1. **Functional Requirement for Cheque truncation System**

| **Sr. No** | **Functional Minimum Requirement** | **Bidder’s Response** | **Bidder’s**  **Remark** | **Evaluation Result(Accept/Reject)** |
| --- | --- | --- | --- | --- |
| **Fintech International Ltd** |
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|  | Scope of the Solution to be deployed |  | A fully integrated CTS solution with all payments instruments i.e. Cheques, EFTs, Direct Debits, Bulk credits, RTGS | Accept |
|  | Supply, Installation and Commissioning of Cheque Truncation System (CTS) | Y | We agree to supply, install & commission a CTS System | Accept |
|  | General Mandatory Requirement of the CTS |  |  |  |
|  | The Cheque Truncation System (CTS) to be deployed at Head Office of the DBE shall have Clearing House Interface (CHI). | Y | Chequepoint system is web-based and will be deployed at HQ with clearing house interface. | Accept |
|  | The Clearing House Interface (CHI) shall provide connectivity between the Capture System of DBE branch and the Clearing House (CH) at the National Bank EATS. | Y | Chequepoint CTS allows for offline branches whereby data can be sent to designated branch, service branch or nodal branch. Interface will be provided to CH at NBE. | Accept |
|  | The CTS of the Clearing House Interface shall support to: |  |  |  |
|  | * Scan and archive both “on-us and off-us” cheques deposited by the customers at DBE branch; | Y | Chequepoint allows for scanning of both cheques before proceeding to next stage of the process. | Accept |
|  | * Provide a gateway for transmission of MICR data and electronic cheque images to Clearing House; | Y | Chequepoint does not provide the gateway since this is already provided by Montran as expected. Chequepoint generates files according to the Montran formats and places them in the configured location for the gateway to pick and submit, includes images. | Accept |
|  | * Perform the required validations to ensure that MICR data and cheque image capturing process from a participant capture system is free from operational errors; | Y | MICR data will be validated against the specifications provided and algorithm of generations among others | Accept |
|  | * Generate exchange files/ posting files from MICR data and electronic cheque images for “off-us cheques” at each session for outward transmission to Clearing House; | Y | Chequepoint adapts to the NBE requirements to generate all the necessary files including cheque images to be sent to CH. | Accept |
|  | * Sort “off-us cheques” MICR data and their related electronic cheque images into bundles as per Clearing House requirement and validate these bundles against the session window to which they will be attached at the Clearing House; | Y | This is available. Chequepoint will bundle cheques and since it operates in sessions, they automatically will be applied to the open session and closed with the session closure. | Accept |
|  | * authenticate and archive internally and transmit each “off-us” exchange file to Clearing House after digitally signed and encrypted as per Clearing House requirement; | Y | Chequepoint applies the digital signature and encryption as provided by the clearing house. | Accept |
|  | * settle internally all “on-us” cheques and archive accordingly; | Y | On-us Cheques have a different process and once approved, the CBS is updated and the cheque details stored accordingly. |  |
|  | * change posting file format and size, as and when required by the CH; | Y | We are flexible to the change the posting file format when required. | Accept |
|  | * reconcile outward cheques presented after end of session at the Clearing House, by accessing reports as stated on the EATS System Rule; and | Y | Reports will be accessed, read and reconciled with items on Chequepoint. | Accept |
|  | * Receive digitally signed inward financial data and image exchange files from the Clearing House. | Y | This is the core functionality of Chequepoint as concerns inward cheque. The cheque images will also be received within. | Accept |
|  | The Clearing House Interface/Capture System with function of the UV enabled cheque scanner shall have the capability to control “Anti Counterfeit and Anti Tampering” by analyzing features and character of cheques such as: | Y | This fully functional in Chequepoint as detailed below | Accept |
|  | * UV Ink printed Logo, account number, etc. identification for anti-counterfeit; | Y | Chequepoint is capable of utilizing UV scanners & present the captured UV image to the system user. | Accept |
|  | * UV Fibers identification for anti-counterfeit; | Y | The UV scanned image will contain the fibers. | Accept |
|  | * UV band/overlays for anti-tampering evidence inspection and observation of cheques vulnerable areas such as – date, pay name, amount in words and figure, signature, and MICR code line for possible fraud and alteration; | Y | These will be captured within the Chequepoint UV image. | Accept |
|  | * Barcode identification and verification; | Y | Barcode reading is included within the Chequepoint UV image. | Accept |
|  | * Other UV ink print related security features to be introduced in the future. | Y | The system can pick any feature introduced in future. | Accept |
|  | The Clearing House Interface/capture system shall support: | Y | Chequepoint is ready to support below. | Accept |
|  | * to generate gray scale, black and white and UV and combined UV and gray scale electronic images during scanning cheques; | Y | This feature is incorporated within Chequepoint and requires minimal changes. | Accept |
|  | * Visual Cheque Image Verification to authenticate the genuineness of cheques such as counterfeit, tampering or alteration by displaying the electronic cheque image on the operator computer screen; | Y | The image is presented after scanning for authentication, both front and back can be viewed. Plus the security feature. | Accept |
|  | * Automatic Recognition counterfeit, tampering or alteration of cheques at its application level processing; | Y | System automatically rejects folded, unclear and altered Cheques. | Accept |
|  | * Image Replacement Document (IRD) printing that is printing of image / cheque replacement documents when physical items are required; | Y | This is a core part of Chequepoint and the images can be printed. | Accept |
|  | * Image Quality Assurance (IQA) as formulated by Financial Service Technology Consortium (FSTC); | Y | Chequepoint system is able to perform IQA as per FSTC requirements. | Accept |
|  | * To provide/generate various reports and audit trial reports that could help control staff of participants to oversee the cheque truncation operations. | Y | Audit trail reports are available to indicate all features and actions accessed in the operation of the system plus the reports. | Accept |
|  | The proposed solution should be able to cater to Bank’s clearing system and should provide Straight through Processing for inward clearing to the Bank’s Host/ CBS. | Y | Straight through processing is available for EFTS and RGTS. | Accept |
|  | The proposed system should provide for Web-based ad-hoc query, Web-based APIs for batch queries and application specific integration, multiple participant access control, PKI integrated security, flexible database management, indexing, etc. | Y | The system has this feature where users can generate ad-hoc queries for certain data. Web-based API, can display batch queries in its functionality. This can be modified though to have APIs within web service if desired. On application specific integration Chequepoint can integrate with different core systems such as flecube, Delta, Temenos T4, Finnacle, Rubikon etc.  For multiple participant access control, the inbuilt role functionality controls different participant in terms of access and execution of their mandate.  PKI integrated security is inbuilt in the Chequepoint system.  For flexible database management the system utilizes robust RDBMS such as MSSQL, Oacle with multiple features allowing for indexing, mirroring etc. | Accept |
|  | The proposed solution should provide the capture system along with the consolidated application software to receive from the capture system i.e. to and from branch host to CHI, validate, build, and send clearing data (MICR data and Images) including returns. | Y | System provides this with captured system software instruments receiving transactions. The transaction data are all validated and sent to clearing. | Accept |
|  | The system should receive processes, validate, and reconcile clearing data (MICR data and Images) including returns. | Y | The system maintains records of captured instruments and transactions and these are used in reconciliation. The transaction data such as account, serial no, codeline are all validated and check-digit validation applied | Accept |
|  | It should provide interfaces to the capture, archive, Host and other System. | Y | This is catered for by Chequepoint CTS | Accept |
|  | It should control and monitor the outward and inward clearing (MICR data and Images) process by providing: | Y | This is provided by Chequepoint system. | Accept |
|  | User Interfaces to monitor and control of the clearing processes, administer the clearing processes such as participation management, payment type definition, calendar, clearing session definition, return codes, exclude a branch and unwind all transactions, etc. | Y | -The system does maintenance of bank users as well as banks involved in clearing and corresponding codes. Bank users will administer based on roles provide.  -Maintenance has been provided for this  -Calendar is maintained and holidays are provided for within it to consider during transactions processing.  -Session maintenance parameterization is done  -Return reasons are maintained and can be uploaded from a file as well based on the provision of the clearing house.  Excluding branch has to be customized. The system can be return transactions but reversal on the core system will be implemented. | Accept |
|  | * Security to all financial transactions and provides the security by integrating the PKI for privacy, authentication, data integrity, and non-repudiation using the digital signature. | Y | PKI and digital signature are implemented within Chequepoint CTS. | Accept |
|  | * The system should process, route and archive the images as per the requirements of the NBE guideline and standard, etc., apart from generation of reports, providing research facilities, statistics, billing, and the like. | Y | The system has a comprehensive set of reports and capable of capturing the images. Proper scanners can be configured to adhere to the image standards required. | Accept |
|  | The system should be user friendly, modular, flexible for future enhancements. | Y | Chequepoint is highly parameterized and different modules can be turned on or off. It is flexible for future enhancements. | Accept |
|  | The system should have storage and retrieval module which is robust, scalable, flexible, secured so that images and data are temper proof and reliable. | Y | The system can store huge volumes of data through the RDBMS employed such as MSSQL Enterprise Edition or Oracle. The database is optimized to allow for quick retrieval of images and data. The data itself will need to be hashed to ensure backend changes are detected and rejected. | Accept |
|  | The system should comply and provide for appropriate security so that images and data remain safe and retrievable till the duration stipulated by NBE. | Y | Security is available in terms of   1. Access to data via interface or database 2. Encryption of sensitive data 3. Hashing to ensure data integrity will need to be customized | Accept |
|  | The system should have “CD Delivery System” capability to cut and deliver drawee and/or presenting bank and/or branch wise image and MICR data files of cheques on a CD. | Y | Customizations to be done to be able to generate data files in a different folder for burning on CD. | Accept |
|  | One Month Support after implementation. | Y | This is acceptable as long as DBE agrees | Accept |
|  | The proposed system shall support Oracle database, preferably 12c version, and shall be installed/run on Linux operating system. | Y | The system supports Oracle Database | Accept |
|  | Outward Clearing Module |  |  |  |
|  | The system at the truncation point shall capture cheques image and the full MICR (Magnetic Ink Character Recognition) code line data both ON-US and OFF-US. | Y | This is in built in the Chequepoint, the system captures cheque images and full MICR code line data both ON-US and OFF-US. | Accept |
|  | The system shall read particulars available on the MICR Code line as specified by NBE and create data file for further processing. | Y | This is inbuilt into Chequepoint. The codeline specification will need to be included in the system though. | Accept |
|  | The system shall have the functionality of repairing MICR data fields through supervisor approval when failed to be red automatically by the scanner. | Y | This inbuilt into Chequepoint and is allowed an alert pop up when it fails. | Accept |
|  | The system shall have a provision for performing data entry of additional fields such as customer name, Reject, Repair, Balancing, etc. to be defined by the bank. The details of these shall be made available during implementation. | Y | The provisions are supported by the system modifications will be required in case of extra fields. | Accept |
|  | The system shall support maker-checker during image scanning and data capturing process as per bank requirement such as transaction amount, Repair, Reject, etc. | Y | This is already within the system. Maker-checker is fully supported. | Accept |
|  | The system shall support to prompt/signal to the maker & checker indicating that the image quality defects, is found needs verification of checker. | Y | The notifications are available and with the corresponding messages or defect alert. | Accept |
|  | The system shall support centralized digital signature to be applied automatically at the time of checking (approval). | Y | The digital signature is applied at the time of file generation. | Accept |
|  | The system shall provide the capabilities for branches/truncation point to track the status of the files/images sent to/ received from EATS through Head Office. | Y | Customization will be required to check on this on real-time basis. | Accept |
|  | The system shall support to assign/attach a unique key / identifier to identify and link the image of each instrument with its MICR line data as well as for any other cross reference which may be required for the entire clearing process using truncation as also any post-processing reconciliation. | Y | This is supported, the reference for each payment record and cheque images are applied within Chequepoint. | Accept |
|  | The system shall support transmitting captured images and MICR data from Branches/Point of Truncations to consolidation Server at Head Office via the Bank’s Network in user defined ways such as batches of instruments (images and data) or in real time i.e. instrument by instrument (images and data) or through CD/magnetic media. | Y | The system is web-based and all the data are immediately captured centrally even through the branch roles exist. | Accept |
|  | The system shall support to be digitally signed individual Images and the MICR Code Line data as well as their respective files using the Public Key Infrastructure. | Y | This is supported within the system, individual images, MICR codeline and files are signed using public Key Infrastructure. | Accept |
|  | The CTS to be installed at Head Office shall receive the images and the MICR data from the branches where cheques have been truncated for outward clearing. | Y | Available System is installed at head office and being web based all information captured from branches are received at HQ for outward clearing. | Accept |
|  | The CTS to be installed at Head Office shall have the provision to carry out clearing cycle-wise balancing; consolidation of all the images and MICR data received and make user defined batches to be forwarded to the EATS as required by NBE. | Y | User defined batches are provided for and cycle-wise balancing requirements will need to be assessed and confirmed for implementation or otherwise. | Accept |
|  | The CTS to be installed at Head Office that shall receive the files containing the MICR data and images from the various branches/Point of Truncations: | Y | Chequepoint receives the images from branches at head office. | Accept |
|  | * consistency checks that the data and the images only are received and that the complete MICR line for each image has been received and whether for each MICR line received there is a corresponding image; | Y | Chequepoint scans the Cheques and matches image details with the code line data and amounts. | Accept |
|  | * checks the correctness of each filed in the batch file are in line with NBE’s EATS requirement | Y | This is catered for in Chequepoint system | Accept |
|  | * produce exception report/s for excess /short images, excess / short MICR line data and forward them to the presenting branch in a message based interface | Y | Chequepoint produces exception reports and returns any error with image or codeline and presents them to the branch users. | Accept |
|  | * segregate the data and images into “ON-US (intra-bank) and OFF-US (inter-bank) | Y | Slight modification will be needed to categorize ON-US & OFF-US Cheques. | Accept |
|  | * perform consistency checks like images and data file match, image quality verification, availability of the entire MICR line for each image shall have to be done | Y | These are inbuilt within Chequepoint. The data file and image checks are done. Image quality verification as well to check the dpi, light intensity etc. | Accept |
|  | * Process/transmit the ON-US (intra-bank) MICR data and cheques images to the bank’s CBS without manual intervention | Y | Modification for categorization and auto posting will need to be done | Accept |
|  | * Process/transmit the OFF-US (inter-bank) cheques images and MICR data electronically to NBE’s Clearing House System (EATS) using the National Payment System Network. | Y | This feature is available within Chequepoint. Categorization to be included. | Accept |
