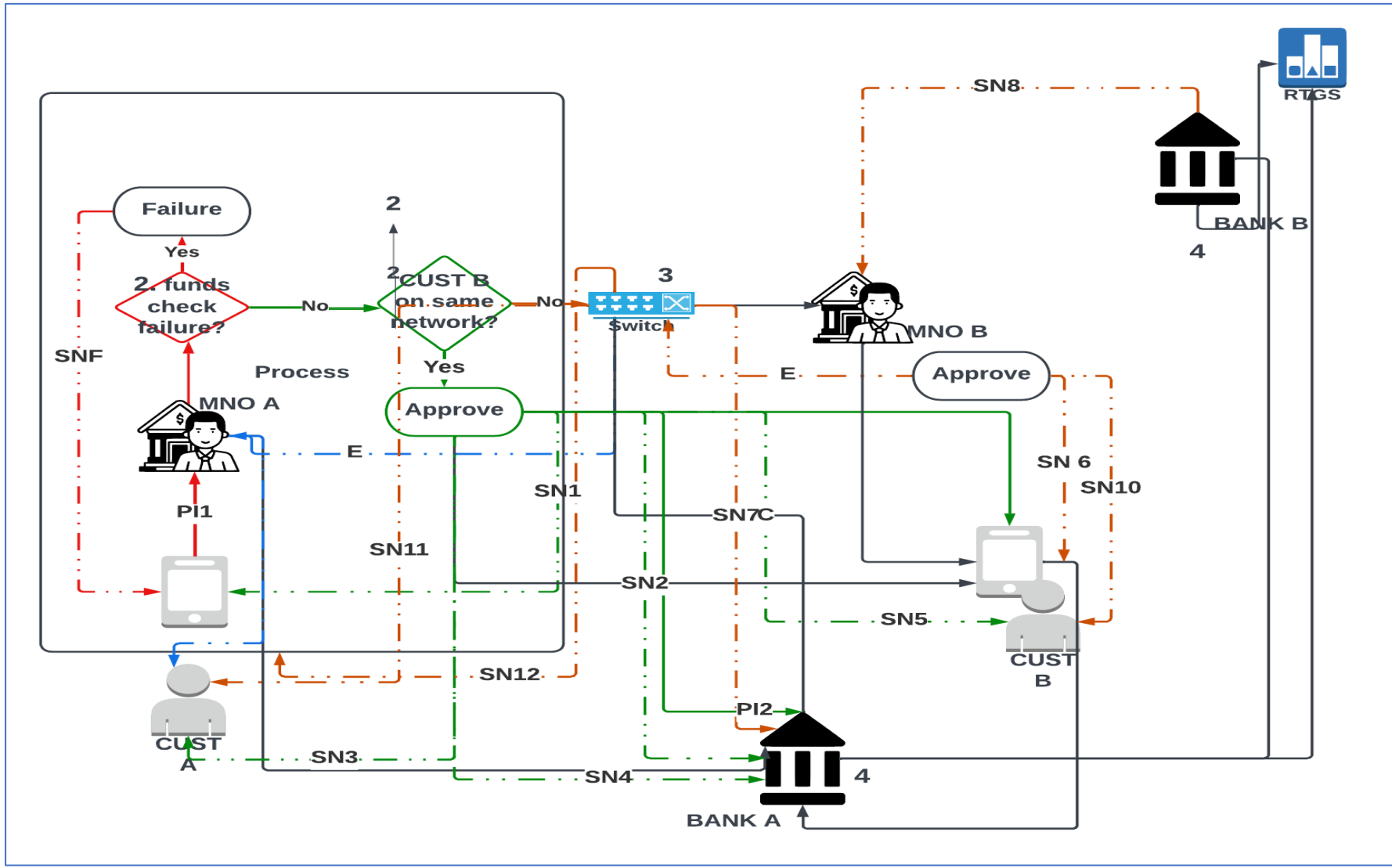


Table 3: Process Flow (Mobile Money – P2P)

Step	Description
1	Proprietary Payment Instruction (PI1) from customer device to MNO “Transfer UGX 50,000 to CUST_B”
2.	Processing MNO A: Funds are available. <ul style="list-style-type: none"> • MNOs_A confirms availability of funds on CUST_A mobile money balance. • MNO_A confirms CUST_B is in the same network. • MNO_A debits CUST_A mobile money account • MNO_A debits CUST_A mobile money account with charges and taxes.
2.1	Standardized notification SN1: “MNO_A has issued a PI of UGX 50,000 for the benefit of MNO_A/CUST_B”
2.2	Standardized notification SN2: “MNO_A has issued a PI of UGX 50,000 for the benefit of MNO_A/CUST_B”
2.3	Standardized payment instruction PI2: “On behalf of CUST_A, transfer UGX 50,000 to MNO_A_A/CUST_B”
2.4	Processing: <ul style="list-style-type: none"> • MNO_A debits “MNO_A cash balance mirror account” with UGX 50,000. • MNO credits BANK_A nominal cash account with UGX 50,000. • MNO debits BANK_A nominal cash account with charges and taxes.
2.5	Proprietary notification SN3: “CUST_B has been credited with UGX 50,000 from CUST_A/MNO_A”
2.6	Standardized notification SN4: “MNO_A has issued a PI of UGX 50,000 for the benefit of MNO_A/CUST_A”
2.7	Proprietary notification SN5: “CUST_B has been credited with UGX 50,000 from CUST_A/MNO_A.”
2.8	Batch Processing: RTGS batch settlement instruction: “Settle net movements of commercial bank balances”.
3	Processing MNO A: Funds are available and CUST_B is on a different network.

Step	Description
	<ul style="list-style-type: none"> • MNO_A confirms availability of funds on CUST_A mobile money balance. • MNO_A confirms CUST_B is on a different network. • MNO_A debits CUST_A mobile money account. • MNO_A debits CUST_A mobile money account with charges and taxes.
3.1	Standardized payment instruction PI3 (using BNPS application): "On behalf of CUST_A, transfer UGX 50,000 to MNO_B/CUST_B"
3.2	Processing: <ul style="list-style-type: none"> • MNO_B debits "MNO_B cash balance mirror account" with UGX 50,000. • MNO_B credits CUST_B mobile money balance with UGX 50,000. • MNO_B debits CUST_B mobile money balance with charges and taxes.
3.3	Proprietary notification SN6: "CUST_B has been credited with UGX 50,000 from CUST_A/MNO_A. New CUST_B mobile money account balance is <Updated balance>"
3.4	Standardized notification SN10: "MNO_A has issued a PI of UGX 50,000 for the benefit of MNO_B/CUST_B"
3.5	BNPS standard notification SN 11: "CUST_B has been credited with UGX 50,000 from CUST_A/MNO_A Back via transaction Chain"
3.6	Proprietary notification SN12: "CUST_B has been credited with UGX 50,000 from CUST_A/MNO_A. New CUST_A mobile money account balance is <Updated balance>"
4	Batch Processing: RTGS batch settlement instruction: "Settle net movements of commercial bank balances".

Response to #48 above

5.6.4 Hardware/Database/Network/Storage/Middleware/Sizing - BNPS-HRD004 Active-Active Design Architecture