|  | * write the OFF-US (inter-bank) cheques images and MICR data files on magnetic / electronic media to be send to NBE | Y | A modification will be done to have the system generate the images and data files in a folder ready for transfer to external magnetic and electronic media. | Accept |
|  | * The System shall have enquiry facilities which will enable tracking of the status of the cheques images and MICR data submitted by branches/truncation points in batches or real-time basis | Y | The feature is available and can track this information by batches and branches. | Accept |
|  | The System shall have a provision that the Image and Data forwarded to the Clearing House/NBE have fulfilled all the data format and content requirements of NBE. | Y | Customizations will need to be done to ensure all requirements are fulfilled. | Accept |
|  | The application should be able to show/give alert the number of cheques image and transactions to be exported to the core banking system and ACH –EATS | Y | This feature is inbuilt and parameterized in Chequepoint. | Accept |
|  | The application should be able to give the user the option to modify/delete the data or the captured image | Y | If image is distorted this can be deleted | Accept |
|  | The application shall validate whether the cheque amount is within the range of bulk cheque process limit as per NBE rules (parameter) and also identify the maximum length of each field that is supported. | Y |  | Reject- no response provided from bidder |
|  | The application should be able to validate the Payees account maintained in the core banking at real time. | Y | Available- Chequepoint system is able to validate the payees account maintained in CBS in real time | Accept |
|  | The application should be able to give alert on successful completion of transaction (the image and data capture). | Y | The system generates the alert pop ups for successfully completion of transaction. | Accept |
|  | The application should receive acknowledgement from EATS. | Y | This is inbuilt within the system. An acknowledgement is received. | Accept |
|  | The application should post on the core banking of customer statement takes place only when cheque is cleared (at exposure date) until then the application can use suspense accounts or other suggested mechanisms. | Y | Available, System posts on CBS only when cheque is cleared until then it uses suspense account. | Accept |
|  | The application should be able to receive rejection files from the ACH through EATS and make appropriate reversal. | Y | Available, System receives Information for accepted files and make reversals on rejected files from EATS | Accept |
|  | The application should be able to apply accounting entries for rejected files for accepted cheques per the ACH rule | Y | Available, System applies accounting entries for accepted/rejected as per the ACH rule. |  |
|  | The application shall provide alternate option to cancel cheques that could be returned by participant bank manually (without being rejected on EATS) and also able to pass the considered necessary accounting entries. | Y | Manual cancellation of cheque is available and this is done offline without being rejected by EATS. |  |
|  | The application should have a report/inquiry that shows daily outward check status sent to EATS; the accepted and rejected checks by participant bank, branch by booking date, value or Clearing date. | Y | Available but customizations will be required to capture all DBE requirements. | Accept |
|  | The application should able to provide all information related to a single cheque no. by accepting a single parameter (cheque no., amount, processing date, etc) from the user. | Y | This is available and Chequepoint system captures all. | Accept |
|  | The application shall have enquiry at branch level as well as at center that can enable tracking of the status of the batches submitted by branches. | Y | This in built and a standard requirement in the system. | Accept |
|  | The application should be able to inquiry list all of all processed cheques ; authorized, unauthorized, deleted by specific date and range of dates and make inquiry by amount of transaction and range of transactions ,cheque numbers ,bank and branch codes and other parameter to provide capabilities for branches to track status of the files sent to/received from EATS. | Y | Available, all listed inquires are readily accessed within chequepoint system when required. | Accept |
|  | Inward Clearing Module |  |  |  |
|  | On receipt of the images and data from Clearing House, the CTS system installed at the bank’s Head Office will verify the files/individual images and MICR data for digital signature under Public Key Infrastructure (PKI). | Y | The feature is inbuilt in Chequepoint. Digital signature will be applied. | Accept |
|  | The CTS system installed at the bank’s Head Office shall have the functionality to return cheques for any valid reason(s) specified by the NBE | Y | Return reasons are parameterized enabling returning of Cheques with attached reasons as specified by NBE | Accept |
|  | The system shall provide for the processing of unpaid cheques, the matching system for locating the returned images / data and the associated handling routines. The Vendor has to describe clearly the return process. | Y | Unpaid Cheques will be matched to the original data to enable further process of unpaying. | Accept |
|  | Whenever the presenting branch has handed over the physical cheque to the drawee bank, the system shall have a facility to mark that the physical cheque is no longer available with it from the date it has been handed over to the drawee bank along with some additional details. | C | Customization to accommodate additional details to be included. The change is however minimal | Reject |
|  | The system shall be capable for storing Return Reasons and corresponding codes and properly map during returning the cheque. | Y | The functionality is available in Chequepoint system and properly maps during return of cheque. | Accept |
|  | The System should be integrated with Core Banking System for the return processing process. | Y | Currently supported within the system. Integration is with the core banking system is a must | Accept |
|  | The CTS system installed at the bank’s Head Office shall verify the images and data shall upload and posted to the CBS database | Y | This is in built within the system and these validations are done pre-upload. | Accept |
|  | The system shall provide for storage of images and MICR data received from EATS at the Head Office. | Y | The robust database and system process allows storage of all images and MICR data at head office |  |
|  | The System shall have the facilities to view the front and reverse side of cheque images along with the MICR data of individual instruments using any standard browser interface for passing of cheques. | Y | System allows for viewing of front and reverse side of cheque images, it also allows major browsers such as Firefox, chrome, internet explorer, chromium, opera are supported. | Accept |
|  | The System shall have the facilities of various features for processing/viewing of images like reverse video, zoom, black and white views, cropping, flip, rotate, gray scale, UV image etc. | Y | Flip, black & white, UV, gray scale are supported but we shall have to modify to add the other options. | Accept |
|  | The System shall have the facility to the Drawee/payee bank Branches to: | Y | Available. | Accept |
|  | withhold cheques and ask for the physical instruments from the presenting banks | Y | This currently available. Cheques can be held for this purpose. | Accept |
|  | * mark and store these items separately and shall allow them to be retrieved later and processed individually for finality | Y | The marking option is done and only when lifted will the process continue in consideration of session and corresponding value dates. | Accept |
|  | * Indicate that the physical instrument in such cases has been retained. | Y | The indication will be shown as status. | Accept |
|  | * The proposed system shall support Application Programming Interface (API) to third party signature verification systems for automating the process of signature verification. | Y | The system is ready to integrate with third party API. | Accept |
|  | The proposed system shall support that the Signature Verification application to provide facilities to authorized user/authorizer to visualize the signature from core banking server/ signature database server while verifying manually the signatures from the images of the cheques with the signatures stored in the data server/ core banking server. This should happen on the same screen i.e. image of instrument and specimen signature one above the other with various option to view i.e. upside down, zooming etc. | Y | This is available in the system and visualized on same screen as indicated. | Accept |
|  | The System shall reformat (if necessary) the posting data to the specific needs of the CBS. | Y | We will comply with the CBS data expectation for posting. | Accept |
|  | The system should provide user defined functionality for fraud detection/alerts for large value debits. | Y | Large value debits can be defined and items greater than these will be notified. Frequency will also be considered. | Accept |
|  | The application should have the facilities to view the front and reverse of cheque images along with the MICR data of individual instruments using any standard browser interface for passing of cheques. | Y | Available ChequePoint system allows for viewing of front and reverse side of cheque images, it also allows major browsers such as firefox, chrome, internet explorer, chromium, opera are supported. | Accept |
|  | The application should retain /show files in the center for any validation error, e.g. for missed branch codes and the user at CPC should able to take further action. | Y | This is in-built in the ChequePoint system. | Accept |
|  | The application should send validation request to the core banking system to validate the cheque number, account restrictions and consequently the authorized users can take appropriate action (pay /reject). | Y | This is supported within the system and these validations are done pre-upload, authorized users can pay/reject. | Accept |
|  | The application shall provide facilities to authorized user/authorizer to visualize the signature verification. This should happen on the same screen i.e. image of instrument and specimen signature one above the other with various option to view i.e. upside down, zooming etc. | Y | This is available in the system and visualization happens on same screen with various options to view. | Accept |
|  | The application should post to the core banking system for accepted payments transactions. | Y | Available within the system. Chequepoint automatically posts to CBS for accepted transactions. | Accept |
|  | The application should send rejection file to the ACH-EATS for rejected transactions. | Y | This is inbuilt within ChequePoint system. | Accept |
|  | The application should have a report /inquiry facilitate that shows incoming cheques by bank, branch, cheque number, business date, clearing date, transaction status, transaction reference, specific date, range of date and other on demand selection fields. | Y | Inbuilt and available in the ChequePoint system. | Accept |
|  | Identification of Image and Data |  |  |  |
|  | The system should have provision of unique ID/number to track the front and back images of an instrument with the corresponding MICR Data of that Instrument and the linkages such as Before handing over to Head Office, after submitting to NBE’s EATS, after archival and storage, for unpaid return instrument processing, etc. | Y | This is available the reference no/ID is available & can be used to track the images and MICR data at any processing stage. | Accept |
|  | The system shall have user defined format of Endorsement/Identification Number (ID) to be generated by the system such as inter alia, the time, date, cheque no, sort code of the presenting branch, etc. | Y | This available, Chequepoint system has the required user formats | Accept |
|  | The system shall have the facilities of printing / at least one line endorsement identifier/s on the reverse side of the cheque and the printing thereon shall be large enough to enable reading and identification on the browser, apart from other user friendly features at the stage of image capture itself. | Y | This is a standard system requirement and is in built in the system. | Accept |
|  | The system shall be capable of endorsing the cheque if presented again by the branch at different places i.e. if endorsement is done at one place then second endorsement shall at another place. | Y | System currently supports this requirement. | Accept |
|  | **Sorting and Batching of MICR Data** |  |  |  |
|  | The system shall have the facilities to Sort the MICR Data on various parameters or a combination of parameters e.g. sorting of the MICR Data of all the instruments above a threshold amount and / or sorting of MICR Data of instruments of a particular presenting bank branch on a given clearing cycle, date and between specified amount ranges etc. | Y | The system provides various sorting criteria including amount, clearing cycle, date etc. | Accept |
|  | The system shall have facilities of merging/ batching of MICR Data received from various branches for generation of a consolidated transmission to NBE’s EATS. | Y | Chequepoint system supports this functionality | Accept |
|  | The system should support Data and image formats of the files to be sent to the presenting and drawee bank branches shall be in conformity with the exact structure and format set by NBE. | Y | System conforms to data image formats as per NBE requirements. | Accept |
|  | **Reconciliation** |  |  |  |
|  | The system shall provide reconciliation and reporting tools: | Y | Chequepoint system provides this(inbuilt) | Accept |
|  | with various combinations such as for images alone, MICR Data alone, images and / or MICR Data in a juxtaposed/ compared form etc. | Y | The reports provided incorporate the MICR data and images separately and together(juxtaposed) | Accept |
|  | * Which will be parameter driven | Y | Parameters are available as a drop down | Accept |
|  | * Facilitates dynamic generation of queries and reports as part of the system. | Y | The system includes a query builder to enable query generation & reports. | Accept |
|  | * The system shall provide a facility for the users to reformat the data and import into other applications. | Y | Whereas the system can generate files, the import format of other applications will need to be specified and customized. | Accept |
|  | The system shall provide online reconciliation and research tools between the branches and Head Office point of truncation. | Y | The system incorporates this and branches as well as head office users can view transactions. | Accept |
|  | The system shall have tools to track whether the single and / or multiple and / or groups and / or file(s) of (entire) Images and MICR Data which have been dispatched from branches / truncation point have been received by Head Office and vice versa. | Y | The system being centralized, will have all data received within the system. | Accept |
|  | Security |  |  |  |
|  | The system shall have the Public Key Infrastructure (PKI) to secure the data and image transmission especially between the Capture System (Bank Branches/Truncation points) to the Head Office. | Y | The PKI is available for secure transmission of data. | Accept |
|  | The system shall provide explicitly for digital signature based data transfer under the PKI especially between the Capture System (Bank Branches/Truncation points) the head office. | Y | The system is centralized and therefore data from branches will be instantly captured in the system via PKI infrastructure. | Accept |
|  | The system shall provide for encryption both for data and image transfer and data and image storage to ensure that data transmitted/stored cannot be subjected to alteration at a later point of time and legally recognized as per the laws of the country. | Y | 3DES encryption will be applied for both storage and transmission. Hashing will be included to ensure unauthorized data change is detectable. |  |
|  | The system shall have minimum features like user authentication, storing images in encrypted form etc. | Y | User authentication, image encryption are all available in the ChequePoint system. | Accept |
|  | The system shall have a facility that Images will be encrypted before storing on disk using digital signatures so that misuse/alteration of images will not be possible at OS level. | Y | This requirement is available and is a standard system requirement in ChequePoint system. | Accept |
|  | The system shall have an application level security features to be used while storage of images and data and during transmission. | Y | At application level hashing will be applied and encryption in 3DES algorithm | Accept |
|  | The System shall be fully integrated with the Public Key Infrastructure (PKI) using the Digital Certificates. | Y | SSL will be applied from reputable CAs such as Symantec. | Accept |
|  | The system must apply rigorous controls to ensure the security of Images, MICR data transactions, files and associated messages in transit. These shall at least include ☹ Proof of endpoints)   1. unique sequence numbering; 2. encryption 3. authentication and double authentication; 4. integrity; 5. immediate delivery acknowledgement and notification 6. automatic reconciliation of acknowledgements; 7. duplicate detection; 8. digital signature based non-repudiation of both source and origin; and 9. Complete, secure audit trail. 10. It is anticipated that the system shall have two discrete security domains, as follows : | Y | 1. Sequence number we use DRN 2. For sensitive data only however for any external files are always encrypted. 3. Access to the system requires authentication via user name and password. All processes require maker checker or dual controls 4. We use modern RDBMS that manages data and ensures control over stored data 5. All file rigorous controls to ensure all listed has changes with Montran are based on acknowledgement and notification for both success and failures. 6. Immediately the system receives responses successes enables finalization while failures trigger reversal and cancelations. 7. System does not allow duplication of MICR line. 8. Chequepoint allows digital signing for files although Montran currently has configured that to be done by the gateway. 9. All activities are audited and reports availed to relevant people. 10. System allows profiling to enable that. | Accept |
|  | The system will have Presenting Branch security domain that will send/receive Outward/Inward Clearing Images, MICR data transactions, files and associated messages, receive acknowledgements and enquiries from the Head Office and will receive acknowledgements, enquiry responses; will send/receive Outward and, Inward Return Clearing Images, MICR data transactions, files and associated messages, and rejected MICR data transactions and files related messages, reports. | Y | This are all available in the ChequePoint system, acknowledgements, reports, enquiries rejected MICR data are all received. | Accept |
|  | * 1. The system will have the Head Office System domain, which receives Images, MICR data transactions, files and associated messages from Branches/point of truncations, processes them for generating the settlements, safe stores it for archival and retrieval and forwards them to NBE’s EATS. (Please note that NBE has established secured connection between Bank’s Head Office and EATS) | Y | The system has Head office domain and is able to perform this where functions are segregated at different levels either head office or at the branch or at corporate client in case of Remote Deposit Capture | Accept |
|  | * 1. Key Usage and Management: | Y |  |  |
|  | For performance considerations, confidentiality will be implemented through use of symmetric cryptography. | C | Customizations to be done to accommodate symmetric cryptography. | Reject |
|  | * Integrity digests may be calculated using a one-way function (e.g. MD5, SHA-1) or Message Authentication Codes (MACs) may be calculated using a recognized methodology such as cipher block chaining. | C | Customizations will be required to include MD5/SHA-1. | Reject |
|  | * For greater assurance, non-repudiation of both source and destination shall be implemented using recognized asymmetric cryptographic methods such as digital signature. | Y | This is available and we shall need to apply based on digital signature key requirements of the clearing house | Accept |
|  | * Symmetric keys used for message encryption shall only be used in one direction (i.e. there will be “send” and “receive” key for each link). | C | This is available but will still be modified in the system to ensure it is one direction. | Reject |
|  | * All cryptographic operations shall be performed in tamper resistant hardware, sited in secure premises. | C | HSM may be employed for this, customizations will be required to conform to this requirement. | Reject |
|  | * All cryptographic keys shall be encrypted under the appropriate variant of the domain master key (which will ensure sound key separation and minimize the potential for procedural attacks), when stored outside the tamper resistant module. | Y | This will be customized as per DBE’s requirements. | Accept |
|  | * The Vendor’s response shall propose, in detail, a key management scheme supported by user procedures, which shall maximize the automation of key management without compromising its security. | Y | This will be fully supported/communicated during implementation. | Accept |
|  | * Asymmetric keys used for key management shall have a length of not less than 1024 bits. | Y | For RSA the bits are 1024 or higher. | Accept |
|  | * Vendor’s response shall describe the security architecture (including algorithms used) and describe the results of any independent security audits the system has been subject to. | Y | This will be provided for when requested as it is confidential information. Security of the system is described in the system modules | Accept |
|  | * All symmetric key operations shall use “Triple DES” or equally secure technology. | Y | 3-DES is preferred | Accept |
|  | * The system shall make provision for the introduction of new algorithms and key structures, post implementation. Vendor’s response shall propose how this facility will be implemented. | Y | The system can accommodate this with some changes to be done as per DBE’s requirements | Accept |
|  | The system should have Audit Trail that must capture sufficient information to allow the Head Office and Branch authorized users to identify and track events in the system, including but not limited to: | Y | Chequepoint system Audit trail captures sufficient information as indicated but not limited to the shared list. | Accept |
|  | Branch associated with each transaction and each step in a transaction; | Y | This is in place in the system | Accept |
|  | * Identification of repairs and the repairer; | Y | This is in built in the system | Accept |
|  | * Time of all significant process steps; | Y | In place in the system and captured on access and completion of step | Accept |
|  | * Time and details of all user access; etc. | Y | Timestamps are attached on all audit trails. | Accept |
|  | * The audit trail and its contents must not be capable of being compromised or destroyed. Vendor’s response shall: | Y | Hashing algorithm applied to the data to ensure the data is not compromised. Encryption is also applied to hide the data. | Accept |
|  | * explain the event logging/safe-storing process and the event log retention and archiving facilities; | Y | These are available in the Audit trail. | Accept |
|  | 1. describe the end-to-end system auditing capabilities as Images, MICR data transactions, files and other messages are processed through the various components of the system and interfaces; and | Y | Refer to Chapter on Chequepoint modules point 13. Comprehensive security module | Accept |
|  | 1. Describe the information retained in audit logs. | Y | Every activity performed by the users logged in saved and deleted are available. | Accept |
|  | 1. The system shall provide Detection of Error and Fraud tools to allow speedy access to audit trail information. | Y | Customizations will be required on detection error. Audit trail information can be speedily and readily accessed. | Accept |
|  | The system shall provide tools for detection of fraudulent instruments. | Y | This are provided in Chequepoint system. | Accept |
|  | The system shall provide controls to minimize the potential for fraud and error which would include amongst other things: | Y | The controls are provided | Accept |
|  | Input data validation; |  | Data will be validated against the core banking system data as well as parameters on the system. | Accept |
|  | * 1. User authentication; | Y | User authentication will be based on id & password | Accept |
| * 1. Restricted user intervention, i.e. limited to low risk fields or processes; | Y | Roles created for users will limit user intervention. | Accept |
| * 1. Connection time limitation; | Y | Session time limits are available to govern | Accept |
|  | * 1. User access restricted by transaction types, amount limits and functions; | Y | User access is restricted in all these areas. | Accept |
| * 1. Privileges granted on a case-by-case basis; | Y | This is provided for in ChequePoint system. | Accept |
| * 1. Controlled access to functions, e.g. via menus; | Y | Provided within the system administration | Accept |
| * 1. Automated repair facilities; | Y | Repair facility provided in the ChequePoint system. | Accept |
| * 1. Error handling mechanisms; | Y | Error handling is provided on application and process levels with mitigation measures applied. | Accept |
| * 1. Automatic cut-offs | Y | Once the sessions expire then the system applies the cut-off automatically to apply subsequent transactions to next session. | Accept |
| * 1. The system shall provide for systems balancing and controls between interfaces to detect duplicate or missing messages or batches or Images, MICR data transactions, files and other messages. | Y | These are inbuilt within the system for all transactions including returns. | Accept |
|  | Vendor’s response shall specify in detail the proposed access control regime, including administration, operational and audit operations | Y | Inbuilt and available in the system and is available on security/maker checker | Accept |
|  | The system must provide mechanisms to prevent fraud or error arising in the course of implementing changes to the system. These mechanisms would be expected to include segregation of duties, acceptance testing and computerized processes for introducing and authorizing new applications or changes. | Y | This is provided for in Chequepoint system including segregation of duties, computerized authorizing of new applications | Accept |
|  | Vendor’s response shall describe how the system protects the confidentiality of customer information and what data protection and database access controls are included in the system. | Y | -Encryption of sensitive data  -Hashing to ensure data integrity will need to be customized. | Accept |
|  | The system shall enforce segregation of duties  Such as: | Y |  | Reject |
|  | segregation between data entry/repair and verification/authorization; and | Y | Inbuilt and available in the system | Accept |
|  | 1. between data entry/repair, first verification/authorization and second verification / authorization / release; the level of authorization shall be determined by the bank based on value or other factors | Y | This is inbuilt and available in the ChequePoint system | Accept |
| 1. The system shall allow for the allocation of value limits for each and every user and shall allow for individual user daily value limits that, when exceeded, trigger exception processing (e.g. requiring du al authorization/supervisor approval for each transaction exceeding the daily limit). | Y | Inbuilt and available in the Chequepoint system | Accept |
| 7.23 | The system shall have Access Control mechanism such as: | Y | This is a standard system requirement this is inbuilt in the system | Accept |
| 7.24 | secure, auditable management of user-ids, access rights, passwords and others; | Y | Available in the system | Accept |
|  | 1. Passwords to be a minimum of eight characters and to have a parameter driven lifespan after which users will be required to change their passwords. There will be a parameter driven inactivity delay after which users will be logged off. 2. the ability to setup user groups of users with access to the same functionality and to limit the functionality of users to just those functions that they have a need to perform; | Y | 1. Password complexity is included which beyond 8 character will require a digit inclusion. The parameter for lifespan is available 2. Inbuilt and available in the system, user groups can be set with the functions indicated. | Accept |
| 1. ensure separation of functions where required (e.g. a user entering a payment to the system would not also be able to authorize that payment for release to the Clearing House); | Y | Inbuilt and available in the system, separation functions can be done as per DBE’s requirements. | Accept |
| 1. detection and reporting of illegal attempts to access the system or functions within the system; | Y | The detection will be based on no of incorrect attempts. Attempted function access without legitimate session is rejected | Accept |
| 1. the maintenance of a secure, auditable log of access to the system, identifying user-id, date, time, functions accessed, operations performed; and | Y | Secure & auditable log of system access is inbuilt and available in the system | Accept |
| 1. Encryption of passwords. | Y | Inbuilt and available in the system. 3-DES is applied. | Accept |
| 1. The system shall protect the individual images and MICR data from tampering and/or replacement through its life cycle. | Y | Hashing will be applied to protect the data and images. | Accept |
| 7.25 | Images will be encrypted before storing on disk using digital signatures so that misuse/alteration of images will not be possible at OS level. | C | This is available images are encrypted suing digital signatures but are stored in the database, customizations can be done for them to be stored in disks | Reject |
| **8** | **Storage and Archival** |  |  |  |
| 8.1 | The system shall provide for storage and archival of Images and MICR data at the Head Office or at any other centralized location as decided by the Bank. | Y | Inbuilt and available in the system. The folder /storage media will be specified in the system | Accept |
| 8.2 | The system shall provide facilities of storing Image and MICR data for online access for a period specified by the bank.  The detailed mode of storage and retrieval of data / image shall be indicated in the responses of the bidders. | Y | Inbuilt and available in the system within the database both current and in the archives | Accept |
| 8.3 | * The system shall archive Image and MICR Data from the live system following the period specified by the parameter to a storage medium capable of being stored and offline accessed for the period specified by the bank. | Y | System archives Image and MICR data from live system as specified by parameters and can be stored offline. | Accept |
| 8.4 | The system shall provide facilities to Branches for retrieving together single and / or multiple and / or group(s) and or file(s) of Image(s) and MICR Data presented to or from them in an efficient and least time consuming manner with a high degree of accuracy. | Y | The system allows for retrieval based on dates, batches etc for both MICR & Image data. | Accept |
| 8.5 | The system shall have the facilities and necessary interfaces for data to be transferred to an external Data Warehouse. | Y | The system allows for replication to remote site/data warehouse where the data can be sent in durations or almost real-time | Accept |
| 8.6 | The Image and MICR Data Archive shall have the facility to store for 10 years and / or any other period as may be required under the law. The period of retention will be set by the Bank as a system parameter. The archive shall be tamper-proof and once archived, it shall remain unalterable. | Y | Inbuilt and available in the chequepoint system as long as necessary disc space is available | Accept |
| **9** | **Interfaces** |  |  |  |
| 9.1 | The system shall conform to the interface standards prescribed by National Bank of Ethiopia for Montran EATS. | Y | We will comply to the standards | Accept |
| 9.2 | The system shall provide facilities for MICR data and Image transmission to NBE Clearing House and other functions such as enquiries, reporting as well as security, resilience and recovery requirements etc. | Y | Inbuilt and available in the system. For NBE security requirements, we will comply. | Accept |
| 9.3 | The proposed system should provide interfaces with Bank’s CBS for both inward and outward clearings, electronic fund transfers, and bulk payments and file transfers. | Y | This is available in the system, it shall interface with banks CBS for both inward and outward clearing, EFT & Bulk payments file transfers. | Accept |
| **10.** | **Branch Access/Participation** |  |  |  |
| 1  10.1 | The system shall be open to all Bank branches within the clearing zone set by the NBE for access. The system shall be configurable to set clearing time which may be changed from time to time by the NBE. | Y | Inbuilt and available in the system. The same is parameterized as per NBE requirements | Accept |
| 10.2 | The system must have the capability to define and add new branches. | Y | Adding and defining branches is available and easy as system is web based | Accept |
| 10.3 | The system shall support the following participation/access structure: | Y |  | Accept |
|  | Branches shall initiate transactions of their own as a member, | Y | This is a standard in ChequePoint system, branches initiate transactions on their own. | Accept |
| 1. Branches may initiate transactions for other branches as a fall back arrangement. | Y | Inbuilt and available in the system, this arrange can be done on ChequePoint system. | Accept |
| 1. Branches may initiate transactions for other Banks as Service Bureaus. | C | Customization will be needed for this requirement | Reject |
| 1. The system shall support Participant Suspension and Reinstatement at Head Office level | Y | The system supports participation and reinstatement at head office level | Accept |
| 10.4 | The system shall support Branch Suspension to occur at any time within the operating day. | Y | This is available in the system, branch suspension can occur at any time | Accept |
| 10.5 | The system shall issue/send Advice of Suspension immediately by broadcast message to all branches by the Head Office. | Y | Inbuilt and available in the system. Advice is sent by head of suspension. | Accept |
| 10.6 | The system shall have Participant Administration Functions to be accessed by Head Office as listed below: | Y | Inbuilt and available in the system | Accept |
| 10.7 | Assign Authorized system administrators or users at Head Office and Participant Branches | Y | Available system complies with this requirement. | Accept |
|  | 1. Admitting new Participant branches | Y | Inbuilt and available in the system | Accept |
| 1. Participant branch Profiles Details such as names, identification codes, account numbers, etc. will be recorded at Participant establishment and updated at need. | Y | Inbuilt and available in the system, the participant branch will profiles the listed details and update is done at need. | Accept |
| 1. Assign Participant branches system functions that will be able to use. | Y | Inbuilt and available in the system, this will be configured as per DBE’s requirements. | Accept |
| 1. Suspend Participant branch from ability to transact within a Clearing House operating day and/or Session. | Y | Inbuilt and available in the Chequepoint system. | Accept |
| 1. Revoke Participant branches system functions access. | Y | Available, system administrator at head office can revoke | Accept |
| 1. Reinstate Participant’s ability to transact following a suspension. | Y | This is available, reinstatement of ability to transfer is effected by system administrator | Accept |
| 1. Cancel / Removes Participant branches from the system and cancels any Queued transactions. | C | The system can remove participant branches from the system but the cancelation of the queued transactions will need to be included (Customized). | Reject |
| 1. Broadcast Message issued by the Bank at its discretion advising of changes to a Participant’s status. | Y | Inbuilt and available in the system. Broadcasts can be done from the administrative side of the application. | Accept |
| 1. The system must track the elapsed period since input of Inward, Outward, Outward and Inward Return Clearing for a clearing cycle. | Y | Inbuilt the system can track elapsed period for a clearing cycle. | Accept |
| 10.8 | The system shall support to define Operating Calendar such as holidays, working days, working hours, clearing cycles, etc. at Head Office level. | Y | Inbuilt and available in the system. The calendar management is within the administrative function | Accept |
| 10.9 | The system shall have a facility for the Head Office to use a Broadcast Message to announce scheduled system holidays applicable to the Centre. | Y | This available the head office uses broadcast message for scheduled system holidays | Accept |
| 10.10 | The system shall have an enquiry facility for branches to enable branches to check the system calendar and access information on all holidays. | Y | The branch authorized users are able to access the information on holidays. | Accept |
| 10.11 | The system shall have a facility/parameter at Head Office level to extend the Operating/working Hours/Sessions for any given day under exceptional circumstances as approved by the NBE | Y | The facility is available extension of working hours/sessions for can be done. | Accept |
| **11.** | **Message Format & Validation Requirements** |  |  |  |
| 11.1 | The system shall support the message format specified by the NBE. | Y | The system already has supported the NBE format and will now include the changes offered by NBE. | Accept |
| 11.2 | The Head Office and Participant Branches shall perform various validations of incoming Image, MICR Data Transaction and other related messages such as: | Y | Fully compliant | Accept |
| 11.3 | 1. validate message and file content, format and counterparties; 2. validate Images against the given parameters; 3. validate MICR data against the given parameters such as valid MICR code line, etc.,   validate message and file format, addressing, image formats and its contents, messages formats and its contents, etc. | Y | All messages will be validated against content in CBS. Images will be validated based on specifications expected & maintained, MICR code line against length and various component data, addressing in message against expected etc.  All file formats are validated in the system. | Accept |
| 11.4 | 1. The system shall a validation processing that include, amongst other things: | Y | We shall confirm to the below requirements | Accept |
| 11.5 | sequence checking, i.e. to ensure against message and or file / data / records / image loss or duplication; | Y | This will be done against expected sequences | Accept |
| 11.5 | 1. message and/or file authentication, double authentication, integrity checking and non-repudiation checking; | Y | Digital signatures and hashing applied will be used to check for integrity and non-repudiation…double authentication will not be allowed. | Accept |
| 1. checking to ensure data types appropriate to defined fields; | Y | System checks that data types are as per defined fields | Accept |
| 1. checking dates for correctness (against system calendars); and | Y | System automatically checks this | Accept |
| 1. the direction of transactions to different system processes | Y | Transactions are directed to different processes this is set up during installation of the system. | Accept |
| 1. The system shall provide the ability to set a minimum and/or maximum value for Clearing House transactions as a system parameter. Transactions below this value and/or above this value would fail validation testing and shall be returned to source with a reason for failure of the validation. | Y | The value will be under system maintenance parameters and will check for values above set limit for return to source. | Accept |
| 11.6 | The system shall provide for online validations of the fields comprising the MICR read band with provision for balancing and item correction. | Y | Inbuilt and is provided for in ChequePoint system | Accept |
| 11.7 | The Inward Clearing Module shall provide for online validations of the fields comprising the MICR read band. | Y | The module provides for online validation of the mentioned fields in the system. | Accept |
| **12.** | **System Administration and Enquiry Requirements** |  |  |  |
| 12.1 | The system shall support MICR Data and Images Files Outward and Inward queues Enquiries for Head Office and Branches. | Y | Inbuilt and available in the system. Enquiries can based on various filters such as batch, ids, branch etc. | Accept |
| 12.2 | The system shall support System Administration tasks to know the status of Participant Branches such as: | Y | The system fully supports the participants branches as detailed below. | Accept |
| 12.3 | Monitor the status of Participants and take action as required to resolve problems or initiate fallback arrangements. The system must provide facilities to support these tasks. | Y | Inbuilt and available in the system. The system enables returning of the transactions to maker or verifier for review and amendment or alternative action. | Accept |
|  | 1. Issue system messages to Participant branches to inform them of problems/operational actions and issues. | Y | Inbuilt and available in the system. The system has a correspondence module for notification of participants | Accept |
| 1. The system shall allow Participant branches to enquire on the status of their Settlement of individual MICR Data and Images held in the Clearing House /NBE’s EATS at any time during the day for the current Settlement day as well as any previous Settlement days. | Y | In-built system allows for participant branches to make these inquiries | Accept |
| 12.4 | The system shall support the monitoring of Participant performance against targets for settlement completion within intraday deadlines, e.g. Participants could be required under system rules to complete a specified percentage of their payments by a specified time within the day. | Y | Inbuilt and available in the system, ChequePoint system supports monitoring of participant performance against targets for settlement | Accept |
| 12.5 | The system shall support Participant Branches to be able to enquire on-line on the system’s daily operating schedule. | Y | Inbuilt and available in the system. The authorized users are able to view the schedule. | Accept |
| 12.6 | The system shall support Participant Branches to be able to enquire on system parameters governing their participation in the system, e.g. access to system functions, etc. | Y | Inbuilt and available in the system. The authorized users are able to view the parameters | Accept |
| **13.** | **Reports** |  |  |  |
| 13.1 | The system shall provide facilities to allow reports to be easily specified and produced by the Head Office and/or the participant branches User. Some of the expected requirements are the following: | Y | Fintech shall conform to this requirement. | Accept |
| 13.2 | The system shall provide reconciliation and reporting tools with various combinations such as for images alone, MICR Data alone, images and / or MICR Data in a juxtaposed form etc. | Y | This are catered for and provided in ChequePoint system. | Accept |
| 13.3 | 1. The tools provided will be parameter driven. | Y | This is available in the system the tools provided are parameter driven | Accept |
| 1. Facility for the users to reformat the data and import into other applications. | Y | Available users can reformat data and import into other applications | Accept |
| 1. The Report generation toll shall be able to archive and Retrieve Reports on the various flexible parameters. | Y | Inbuilt and available in the system | Accept |
| 1. Reports shall be produced in TEXT and/or PDF format. | Y | Available reports can be produced in PDF format and Excel | Accept |
| 1. Reports will draw on Images and Data | Y | This is inbuilt and available in the Chequepoint system | Accept |
| 1. Current day’s data and Images | Y | This are readily available and are accessed at the end of the day | Accept |
| 1. Images and data retained as available for on-line enquiry; | Y | Available in the system, this are retained | Accept |
| 1. Archived Images and data. | Y | This can be accessed in the archive when required. | Accept |
| 1. Exception reporting is a necessity wherever required. | Y | Exception reporting is available when required. | Accept |
| 1. Reports must be available in both electronic form and hardcopy. | Y | The reports are available in electronic form PDF, Excel and can be printed out in hardcopy | Accept |
| 1. Periodic Statements for Participants must also be available in both electronic softcopy and hardcopy form. | Y | Periodic statements are available in electronic, PDF/Excel and can be printed in hardcopy. | Accept |
| 1. Facilitate dynamic generation of queries and reports as part of the system. | Y | This will be parameterized as per DBE’s requirements. | Accept |
| 1. The system must provide reports that assist in the early detection and management oversight of potential fraud or error, including but not limited to reports showing: | Y | The system has a comprehensive audit trail that can further generate predictive reports on the potential fraud trends. Refr to the description below. | Accept |
| 1. Very high value payments (high value threshold to be parameterized); | C | This may need to be customized based on parameters | Reject |
| * Unsuccessful login attempts; * Undelivered Images, MICR data transactions, files and other messages; | Y | Un successful login attempts reports are available on Audit trail  System caters for this and a report is available | Accept |
| * Duplicate Images, MICR data transactions, files and other messages; | Y | Duplicates are rejected in the system. | Accept |
| * Application privilege change and access. | Y | This report is generated by the system | Accept |
| * The system shall support to generate report required by the NBE and allow online access by the NBE. | Y | Such reports can be customized and generated for compliance |  |
| **14.** | **Image Processing** |  |  |  |
| 14.1 | The system shall necessarily support to capture both front and reverse images of individual cheques. | Y | Chequepoint system supports capture of both front and reverse images | Accept |
| 14.2 | The system shall be capable of capturing at branches both black and white as well as Grey Scale. | Y | System allows for capturing at branches for both black/white and Gray scale images. | Accept |
| 14.3 | The System shall provide facilities to scan cheque images in the following way:  Minimum DPI Format Comp.  Front Grey Scale 100 DPI JPG JPEG  Front Black & White 200 DPI TIFF CITT G4  Reverse Black & White 200 DPI TIFF CCITT G4  UV Image Grey Scale 100 DPI JPG JPEG | Y | The parameters will have to be set on the scanner to capture images based on the given values. | Accept |
| **15.** | **Image Quality , Usability Management and Standards** |  |  |  |
| 15.1 | The system shall support Image Quality Assurance at the scanning stage so that the images meet processing quality standards in accordance with ANSI X9.37. | Y | The parameters will have to be set on the scanner to capture images based on the given values. | Accept |
| 15.2 | The system shall perform Image Quality Analysis (IQA) validations as formulated by Financial Service Technology Consortium (FSTC) at the capture system or CHI to ensure that the image provided by capture system/CHI contain the correct specification and fall within the threshold standards set by the NBE. | Y | This is available. IQA will however be performed after scanning of image and appropriate action taken thereafter. | Accept |
| 15.3 | The system shall support an IQA indicator tag/flag indicating the outcome of the IQA test carried out on each electronic cheque image by the capture system/CHI. | Y | The system will show the list of specifications and outcome of the test with pass or fail flag. | Accept |
| 15.4 | The system shall support to parameterize the threshold values for different IQA parameters which shall be communicated to banks by the Clearing House/NBE from time to time. | Y | This is already in the maintenance parameters | Accept |
| 15.5 | The System shall check, detect and flag image quality defects for all image renditions such as Grey Scale on the front and black and white on the front and reverse of the cheques. | Y | This is inbuilt and available in the system, for any quality defects on the image the system will alert user | Accept |
| 15.6 | The conditions and definitions shall be definable and based on parameters. Some these parameters may be Partial Image, excessive Image Skew, Piggy Backed Image, Image Too Light or To Dark, Image Contains Streaks and/or Bands, Below Minimum Image Size, Exceeds Maximum Image Size, etc., | Y | This conditions are definable on Chequepoint system and based on parameters | Accept |
| 1. 7 | The Images which do not pass these Image Quality requirements shall be left for judgment for the operator in consultation with Supervisor.  The vendor shall give details on the facilities provided for the above in the System both at the HO/Service Branch System and Presenting Branch System. | Y | This is inbuilt and available in the system, operator and supervisor have the final say | Accept |
| 15.8 | The System shall be capable of protecting images and MICR data from tampering and /or replacement throughout its life cycle. | Y | This is well catered for in the system | Accept |
| 15.9 | The System shall reject tampered images and MICR data at various entry points. | Y | Chequepoint system rejects tampered or defective images/MICR data at various points. | Accept |
| 15.10 | The system shall support the data formats and field definitions for storing, archiving, retrieving, processing, quality of images and MICR data at the Head Office (Clearing House Interfaces) as well as exchanging between institutions shall meet at the minimum: | Y | System supports the below formats listed. | Accept |
| 15.11 | ANSI X9.90 and ANSI DSTU X9.90 Specifications for an Image Replacement Document (IRD), | C | We will customize to ensure compliance with the stated standards | Reject |
|  | 1. ANSI X9.37 and ANSI DSTU X9.37 Specifications for Electronic Exchange of Cheque and Image Data; | C | We will customize to ensure compliance with the stated standards | Reject |
| 1. ANSI X9.81 Specifications for Bulk Image and Data Exchange. Further, the System offered shall adopt the above standards for the Ethiopian Banking environment. | C | We will customize to ensure compliance with the stated standards | Reject |
| 1. The system shall have utilities to verify different fields like valid MICR code, MICR quality, image size, image quality, image usability, image dimension etc. in real time. | Y | This verification utilities for different fields are available and inbuilt within the system | Accept |
| 15.12 | 1. The system shall provide facilities to print the images of single, multiple, group, files of instruments from the archive of the Central Image or from the Head Office in the format specified in the Standard DSTU X9.90– 2003 Specifications for an Image Replacement Document – IRD, | Y | This available and inbuilt in the system but will only require customization in complianceto the standard (DSTU X9.90-2003) | Accept |
| 15.13 | The system shall keep track of image prints taken, whenever made, in the form of an audit trail / log. The point where such an image is retrieved shall also have the facility to certify that the image represents the document or that payment has been effected and this has been noted by affixing the appropriate system generated stamp. | Y | This feature is available in the system, generated stamp modification will be required otherwise the feature is present | Accept |
| **16.** | **Operational Requirements** |  |  |  |
| 16.1 | The system shall support Start-of-day, Cut-offs, End-of-Day and Multiple Clearing Sessions that must be synchronized the NBE’s clearing sessions;  The Vendor’s response must describe how the operating times of the various system components will be harmonized and controlled. | Y | Chequepoint system fully supports this as per NBE standards.  Operating times are harmonised/ parameterized into the system during implementation following NBE standard and banks requirements. | Accept |
| 16.2 | The End-of-day, for Multiple Clearing Sessions and report printing tasks must be completed in shortest possible time. | Y | This is available and inbuilt within the system. The system is designed and optimized to allow for speedy EOD processing. | Accept |
| 16.3 | The System shall provide a high level of resilience/fault tolerance at Hardware, System Software and Application Level at the HO/Service Branch and Presenting Branch Sites resulting in high availability. | Y | Fault tolerance is heightened by effective error handling for both logical and hardware related errors. Being a centralized system, the intrinsic error handling covers both branches and head office | Accept |
| 16.4 | The system shall have a facility to maximize the automation of backup, archiving and retrieval processes.  The bidder shall propose a methodology for the backup, archiving and retrieval of MICR and Image data | Y | Backup, retrieval and archiving is automated on database level with robust RDBMS in use. | Accept |
| 16.5 | The system must have auditable mechanisms for reporting failures in the various components of the system, e.g. communications, host Application Modules, end user devices, End-user Application Modules, database, etc.   * The bidder shall describe the mechanisms for reporting failures in the various system components and the Help Desk facilities for resolving of the problem of the users. | Y | Failures are reported within log files and event viewer for the various components.  Help desk has a portal for logging in system issues, which are given a ticket and closed once resolved. There is also a helpdesk email address being monitored 24/7 | Accept |
| 16.6 | The system shall have fully automated control facilities – for initializing the systems, start-of-day, end-of-day, start-of-Clearing Session, end-of-Clearing Session, housekeeping/report printing, closedown, etc.   * The bidder shall describe how the system is operationally managed and what manual and automated processes are required. | Y | This control facility is fully automated**.** | Accept |
| 16.7 | * The bidder shall specify the Operating Systems, Systems Software such as Data Base Management Systems, Transaction Processing Monitoring Systems, Messaging Middleware, Security System Software including PKI, Access Control Software, Utilities, Archival and Retrieval Software, Back-up and Restore Software, any firmware, etc., | Y | We will readily advise the bank on Operating systems to purchase for ease in integrations. The software’s an hardware’s are listed in the operating system chapter in the technical proposal. | Accept |
| 16.8 | Where a business function is set by a parameter, the parameter must be able to be set by the appropriate business user. The timing of parameter changes (i.e. immediate or overnight) must be suited to the function being parameterized.  The bidder shall describe when, how and by whom parameters are set within the system. | Y | These parameters are set by appropriate users with the user rights to set the same and are suited to the function.  Parameters are set by user or users given the rights by the bank in the system. | Accept |
| 16.9 | The system shall have a facility that allow the Bank’s Head Office System Administrator to send free-format messages to individual, all, or selected groups of Presenting Branches. | Y | This is available and inbuilt within the system. The correspondence module allows for such messages where the administrator can type any message to be sent. | Accept |
| 16.10 | Message, including free format and defined format messages, will be:   * cut-off warnings, * changes in operating hours, * Changes in Clearing Sessions,   notice of Participant suspension, etc. | Y | Customizations will be needed to parameterize defined format messages. Free format is available.  k |  |
| 16.11 | The bidder shall clearly describe the protocols, messages formats, syntax, functionality, type of data, etc., and the corresponding International Standards used for the MICR and Images data files and messages for exchanging from/to the Presenting Branch to/from Head Office, etc. | Y | The system is centralized and doesn’t require formats and protocols between branches. Http with TCP/IP will be used for the web information transmission. Data once captured through the interface will be stored immediately in the database. | Accept |
| **17.** | **Processing High Value payments (Outgoing and incoming )** |  | This is supported by the System but capping on limits will be done as specified by DBE |  |
| 17.1 | The application should have different menus to process high value payment instructions and high value cheque/CPO payments. | Y | This will be customized to include different menus. | Accept |
| 17.2 | The application should able to scan the cheque image and register paid cheque/CPO no. for high value cheque payments. | Y | Available. System is able to perform this function as indicated. | Accept |
| 17.3 | The application should process high value payment instruction(MT103) and post it to the core banking system | Y | Available, System processes the high value instructions and posts to core banking system. | Accept |
| 17.4 | The application should be able to validate debit account no., account balance and account restrictions at real time. | Y | Supported, the System validates these in real time | Accept |
| 17.5 | The application should validate the beneficiary banking details like bank and branch code ,and other details | Y | Available, this is inbuilt in the system | Accept |
| 17.6 | The application should set preauthorization at the center at amounts above certain value to manage liquidity.  Note: - amount limit will be sets as per the bank rule/procedure. | Y | Customisations will be required for amounts above certain value. | Accept |
| 17.7 | The application should be able to generate MT 103 outward RTGS payment message as per swift message standard (Annex R). | Y | This is available and inbuilt within the system. | Accept |
| 17.8 | The application should send the MT103 instruction to EATS –ACH through compatible file format and filed validation | Y | Available, this is a standard System feature. | Accept |
| 17.9 | The application should receive positive acknowledgment message for accepted files and negative acknowledgment message for rejected files from the EATS and instantly post the transaction to core banking. | Y | Available, the System notifies of accepted & rejected files from EATS and posts to CBS. | Accept |
| 17.10 | The application should be able to post reversal entries for MT103 transfers that rejected by the users at the center, queued and rejected by the EATS at the end-of-day. | Y | Available, this is inbuilt within the system application can post listed reversal entries. | Accept |
| 17.11 | The application should able to generate automatic liquidity request or other means to monitor queued transactions and availability of balance at Net Settlement account for liquidity management. | Y | Customisations will be required for this functionality. | Accept |
| 17.12 | The application should have the rejection reason for rejected transaction should be stated in understandable format (should be decoded). | Y | Available, System shows reject reason in Word. | Accept |
| 17.13 | The application should have report/inquiry facility that shows the status of MT103 transactions in EATS Per Branch, Bank, processing date, and other parameters. | C | Customisations will be required to bring this up to DBE requirements. | Reject |
| 17.14 | The application should be able to receive high value payment instructions from EATS | Y | Available, System allows for receipt of High value payment instructions from EATS. | Accept |
| 17.15 | The application should be able to validate the account number of the payee and make the necessary posting to the core banking system with single approval at CPC on batch level or any other mechanism (for controlling purpose). | Y | Available, this is a standard System functionality | Accept |
| 17.16 | The application should have restriction on NRNT , FCY, no post Credit, blocked and other related accounts, if any as per the bank procedure | Y | Customisations will be required to b’ring this up to DBE requirements. | Accept |
| 17.17 | The system should be made Sequence (FIFO) of message and non-duplication of control. | Y | Available, This is standard System feature in ChequePoint. | Accept |
| 17.18 | The application should queue the incoming high value of transaction at the center if the information are incorrect /for proper action/ | Y | This is inbuilt within the system and it queues the incoming high value transactions. |  |
| 17.19 | The application should allow users to make amendment on the payees account number /if required /. | Y | System allows for amendment on recaptured cheques not account numbers. | Accept |
| 17.20 | The application should raise MT 202 message for any rejected /returned MT103 transaction to ordering bank through EATS | Y | Available, System automatically raises the message to ordering Bank | Accept |
| 17.21 | The application should have report /inquiry option that shows the inward high value payment (RTGS) by status credited to customers, rejected (returned to the drawer), and credited (account ,branch ,date …) | Y | Available, this is in built within the System. | Accept |
| **18.** | **Bank to Bank Transfers (Outgoing and Inward )** |  |  |  |
| 18.1 | The application should able to accept Bank to Bank transfers (MT202) post it to the core banking system. | Y | Available, this is a standard System feature. | Accept |
| 18.2 | The application should validate details of bank information and mandatory fields of payment messages should be verified according to swift message standard. | Y | Available, Chequepoint system validates and verifies the listed items according to swift message standard. | Accept |
| 18.3 | The application should send the MT202 instruction to EATS –ACH through compatible file format and filed validation | Y | Available, The System complies to this as we are already processing for other 8 banks in Ethiopia | Accept |
| 18.4 | The application should receive positive acknowledgment message for accepted files. | Y | Available, Positive acknowledgement from accepted files is received. | Accept |
| 18.5 | The application should receive negative acknowledgment message for rejected files from the EATS and instantly make the necessary reversal entry and send to core banking system. | Y | Available, .System receives negative message from EATS and makes reversal. | Accept |
| 18.6 | The application should set preauthorization at the center for amounts above certain value (depending on bank procedure) to manage liquidity. | Y | This will be customised as per DBE requirements | Accept |
| 18.7 | The application should be able to post reversal entries for MT202 transfers that rejected by the users at the center or not accepted by the EATS (i.e. for liquidity purpose) | Y | Available, this system is able to post these entries. | Accept |
| 18.8 | The application should have report/inquiry facility that shows the status of MT202 transactions in EATS.(Per Branch and By Bank) | Y | Available, The report inquiry shows the status of MT202 transactions in EATS by bank and per branch. | Accept |
| 18.9 | The application should validate debit account no. and account restrictions at real time | Y | Available, this are validated in real time. | Accept |
| 18.10 | The application should be able to accept Incoming Bank to Bank transfers from EATS. | Y | Available, this a standard System feature | Accept |
| 18.11 | The application should be able to validate the Bank code, and make the necessary queue for authorization at CPC. | Y | Available, this is inbuilt in the system, system validates the same and queues for authorization. | Accept |
| 18.12 | The application should be interfaced to core banking system and allow users to make amendment /adopt on the credited account number /if required /. | Y | Available, This is a standard system feature, the system is interfaced to CBS and users can make amendments. | Accept |
| 18.13 | The application should able to un-pay the incoming RTGS by using MT202. | Y | This is inbuilt, system is able to unpay this using MT202 | Accept |
| 18.14 | The application should be able to adopt incoming RTGS transactions at the head office. | Y | This is available and is a standard system functionality | Accept |
| 18.15 | The application should have report /inquiry option that shows Bank to Bank Transfers by status authorized, rejected (returned to the drawer), and credited account with specific date, range of date and other on demand selection criteria. | Y | Available, This is inbuilt in the System and performs all the listed report inquiries | Accept |
| **19.** | **Bulk Payments Outward credit transfers** |  |  |  |
|  | The application should able to initiate bulk credit payments. | Y | Available, System this is a standard feature the System is able to initiate bulk credit payments. | Accept |
|  | It should able to validate debit customer account and balance. | Y | Available, System is able to validate debit Customer account and balance. | Accept |
|  | It should made validation of payment message fields and avail alert message like invalid bank BIC address, invalid amount, etc. | Y | Available, this is inbuilt in the system. Validations payments messages and alerts are for this are captured as indicated in system. | Accept |
|  | It should able to receive debit confirmation message for accepted files and negative acknowledgement for rejected files form EATS and post the necessary accounting entry to the core banking system. | Y | Available This function is inbuilt within the system | Accept |
|  | The application shall able to make credit transfer cancellation. |  | The CTS application has this feature | Accept |
|  | The application shall be able to receive direct credit transfer. |  | Available but might require minimal customization | Accept |
| **20.** | **Outward Direct Debit transfers** |  |  |  |
|  | The application should able to input Direct Debit items, batch files and send to EATS. | Y | Available, System can perform all Direct Debits functions and send to EATS | Accept |
|  | The application should able to validate credit customer account. | Y | Available, This is in built and System automatically validates Customer accounts | Accept |
|  | The application should able to receive Credit confirmation message for accepted files and negative acknowledgement for rejected files form EATS and able to post the necessary accounting entries to the core banking system. | Y | Available, System receives Information for accepted flies and negative rejected files from EATS | Accept |
|  | The application shall be able to process direct debit rejection. |  | The CTS system fully supports this. | Accept |
|  | The application shall be able to receive direct debit transfer. |  | This is available and a standard system feature | Accept |
| **21.** | **Inward SEPA Credit transfers** |  |  |  |
| 21.1 | It should able to generate transactions based on incoming file and Credit customer account | Y | Available, this is inbuilt within the system, transactions are based on incoming file & credit customer account. | Accept |
| 21.2 | The application should generate a report showing the date, account, amount, order banking and other details of the incoming files. |  | Available, this is inbuilt within the system, the report accommodates all listed items. | Accept |
| 21.3 | The application should able to produce transaction summery details using different parameters. | Y | Available, ChequePoint System can produce transaction summary details using different parameters. | Accept |
| **22.** | **Other functionalities** |  |  |  |
| 22.1 | The application should be able to receive MT900 (confirmation of debit on DBE’s Payment and Settlement account is debited at NBE) | Y | Available, system is able to receive MT900 as indicated. | Accept |
| 22.2 | The application should able to generate transaction based on the incoming file and the authorized user able to amend debit account no., add debit remittance information and authorize the transaction. |  | Available, this is a standard feature in Chequepoint system | Accept |
| 22.3 | The application should be able to receive MT910, (confirmation of credit on DBE’s Payment and Settlement account is credited at NBE), The application should able to generate transaction based on the incoming file and the authorized user able to amend Credit account no., add credit remittance information and authorize the transaction. | Y | System is compliant to the requirement | Accept |
| 22.4 | The application should be able to receive and send MT999 messages (free format messages are used to send non-financial messages to other banks) per NBE standard  -The application should validate the participant bank BIC address.  -it should provide maker-checker arrangement | Y | The system is able to perform this functions and can be parameterized further as per DBE’s requirements  \*V . | Accept |
| 22.5 | The application should be able to send MT920(Balance request for EATS) and receive MT941(Balance confirmation from EATS)  -The application should support the inquiry of balance confirmation request of any date | Y | This is inbuilt in the system. Chequepoint system is able to perform the listed functions. | Accept |
| 22.6 | The application should be able to receive  MT 950 from EATS (the statement of each account maintained in NBE-EATS) | Y | Chequepoint System is compliant to the requirement | Accept |
| 22.7 | The application should be able Scan on –us cheques , Store the image ,post the transaction on the core banking system and avail the image on the customer statement | Y | Available, this is a standard System functionality | Accept |
| 22.8 | The application should allow corporate customers to scan cheques and send the image and the transaction to the bank clearing and payment. | Y | Available, our RDC remote deposit capture module does this function. |  |
| 22.9 | The application shall incorporate bank charges i.e., service charge, commission(if any) | Y | Available this is inbuilt and will be parameterized as per DBE’s needs | Accept |
| 22.10 | The application should have a reconciliation module that can reconcile all the transaction passed through it and make available the reconciled transactions as well the expectations reports (with an option of report and reconciliation period parameter i.e. daily, weekly, monthly) and facility for the users to reformat the data and import into other applications. | Y | This is available, the System does reconciliations and avails reports. It does all the reports that are been stated. | Accept |
| 22.11 | The application should allow corporate customers to scan cheques, validate the image and initiate transaction from their site. | Y | This is available by Remote Deposit Capture module on Cheque Point system. | Accept |
| **23.** | **General Enquiries and Reports Requirement** |  |  |  |
| 23.1 | The application should be able pull at least the following reports and inquiries from NBE EATS ;   1. The states of payment and settlement account with the National Bank of Ethiopia ; 2. The transactions on payment and settlement account in particular the EATS Applications ; 3. The pending queue with individual instructions; 4. Bulk Net Settlement instructions or other Net settlement Instruction still to be processed; 5. Intraday credit position with the National bank(if any); 6. Ad hoc or on request reports not required as officially delivered versions printed from the screen at any time. | Y | Available, ChequePoint CTS System is able to perform all listed functions from a to f. | Accept |
| 23.2 | The application should be able to pull and retrieve the following inquires and reports with regard to MT103 and MT202   * Outward Remittance MT202,MT103 Status Enquiry – Today and per specified day * Outward MT202,MT103 Unauthorized Enquiry - Per Branch * Outward MT202 ,MT103Authorized Enquiry - Per Branch * List of Authorized MT202 ,MT103 outward Remit * List of Authorized MT202 – EATS Status * List of Authorized MT202 – EATS Status Wise * List of all uploaded transactions per specified day. | Y | Available,  The System is able to pull and retrieve all these inquiry reports with regard to MT103 and MT202. | Accept |
| 23.4 | The application should be able to pull and retrieve at least the following inquires and reports in connection with MT 900 and MT910   * List of authorized MT900/910 * List of unauthorized MT900/910 | Y | The System can pull and retrieve the inquiries and reports indicated | Accept |
| 23.5 | The application should allow users to export reports and inquiries to various file form ATS including Excel and PDF file. | Y | Available, reports & inquiries are exported in both Excel and PDF | Accept |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.N | Non-functional requirement | Bidder’s Response | Bidder’s Remark | Evaluation Result(Accept/Reject |
| **Fintech International Ltd** | **Fintech International Ltd** |
| 1 | The supplier should be able to provide technical training on administration of the new system and customization on it and end to end functional training to Bank’s employee.  The following training sessions are expected to be conducted by the supplier;   * Users from the center and district offices 20 employees * Users Branch offices 20 employees   -IT(Technical) staff 7 employees | Y | We shall provide training as requested by DBE | Accept |
|  | The supplier should be able to include at least the following contents in training:   * Detailed customization issues (if any) * Report design and customization * The security facilities of the system * Integrating and interfacing aspects of the system * Operating system on which the system runs * Database management system on the system |  | The training will be in 2 parts i.e. end user and administrator training. Training manuals and release notes will be provided. Our training aims at empowering the bank’s resources to fully operate and support the application with minimal reference to the vendor | Accept |
|  | The training proposal of supplier of should include ; (please include on the technical proposal) | Y | Refer to chapter on Approach Methodology and Work plan | Accept |

1. **Non functional Requirements of Cheque Truncation System**

**Training**

**Other Miscellaneous Requirements**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S/No | Non Functional Requirement | Bidder’s Response | Bidder’s Remark | **Evaluation Result(Accept/Reject)** |
| Fintech International Ltd | Fintech International Ltd |
| 1. | The Application should be able to flexible for Report & Inquiry designing functionality without the help of Programmer | Y | The system has standard reports and a provision to create own reports. |  |
| 2. | The supplier should have enough experience on MONTRAN and TEMENOS Core Banking Application interface on Automated Clearing House. | Y | Chequepoint fully integrates with Montran ACH and we have implemented the same in Ethiopia, Malawi, Kenya, Uganda and Tanzania. Chequepoint has also been interfaced with TEMENOS in several banks in the region. | Accept |
| 3. | The application should be able to compatible the current Bank’s Platform i.e. Operation system IBM AIX, Database Oracle | Y | Chequepoint is agnostic to operating systems and Databases therefore it can run in any on the mentioned platforms | Accept |
| 4. | The application architecture should support centralized and decentralized and scalable, reliable, available and manageable without affecting business | Y | Both centralised and decentralised options and a combination of the 2. It allows for offline branches. Its scalable readily available and manageable. | Accept |
| 5. | The application should maintain transaction log, log audit trial, transaction audit trail of update or modified table or field | Y | The system has a comprehensive audit trail which tracks all activities including database logs. | Accept |
| 6. | The application should be use best image compression algorism to store cheque image to maintain image quality as per NBE requirement and optimal server space | Y | This is in a standard system feature to ensure optimal storage usage. | Accept |
| 7. | The application should be able to have a data migration tool i.e. migration of previous ATS transaction from T24 to its | Y | System is compliant and has data migration tool since it maintains separate database | Accept |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S/No | Non Functional Requirement | Bidder’s Response | Bidder’s Remark | Evaluation Result(Accept/Reject) |
| Fintech International Ltd | Fintech International Ltd |
|  | own database |  | from the core banking system |  |
| 8. | The application should be able to support different scanner brands. | Y | Chequepoint is agnostic to scanners as long as they meet the minimum NBE requirements. The tested scanners include LS-40, LS- 150, Panini, Smart source, digital check Tellerscan etc. | Accept |
| 9. | The application should support both real time and schedule communication/' interface with T24. | Y | The application supports real time communication with T24 or CBS but it is designed for scheduled communication with both the CBS and ACH (Montran) | Accept |
| 10. | The application should be able to handle transactions while offline from T24 | Y | System can handle offline transactions. | Accept |
| 11. | The application should be able to handle (implement) different Bank’s business rule and user friendly to amend or insert the new business rule i.e. handling corporate customer or high value payments differently | Y | The system is highly parameterized and specific workflows to DBE can be customized.  There are other value add features for corporate customers like Remote Deposit capture and image statements  System is able to handle high value payments. | Accept |
| 12. | The application should be able to maintain exception handling i.e. file corruption, poor connectivity etc. | Y | This is a standard system feature. | Accept |
| 13. | The application should have administrative menu for technical support staff without accessing the Database which is suitable for first level support | Y | This will be parametrised as per DBE’s requirements | Accept |
| 14. | The application should have a flexible nature to add new parameter (to add new business rule ) | Y | The system is flexible and new parameters can easily be added. | Accept |
| 15. | The application should be able to scalable for future enhancement | Y | System is open for current and future enhancements | Accept |
| 16. | The new application should be able to customize and go to live environment with | Y | Standard customizations are done within the maximum | Accept |

Non-Functional Criteria for Cheque Scanner

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| --- | --- | --- |
| Particulars | Bidder’s  Reponses | **Evaluation Result(accept/Reject)** |
| Fintech International Ltd |
| How long have you been working as office Equipment supplier as per your current license? (specify in year) Please attach supporting document. (For Local & Foreign Bidders) | 14 Years | Accept |
| Is office Equipment your main business line? (yes/No) (Please attached supporting document). (For Local, Foreign Bidders & Agent) | **NO.** we also supply and implement financial solutions | Accept |
| Do you have renewed License to supply the requested item?  (Yes/No) Please attach current License (For Local, Foreign Bidders & Agent) | Yes, Attached | Accept |
| Do you have manufacturer Authorization letter issued by the manufacturer? (Yes/No) Please attach your supportive letter (For Local & Foreign Bidders) | **Yes,** Attached | Accept |
| Do you agree to maintain items you proposed and always handle spare parts at your stock as per the manufacturer recommendation for the items you proposed? ( Yes/No) (for Local Bidders & Agent) | **Yes** Etcon Ltd will maintain the scanners through its fully fledged support center in Addis Ababa | Accept |
| Availability of Maintenance Workshop (Yes/No) Please specify address. (For Local Bidders & Agent) | **Yes**  ETCON PVT LTD Nega City Mall Building - 7th Floor,  P.O. Box 3790  Tel: +251 11 557 0705  Addis Ababa - Ethiopia | Accept |
| Number of full time Technicians (Please attach CVs with relevant Credentials and evidence verifying that they are paying income tax for the last six consecutive months at your company). (For Local Bidders & Agent) | Attached - Refer to annexures | Accept |
|  |  |
| As a local partner in Ethiopia, do you have direct relationship/partnership with the manufacturer for the office equipment you proposed? Please attach relevant credentials and evidential documentor local bidders) | YES | Accept |
| Do you provide Technical Support Service for the office Equipment you propose? Attach supporting document (yes/No). (For Local Bidders) | YES | Accept |
| Did you supply the items you propose in this bid documents to any other origination in Ethiopia? Please specify the quantity and attach supporting documents. (For Local & Foreign Bidders) | **YES**  **Addis International 5 Dashen Bank SC 10 Oromia International Bank 20** | Accept |
| Total |  |  |

| **Sr. No** | **Component** | **Minimum Technical Requirement for Scanner** | **Bidder’s Response** | **Evaluation Result(Accept/Reject)** |
| --- | --- | --- | --- | --- |
| **Fintech International Ltd** |
| 1 | UV Image | * UV Image enabled Cheque scanner | YES: Fully compliant   * With UV imaging available on Front CIS UV camera as factory standard | Accept |
| 2 | UV & IQA imaging Speed (dpm) | * 50 documents per minute or higher with UV imaging and IQA engine analysis running. | YES: Fully compliant   * With approximately 80 Documents Per minute with UV imaging and IQA engine activated. This speed is based on the 6” check | Accept |
| 3 | MICR Recognition | * E13B and CMC7 auto detect MICR reader; * Optical Character Recognition to enhance MICR Read (OCR-A, OCR-B); * Barcode software decoding; | YES: Fully compliant  Standard   * Standard E13B /CMC7 auto detect MICR reader; * Standard Optical Character Recognition to enhance MICR Read (OCR-A, OCR-B, * Standard Barcode software decoding * ID Card Scanning | Accept |
| 4 | Cheque Scanner type | * Table Top (suitable for Remote, Teller or Back office Capture)-most occupy small space with small foot print. | YES: Fully compliant  Small size and weight   * Table top, fits small work space * Dimensions:175 mm/ 6.9 in (H);230 mm/9.0 in (L);140 mm/5.5 in (W) * Weight : 3.5 kg /7.7 lb maximum * Build out of steel casing. * Very hardy and sturdy * Suitable for Remote, Teller and Back office Capture | Accept |
| 4 | Exit Pockets | * A single exit pocket capable of holding up to 30 or more documents. * Support Pocket Full sensor | YES: Fully compliant   * A single exit pocket capable of holding 100+ documents * Support Exit Pocket Full sensor | Accept |
| 5 | Image scan mode Supported | * Supports both 16 and 256 levels of gray at 100dpi, 200dpi, 240dpi, 300dpi image resolution for front and rear Image | YES: Fully compliant  Image capture modes   1. Resolution: 100,200 or 300 dpi ,selectable for front and rear images 2. Gray scale levels,16 or 256 | Accept |
| 6 | Document Feeder | * 100 document manual/automatic input feeder, with double feed sensors | YES: Fully compliant   * 100 document manual input feeder, with double feed sensors | Accept |
| 7 | ID Scan | * Straight path for Scanning of ID cards, Credit cards, Business cards, or other media of up to 0.030 inches (0.0762mm) thick for additional customer identification purposes etc. | YES: Fully compliant  It has a side scanning pocket for ID, Business cards, credit cards etc | Accept |
| 8 | Image capture | * Resolution: 100, 200 or 300 dpi, selectable * Gray scale levels, 16 or 256 * Ultra Violet Imaging that detect the presence of UV ink logo, UV characters i.e. cheque serial number, UV fibers, etc. on the cheques * Grayscale Image to Black & White Image conversion | YES: Fully compliant   * Resolution: 100, 200 or 300 dpi, selectable * Gray scale levels, 16 or 256 * Strong UV detection signal to detect UV logos, UV characters and UV fibers. UV signal quality parameterization * Best UV imaging system in the industry for check scanners. * Consistent UV image quality with every check capture. | Accept |
| 9 | UV Print identification | * UV Ink printed Logo, account number, etc. identification for anti-counterfeit; * UV Fibers identification for anti-counterfeit; * UV band/overlays for ant-tampering evidence inspection and observation of cheques vulnerable areas such as – date, pay name, amount in words and figure, signature, and MICR code line for possible fraud and alteration; * UV Barcode identification and verification; and * Other UV ink print related security features to be introduced in the future. | YES: Fully compliant   1. LS 150 Captures very clear UV Images printed as Logo, Account number and any UV alpha numeric code 2. Using the UV image captured by the scanner, Antifraud detection can be implemented for UV fibers alteration 3. Based on the UV image, UV Band overlays, can be detected electronically using an application or by visual observation 4. Captures UV Barcode for identification and verification 5. Captures any UV features impeded in documents.LS Image cameras does not fade with time | Accept |
| 10 | UV Cheque for Anti Counterfeit and Anti Tampering control tasks | * Visual Cheque Image Verification to authenticate the genuineness of cheques such as counterfeit, tampering or alteration by displaying the electronic cheque image on the operator computer screen; * Automatic Recognition of counterfeit, tampering or alteration of cheques at the application level processing based on the UV image captured by the Scanner. | YES: Fully Compliant   1. LS 150UV Image visual verification an authentication for counterfeit, tampering or alteration from operator computer screen 2. Automated Application configuration to map UV image captured by scanner to verify for authenticity, counterfeiting, tampering and alteration. | Accept |
| 11 | Fulfilling Ethiopian Banks Cheque Standard | * The Cheque Scanner should have the capabilities and features to scan and capture information from instruments adhering to Ethiopian Banks Cheque standard and format | YES: Fully Compliant  Ethiopian Cheques are two types namely Personal and Business;   1. Personal Cheque size 172 mm by 76 mm without counter file; 2. Business Cheque size 203 mm by 102 mm 2ithout counter file; 3. Bank E13 B MICR code line standard and format length:= 29 digits 4. Cheque serial no. – eight digits 5. Bank-branch code- six digits; 6. Two digits for Bank code 7. Four digits for Branch code 8. Customer account no. –thirteen digits | Accept |
| 12 | Image captured formats Supported | * JPEG, BMP, CCITT, JPEG TIFF, CCITT Gr 4. Lowest image size compression using JPEG TIFF Image file format of about 8KB per image file. * JPEG Image quality software selectable parameters (2-55) to reduce image file size | YES: Fully Compliant  Supported captured image formats   1. BMP,JPEG,TIFF,TIFF level IV, by software compression to achieve lowest image file size i.e. 8KB for back image for Bitonal image file 2. Selectable JPEG Image Quality Parameters 2-255 to reduce image file size | Accept |
| 13 | Number of Images supported in one check pass | 1. Front Grayscale image Merged with UV, 2. Front Image as either UV only, UV BW or UV BW reversed for high security; 3. Front Grayscale image 4. Back Grayscale Image 5. Front BW image (Bitonal) 6. Back BW image (Bitonal) | YES: Fully Compliant  Captures 6 images in one pass for one check pass   * Front Grayscale image Merged with UV, * Front Image as either UV only, UV BW or UV BW reversed for high security; * Front Grayscale image * Back Grayscale Image * Rear BW Image (Bitonal) | Accept |
| 14 | IQA Requirements | * Scanner must be fully compliant to Image Quality Assurance (IQA) standard as formulated by Financial Service Technology Consortium (FSTC) * All IQA parameter related changes must be made free of cost from time to time. | YES: Fully Compliant   * Scanner comes with free of cost IQA engine and license per scanner * Scanner is fully compliant to Image Quality Assurance(IQA) as per ANSI standards and as formulated by Financial Service Technology Consortium(FSTC) * All IQA parameter related changes are made free of cost from time to time * IQA engine verification on grayscale and Bitonal images, both front and rear as required * Easy integration of IQA engine to clearing application * Selectable IQA parameters by user * IQA software licenses are part of scanner price. No need to buy licenses every year. | Accept |
| 15 | Connectivity/  Communication and software | * USB 2.0 and with Optional onboard USB hub host port * Common API/DLL for Windows Vista/7/8/10 (32/64 bit), * Ranger API for scanner and application portability Option * Optional TWAIN interface driver * Exerciser and diagnostic application | YES: Fully Compliant   * USB 2.0 and with Optional onboard USB hub host port * Common API/DLL for Windows Vista/7/8/10 (32/64 bit), * LS Common API/DLL free of cost * Linux and Mac OSX Support * Ranger API for scanner and application portability Option available-Ranger API license comes at a cost per scanner. Ranger API is third party portability software. * Optional TWAIN interface driver available * Exerciser and diagnostic application comes standard with the scanner at no cost | Accept |
| 16 | Endorsement | * Rear Ink jet Endorsement –1 or 4 lines (If one line printing, it must be capable of printing in two selectable positions. | YES: Fully Compliant   * Rear Inkjet Endorsement with one-line printing * 12 nozzles inkjet positions, 6,000,000 characters ink cartridge life * Standard or bold printing * Variable font size printing | Accept |
| 17 | Diagnostic Utility program (MTRs) | * On Board Maintenance Test Routines (MTRs) * On Board Diagnostics: Tests the functionality of the scanner * Power-on Self-Testing: Automatic self-testing and photocells calibration when powering the scanner. | YES: Fully Compliant   * On Board Maintenance Test Routines (MTRs) for service checks and tests. Checks error history * On Board Diagnostics: Tests the functionality of the scanner. Tests motors, sensors, image lamps etc, at power on * Power-on Self-Testing: Automatic self-testing and photocells calibration when powering the scanner. | Accept |
| 18 | Documentation, Tools and Training | * Users/Operators Manual * Demo Cheque Scanning software for testing, the API (Application Programming Interface) with its SDK details & documentation, * Training on the use, operation and minor maintenance of the scanner * User/operator self-maintenance and diagnostic tools to reduce downtime * Software based service, maintenance, adjustment and calibration tools available for onsite tests and repair for easy and quick repairs. | YES Fully Compliant:   1. Users/Operators Manual available in hard and soft copy 2. Demo Cheque Scanning software for testing, the API (Application Programming Interface) with its SDK details & documentation. SDK download site provided to API programmers for free. 3. Training on the use, operation and minor maintenance of the scanner done at no additional cost 4. User/operator self-maintenance and diagnostic tools to reduce downtime: Ability to diagnose by user. 5. Software based service, maintenance, adjustment and calibration tools available for onsite tests and repair for easy and quick repairs. 6. Low downtime high return on investment 7. Durable scanner. Life expectancy 5,000,000 scans. About 5-7 years | Accept |
| 19 | Scanner Maintenance Log | * Non Erasable Maintenance and service History including  1. The Start date on which the scanner is first powered on 2. Number of cheques processed 3. Scanner logic ID and serial number within scanner firmware. 4. Scanner Power on cycles History, paper Jam history, Ink cartridge counter etc. 5. Scanner configuration parameters | YES Fully Compliant:  Comes with standard in the MTR with Non Erasable Maintenance and service History including   1. The Start date on which the scanner is first powered on 2. Number of checks processed 3. Scanner logic ID and serial number within scanner firmware. 4. Scanner Power on cycles History, paper Jam history, Ink cartridge counter etc. 5. Scanner configuration parameters | Accept |
| 20 | Operating Systems Supported | * Windows Vista® (32 / 64 bit), * Windows 7® (32 / 64 bit), Windows 8® (32 / 64 bit), Windows 10 (32/64bit) | YES: Fully Compliant:   * Windows Vista® (32 / 64 bit), * Windows 7® (32 / 64 bit), Windows 8® (32 / 64 bit), Windows 10 (32/64bit)   Linux and Mac OSX Support | Accept |
| 21 | Input Voltage: | * 100 to 240 VAC, 50/60 Hz | YES: Fully Compliant:   * 100 to 240 VAC, 50/60 Hz input voltage * 24VDC 1.0 amp output * Zero warm-up time at power on * Low power consumption * Low heat generation * 3.5kg weight (small space on desk) | Accept |
| 22 | Warranty Period | * Minimum 12 months | YES: Fully Compliant:   * 12 months’ parts warranty(warranty excludes consumables, i.e. ink cartridge, PSU adaptor | Accept |
| 23 | Scanner Demonstration | * Vendor/Supplier (or Partner) to demonstrate all features to meet all mandatory specifications | YES: Fully Compliant:   * Demonstration scanner using demo software available immediately. Demonstration to be arranged at either vendor or customer sites as preferred * All scanner specifications, manuals, drawings to be demonstrated as per Bank checklist. | Accept |
| 24 | Technical Support | * Vendor/Supplier (or partners) to demonstrate technical support ability, training, and experience with support plan methodology on response and resolution time windows | 1. 1st level support- Available from Addis Ababa and other parts of Ethiopia as per support arrangement terms and conditions(**Local Vendor and Service Provide**r)   **ETCON**   1. Clearly defined call response and resolution times 2. Clear KPIs within SLA 3. 2nd level support- available from Fincom Technologies Ltd-Kenya(Distributor) 4. 3rd level support- Available from CTS/Arca Technologies Ltd-Italy(Manufacturer)   A fully equipped worship and certified technical support centre and team already set up at our offices in Addis Ababa.  Team/centre to undertake support, training, and logistical requirements such as spare parts, supplies etc.  Parts in stock, PSU units, Logic PCBs, Feed rollers etc | Accept |
| 25 | Reference sites/Installations | * Vendor/Supplier (or partners) to demonstrate similar references sites where product is installed in the last 2-5 years and relevant testimonials and a contact person of the respective institution (s). | YES: Fully Compliant:  Some of the references sites executed by our distributor Fincom Technologies Ltd in East Africa, on the LS 150UV scanner in the last 6 years.  Other references available on request. Fincom supports over 70 Banks in East Africa the LS 150UV scanner product.  Over 4000, Ls 150UV scanners deployed in East Africa since 2007.  All scanners sold since 2007 are still in service  Local references include   1. ZEMEN BANK 2. ADDIS INTERNATIONAL BANK 3. OROMIA INTERNATIONAL BANK 4. AWASH BANK 5. BERHAN INTERNATIONAL BANK | Accept |

1. **Technical Evaluation for Cheque Truncation System**

| **Sr. No** | **Functional Minimum Requirement** | **Bidder’s**  **Response** | **Bidder’s**  **Remark** | **Evaluation Result(Accept/Reject)** |
| --- | --- | --- | --- | --- |
| **Moti** | **Moti** |
|  | Scope of the Solution to be deployed |  |  |  |
|  | Supply, Installation and Commissioning of Cheque Truncation System (CTS) | Y |  | Rejected |
|  | General Mandatory Requirement of the CTS |  |  |  |
|  | The Cheque Truncation System (CTS) to be deployed at Head Office of the DBE shall have Clearing House Interface (CHI). | Y |  | Rejected |
|  | The Clearing House Interface (CHI) shall provide connectivity between the Capture System of DBE branch and the Clearing House (CH) at the National Bank EATS. | Y |  | Rejected |
|  | The CTS of the Clearing House Interface shall support to: | Y |  | Rejected |
|  | * Scan and archive both “on-us and off-us” cheques deposited by the customers at DBE branch; | Y |  | Rejected |
|  | * Provide a gateway for transmission of MICR data and electronic cheque images to Clearing House; | Y |  | Rejected |
|  | * Perform the required validations to ensure that MICR data and cheque image capturing process from a participant capture system is free from operational errors; | Y |  | Rejected |
|  | * Generate exchange files/ posting files from MICR data and electronic cheque images for “off-us cheques” at each session for outward transmission to Clearing House; | Y |  | Rejected |
|  | * Sort “off-us cheques” MICR data and their related electronic cheque images into bundles as per Clearing House requirement and validate these bundles against the session window to which they will be attached at the Clearing House; | Y |  | Rejected |
|  | * authenticate and archive internally and transmit each “off-us” exchange file to Clearing House after digitally signed and encrypted as per Clearing House requirement; | Y |  | Rejected |
|  | * settle internally all “on-us” cheques and archive accordingly; | Y |  | Rejected |
|  | * change posting file format and size, as and when required by the CH; | Y |  | Rejected |
|  | * reconcile outward cheques presented after end of session at the Clearing House, by accessing reports as stated on the EATS System Rule; and | Y |  | Rejected |
|  | * Receive digitally signed inward financial data and image exchange files from the Clearing House. | Y |  | Rejected |
|  | The Clearing House Interface/Capture System with function of the UV enabled cheque scanner shall have the capability to control “Anti Counterfeit and Anti Tampering” by analyzing features and character of cheques such as: | Y |  | Rejected |
|  | * UV Ink printed Logo, account number, etc. identification for anti-counterfeit; | Y |  | Rejected |
|  | * UV Fibers identification for anti-counterfeit; | Y |  | Rejected |
|  | * UV band/overlays for anti-tampering evidence inspection and observation of cheques vulnerable areas such as – date, pay name, amount in words and figure, signature, and MICR code line for possible fraud and alteration; | Y |  | Rejected |
|  | * Barcode identification and verification; | Y |  | Rejected |
|  | * Other UV ink print related security features to be introduced in the future. | Y |  | Rejected |
|  | The Clearing House Interface/capture system shall support: | Y |  | Rejected |
|  | * to generate gray scale, black and white and UV and combined UV and gray scale electronic images during scanning cheques; | Y |  | Rejected |
|  | * Visual Cheque Image Verification to authenticate the genuineness of cheques such as counterfeit, tampering or alteration by displaying the electronic cheque image on the operator computer screen; | Y |  | Rejected |
|  | * Automatic Recognition counterfeit, tampering or alteration of cheques at its application level processing; | Y |  | Rejected |
|  | * Image Replacement Document (IRD) printing that is printing of image / cheque replacement documents when physical items are required; |  |  | Rejected |
|  | * Image Quality Assurance (IQA) as formulated by Financial Service Technology Consortium (FSTC); | Y |  | Rejected |
|  | * To provide/generate various reports and audit trial reports that could help control staff of participants to oversee the cheque truncation operations. | Y |  | Rejected |
|  | The proposed solution should be able to cater to Bank’s clearing system and should provide Straight through Processing for inward clearing to the Bank’s Host/ CBS. | Y |  | Rejected |
|  | The proposed system should provide for Web-based ad-hoc query, Web-based APIs for batch queries and application specific integration, multiple participant access control, PKI integrated security, flexible database management, indexing, etc. | Y |  | Rejected |
|  | The proposed solution should provide the capture system along with the consolidated application software to receive from the capture system i.e. to and from branch host to CHI, validate, build, and send clearing data (MICR data and Images) including returns. | Y |  | Rejected |
|  | The system should receive processes, validate, and reconcile clearing data (MICR data and Images) including returns. | Y |  | Rejected |
|  | It should provide interfaces to the capture, archive, Host and other System. | Y |  | Rejected |
|  | It should control and monitor the outward and inward clearing (MICR data and Images) process by providing: | Y |  | Rejected |
|  | User Interfaces to monitor and control of the clearing processes, administer the clearing processes such as participation management, payment type definition, calendar, clearing session definition, return codes, exclude a branch and unwind all transactions, etc. | Y |  | Rejected |
|  | * Security to all financial transactions and provides the security by integrating the PKI for privacy, authentication, data integrity, and non-repudiation using the digital signature. | Y |  | Rejected |
|  | * The system should process, route and archive the images as per the requirements of the NBE guideline and standard, etc., apart from generation of reports, providing research facilities, statistics, billing, and the like. | Y |  | Rejected |
|  | The system should be user friendly, modular, flexible for future enhancements. | Y |  | Rejected |
|  | The system should have storage and retrieval module which is robust, scalable, flexible, secured so that images and data are temper proof and reliable. | Y |  | Rejected |
|  | The system should comply and provide for appropriate security so that images and data remain safe and retrievable till the duration stipulated by NBE. | Y |  | Rejected |
|  | The system should have “CD Delivery System” capability to cut and deliver drawee and/or presenting bank and/or branch wise image and MICR data files of cheques on a CD. | Y |  | Rejected |
|  | One Month Support after implementation. | Y |  | Rejected |
|  | The proposed system shall support Oracle database, preferably 12c version, and shall be installed/run on Linux operating system. | Y |  | Rejected |
|  | Outward Clearing Module |  |  |  |
|  | The system at the truncation point shall capture cheques image and the full MICR (Magnetic Ink Character Recognition) code line data both ON-US and OFF-US. | Y |  | Rejected |
|  | The system shall read particulars available on the MICR Code line as specified by NBE and create data file for further processing. | Y |  | Rejected |
|  | The system shall have the functionality of repairing MICR data fields through supervisor approval when failed to be red automatically by the scanner. | Y |  | Rejected |
|  | The system shall have a provision for performing data entry of additional fields such as customer name, Reject, Repair, Balancing, etc. to be defined by the bank. The details of these shall be made available during implementation. | Y |  | Rejected |
|  | The system shall support maker-checker during image scanning and data capturing process as per bank requirement such as transaction amount, Repair, Reject, etc. | Y |  | Rejected |
|  | The system shall support to prompt/signal to the maker & checker indicating that the image quality defects, is found needs verification of checker. | Y |  | Rejected |
|  | The system shall support centralized digital signature to be applied automatically at the time of checking (approval). | Y |  | Rejected |
|  | The system shall provide the capabilities for branches/truncation point to track the status of the files/images sent to/ received from EATS through Head Office. | Y |  | Rejected |
|  | The system shall support to assign/attach a unique key / identifier to identify and link the image of each instrument with its MICR line data as well as for any other cross reference which may be required for the entire clearing process using truncation as also any post-processing reconciliation. | Y |  | Rejected |
|  | The system shall support transmitting captured images and MICR data from Branches/Point of Truncations to consolidation Server at Head Office via the Bank’s Network in user defined ways such as batches of instruments (images and data) or in real time i.e. instrument by instrument (images and data) or through CD/magnetic media. | Y |  | Rejected |
|  | The system shall support to be digitally signed individual Images and the MICR Code Line data as well as their respective files using the Public Key Infrastructure. | Y |  | Rejected |
|  | The CTS to be installed at Head Office shall receive the images and the MICR data from the branches where cheques have been truncated for outward clearing. | Y |  | Rejected |
|  | The CTS to be installed at Head Office shall have the provision to carry out clearing cycle-wise balancing; consolidation of all the images and MICR data received and make user defined batches to be forwarded to the EATS as required by NBE. | Y |  | Rejected |
|  | The CTS to be installed at Head Office that shall receive the files containing the MICR data and images from the various branches/Point of Truncations: | Y |  | Rejected |
|  | * consistency checks that the data and the images only are received and that the complete MICR line for each image has been received and whether for each MICR line received there is a corresponding image; | Y |  | Rejected |
|  | * checks the correctness of each filed in the batch file are in line with NBE’s EATS requirement | Y |  | Rejected |
|  | * produce exception report/s for excess /short images, excess / short MICR line data and forward them to the presenting branch in a message based interface | Y |  | Rejected |
|  | * segregate the data and images into “ON-US (intra-bank) and OFF-US (inter-bank) | Y |  | Rejected |
|  | * perform consistency checks like images and data file match, image quality verification, availability of the entire MICR line for each image shall have to be done | Y |  | Rejected |
|  | * Process/transmit the ON-US (intra-bank) MICR data and cheques images to the bank’s CBS without manual intervention | Y |  | Rejected |
|  | * Process/transmit the OFF-US (inter-bank) cheques images and MICR data electronically to NBE’s Clearing House System (EATS) using the National Payment System Network. | Y |  | Rejected |
|  | * write the OFF-US (inter-bank) cheques images and MICR data files on magnetic / electronic media to be send to NBE | Y |  | Rejected |
|  | * The System shall have enquiry facilities which will enable tracking of the status of the cheques images and MICR data submitted by branches/truncation points in batches or real-time basis | Y |  | Rejected |
|  | The System shall have a provision that the Image and Data forwarded to the Clearing House/NBE have fulfilled all the data format and content requirements of NBE. | Y |  | Rejected |
|  | The application should be able to show/give alert the number of cheques image and transactions to be exported to the core banking system and ACH –EATS | Y |  | Rejected |
|  | The application should be able to give the user the option to modify/delete the data or the captured image | Y |  | Rejected |
|  | The application shall validate whether the cheque amount is within the range of bulk cheque process limit as per NBE rules (parameter) and also identify the maximum length of each fields that is supported. | Y |  | Rejected |
|  | The application should be able to validate the Payees account maintained in the core banking at real time. | Y |  | Rejected |
|  | The application should be able to give alert on successful completion of transaction (the image and data capture). | Y |  | Rejected |
|  | The application should receive acknowledgement from EATS. | Y |  | Rejected |
|  | The application should post on the core banking of customer statement takes place only when cheque is cleared (at exposure date) until then the application can use suspense accounts or other suggested mechanisms. | Y |  | Rejected |
|  | The application should be able to receive rejection files from the ACH through EATS and make appropriate reversal. | Y |  | Rejected |
|  | The application should be able to apply accounting entries for rejected files for accepted cheques per the ACH rule | Y |  | Rejected |
|  | The application shall provide alternate option to cancel cheques that could be returned by participant bank manually (without being rejected on EATS) and also able to pass the considered necessary accounting entries. | Y |  | Rejected |
|  | The application should have a report/inquiry that shows daily outward check status sent to EATS; the accepted and rejected checks by participant bank, branch by booking date, value or Clearing date. | Y |  | Rejected |
|  | The application should able to provide all information related to a single cheque no. by accepting a single parameter (cheque no., amount, processing date, etc) from the user. |  |  | Rejected |
|  | The application shall have enquiry at branch level as well as at center that can enable tracking of the status of the batches submitted by branches. | Y |  | Rejected |
|  | The application should be able to inquiry list all of all processed cheques ; authorized, unauthorized, deleted by specific date and range of dates and make inquiry by amount of transaction and range of transactions ,cheque numbers ,bank and branch codes and other parameter to provide capabilities for branches to track status of the files sent to/received from EATS. | Y |  | Rejected |
|  | Inward Clearing Module |  |  |  |
|  | On receipt of the images and data from Clearing House, the CTS system installed at the bank’s Head Office will verify the files/individual images and MICR data for digital signature under Public Key Infrastructure (PKI). | Y |  | Rejected |
|  | The CTS system installed at the bank’s Head Office shall have the functionality to return cheques for any valid reason(s) specified by the NBE | Y |  | Rejected |
|  | The system shall provide for the processing of unpaid cheques, the matching system for locating the returned images / data and the associated handling routines. The Vendor has to describe clearly the return process. | Y |  | Rejected |
|  | Whenever the presenting branch has handed over the physical cheque to the drawee bank, the system shall have a facility to mark that the physical cheque is no longer available with it from the date it has been handed over to the drawee bank along with some additional details. | Y |  | Rejected |
|  | The system shall be capable for storing Return Reasons and corresponding codes and properly map during returning the cheque. | Y |  | Rejected |
|  | The System should be integrated with Core Banking System for the return processing process. | Y |  | Rejected |
|  | The CTS system installed at the bank’s Head Office shall verify the images and data shall upload and posted to the CBS database | Y |  | Rejected |
|  | The system shall provide for storage of images and MICR data received from EATS at the Head Office. | Y |  | Rejected |
|  | The System shall have the facilities to view the front and reverse side of cheque images along with the MICR data of individual instruments using any standard browser interface for passing of cheques. | Y |  | Rejected |
|  | The System shall have the facilities of various features for processing/viewing of images like reverse video, zoom, black and white views, cropping, flip, rotate, gray scale, UV image etc. | Y |  | Rejected |
|  | The System shall have the facility to the Drawee/payee bank Branches to: | Y |  | Rejected |
|  | withhold cheques and ask for the physical instruments from the presenting banks | Y |  | Rejected |
|  | * mark and store these items separately and shall allow them to be retrieved later and processed individually for finality | Y |  | Rejected |
|  | * Indicate that the physical instrument in such cases has been retained. | Y |  | Rejected |
|  | * The proposed system shall support Application Programming Interface (API) to third party signature verification systems for automating the process of signature verification. | Y |  | Rejected |
|  | The proposed system shall support that the Signature Verification application to provide facilities to authorized user/authorizer to visualize the signature from core banking server/ signature database server while verifying manually the signatures from the images of the cheques with the signatures stored in the data server/ core banking server. This should happen on the same screen i.e. image of instrument and specimen signature one above the other with various option to view i.e. upside down, zooming etc. | Y |  | Rejected |
|  | The System shall reformat (if necessary) the posting data to the specific needs of the CBS. | Y |  | Rejected |
|  | The system should provide user defined functionality for fraud detection/alerts for large value debits. | Y |  | Rejected |
|  | The application should have the facilities to view the front and reverse of cheque images along with the MICR data of individual instruments using any standard browser interface for passing of cheques. | Y |  | Rejected |
|  | The application should retain /show files in the center for any validation error, e.g. for missed branch codes and the user at CPC should able to take further action. | Y |  | Rejected |
|  | The application should send validation request to the core banking system to validate the cheque number, account restrictions and consequently the authorized users can take appropriate action (pay /reject). |  |  | Rejected |
|  | The application shall provide facilities to authorized user/authorizer to visualize the signature verification. This should happen on the same screen i.e. image of instrument and specimen signature one above the other with various option to view i.e. upside down, zooming etc. | Y |  | Rejected |
|  | The application should post to the core banking system for accepted payments transactions. | Y |  | Rejected |
|  | The application should send rejection file to the ACH-EATS for rejected transactions. |  |  | Rejected |
|  | The application should have a report /inquiry facilitate that shows incoming cheques by bank, branch, cheque number, business date, clearing date, transaction status, transaction reference, specific date, range of date and other on demand selection fields. | Y |  | Rejected |
|  | Identification of Image and Data |  |  |  |
|  | The system should have provision of unique ID/number to track the front and back images of an instrument with the corresponding MICR Data of that Instrument and the linkages such as Before handing over to Head Office, after submitting to NBE’s EATS, after archival and storage, for unpaid return instrument processing, etc. | Y |  | Rejected |
|  | The system shall have user defined format of Endorsement/Identification Number (ID) to be generated by the system such as inter alia, the time, date, cheque no, sort code of the presenting branch, etc. | Y |  | Rejected |
|  | The system shall have the facilities of printing / at least one line endorsement identifier/s on the reverse side of the cheque and the printing thereon shall be large enough to enable reading and identification on the browser, apart from other user friendly features at the stage of image capture itself. | Y |  | Rejected |
|  | The system shall be capable of endorsing the cheque if presented again by the branch at different places i.e. if endorsement is done at one place then second endorsement shall at another place. | Y |  | Rejected |
|  | Sorting and Batching of MICR Data |  |  |  |
|  | The system shall have the facilities to Sort the MICR Data on various parameters or a combination of parameters e.g. sorting of the MICR Data of all the instruments above a threshold amount and / or sorting of MICR Data of instruments of a particular presenting bank branch on a given clearing cycle, date and between specified amount ranges etc. | Y |  | Rejected |
|  | The system shall have facilities of merging/ batching of MICR Data received from various branches for generation of a consolidated transmission to NBE’s EATS. | Y |  | Rejected |
|  | The system should support Data and image formats of the files to be sent to the presenting and drawee bank branches shall be in conformity with the exact structure and format set by NBE. | Y |  | Rejected |
|  | Reconciliation |  |  |  |
|  | The system shall provide reconciliation and reporting tools: | Y |  | Rejected |
|  | with various combinations such as for images alone, MICR Data alone, images and / or MICR Data in a juxtaposed/ compared form etc. | Y |  | Rejected |
|  | * Which will be parameter driven | Y |  | Rejected |
|  | * Facilitates dynamic generation of queries and reports as part of the system. | Y |  | Rejected |
|  | * The system shall provide a facility for the users to reformat the data and import into other applications. | Y |  | Rejected |
|  | The system shall provide online reconciliation and research tools between the branches and Head Office point of truncation. | Y |  | Rejected |
|  | The system shall have tools to track whether the single and / or multiple and / or groups and / or file(s) of (entire) Images and MICR Data which have been dispatched from branches / truncation point have been received by Head Office and vice versa. | Y |  | Rejected |
|  | Security |  |  |  |
|  | The system shall have the Public Key Infrastructure (PKI) to secure the data and image transmission especially between the Capture System (Bank Branches/Truncation points) to the Head Office. | Y |  | Rejected |
|  | The system shall provide explicitly for digital signature based data transfer under the PKI especially between the Capture System (Bank Branches/Truncation points) the head office. |  |  | Rejected |
|  | The system shall provide for encryption both for data and image transfer and data and image storage to ensure that data transmitted/stored cannot be subjected to alteration at a later point of time and legally recognized as per the laws of the country. | Y |  | Rejected |
|  | The system shall have minimum features like user authentication, storing images in encrypted form etc. | Y |  | Rejected |
|  | The system shall have a facility that Images will be encrypted before storing on disk using digital signatures so that misuse/alteration of images will not be possible at OS level. | Y |  | Rejected |
|  | The system shall have an application level security features to be used while storage of images and data and during transmission. | Y |  | Rejected |
|  | The System shall be fully integrated with the Public Key Infrastructure (PKI) using the Digital Certificates. | Y |  | Rejected |
|  | The system must apply rigorous controls to ensure the security of Images, MICR data transactions, files and associated messages in transit. These shall at least include :( Proof of endpoints)   1. unique sequence numbering; 2. encryption 3. authentication and double authentication; 4. integrity; 5. immediate delivery acknowledgement and notification 6. automatic reconciliation of acknowledgements; 7. duplicate detection; 8. digital signature based non-repudiation of both source and origin; and 9. Complete, secure audit trail. 10. It is anticipated that the system shall have two discrete security domains, as follows : | Y |  | Rejected |
|  | The system will have Presenting Branch security domain that will send/receive Outward/Inward Clearing Images, MICR data transactions, files and associated messages, receive acknowledgements and enquiries from the Head Office and will receive acknowledgements, enquiry responses; will send/receive Outward and, Inward Return Clearing Images, MICR data transactions, files and associated messages, and rejected MICR data transactions and files related messages, reports. | Y |  | Rejected |
|  | * 1. The system will have the Head Office System domain, which receives Images, MICR data transactions, files and associated messages from Branches/point of truncations, processes them for generating the settlements, safe stores it for archival and retrieval and forwards them to NBE’s EATS. (Please note that NBE has established secured connection between Bank’s Head Office and EATS) | Y |  | Rejected |
|  | * 1. Key Usage and Management: | Y |  | Rejected |
|  | For performance considerations, confidentiality will be implemented through use of symmetric cryptography. | Y |  | Rejected |
|  | * Integrity digests may be calculated using a one-way function (e.g. MD5, SHA-1) or Message Authentication Codes (MACs) may be calculated using a recognized methodology such as cipher block chaining. | Y |  | Rejected |
|  | * For greater assurance, non-repudiation of both source and destination shall be implemented using recognized asymmetric cryptographic methods such as digital signature. | Y |  | Rejected |
|  | * Symmetric keys used for message encryption shall only be used in one direction (i.e. there will be “send” and “receive” key for each link). | Y |  | Rejected |
|  | * All cryptographic operations shall be performed in tamper resistant hardware, sited in secure premises. | Y |  | Rejected |
|  | * All cryptographic keys shall be encrypted under the appropriate variant of the domain master key (which will ensure sound key separation and minimize the potential for procedural attacks), when stored outside the tamper resistant module. | Y |  | Rejected |
|  | * The Vendor’s response shall propose, in detail, a key management scheme supported by user procedures, which shall maximize the automation of key management without compromising its security. | Y |  | Rejected |
|  | * Asymmetric keys used for key management shall have a length of not less than 1024 bits. | Y |  | Rejected |
|  | * Vendor’s response shall describe the security architecture (including algorithms used) and describe the results of any independent security audits the system has been subject to. | Y |  | Rejected |
|  | * All symmetric key operations shall use “Triple DES” or equally secure technology. | Y |  | Rejected |
|  | * The system shall make provision for the introduction of new algorithms and key structures, post implementation. Vendor’s response shall propose how this facility will be implemented. | Y |  | Rejected |
|  | The system should have Audit Trail that must capture sufficient information to allow the Head Office and Branch authorized users to identify and track events in the system, including but not limited to: | Y |  | Rejected |
|  | Branch associated with each transaction and each step in a transaction; | Y |  | Rejected |
|  | * Identification of repairs and the repairer; | Y |  | Rejected |
|  | * Time of all significant process steps; | Y |  | Rejected |
|  | * Time and details of all user access; etc. | Y |  | Rejected |
|  | * The audit trail and its contents must not be capable of being compromised or destroyed. Vendor’s response shall: | Y |  | Rejected |
|  | * explain the event logging/safe-storing process and the event log retention and archiving facilities; | Y |  | Rejected |
|  | 1. describe the end-to-end system auditing capabilities as Images, MICR data transactions, files and other messages are processed through the various components of the system and interfaces; and | Y |  | Rejected |
|  | 1. Describe the information retained in audit logs. | Y |  | Rejected |
|  | 1. The system shall provide Detection of Error and Fraud tools to allow speedy access to audit trail information. | Y |  | Rejected |
|  | The system shall provide tools for detection of fraudulent instruments. | Y |  | Rejected |
|  | The system shall provide controls to minimize the potential for fraud and error which would include amongst other things: | Y |  | Rejected |
|  | Input data validation; | Y |  | Rejected |
|  | * 1. User authentication; | Y |  | Rejected |
| * 1. Restricted user intervention, i.e. limited to low risk fields or processes; | Y |  | Rejected |
| * 1. Connection time limitation; | Y |  | Rejected |
|  | * 1. User access restricted by transaction types, amount limits and functions; | Y |  | Rejected |
| * 1. Privileges granted on a case-by-case basis; | Y |  | Rejected |
| * 1. Controlled access to functions, e.g. via menus; | Y |  | Rejected |
| * 1. Automated repair facilities; | Y |  | Rejected |
| * 1. Error handling mechanisms; | Y |  | Rejected |
| * 1. Automatic cut-offs | Y |  | Rejected |
| * 1. The system shall provide for systems balancing and controls between interfaces to detect duplicate or missing messages or batches or Images, MICR data transactions, files and other messages. | Y |  | Rejected |
|  | Vendor’s response shall specify in detail the proposed access control regime, including administration, operational and audit operations | Y |  | Rejected |
|  | The system must provide mechanisms to prevent fraud or error arising in the course of implementing changes to the system. These mechanisms would be expected to include segregation of duties, acceptance testing and computerized processes for introducing and authorizing new applications or changes. | Y |  | Rejected |
|  | Vendor’s response shall describe how the system protects the confidentiality of customer information and what data protection and database access controls are included in the system. | Y |  | Rejected |
|  | The system shall enforce segregation of duties  Such as: |  |  | Rejected |
|  | segregation between data entry/repair and verification/authorization; and | Y |  | Rejected |
|  | 1. between data entry/repair, first verification/authorization and second verification / authorization / release; the level of authorization shall be determined by the bank based on value or other factors | Y |  | Rejected |
| 1. The system shall allow for the allocation of value limits for each and every user and shall allow for individual user daily value limits that, when exceeded, trigger exception processing (e.g. requiring dual authorization/supervisor approval for each transaction exceeding the daily limit). |  |  | Rejected |
|  | The system shall have Access Control mechanism such as: | Y |  | Rejected |
|  | secure, auditable management of user-ids, access rights, passwords and others; | Y |  | Rejected |
|  | 1. Passwords to be a minimum of eight characters and to have a parameter driven lifespan after which users will be required to change their passwords. There will be a parameter driven inactivity delay after which users will be logged off. 2. the ability to setup user groups of users with access to the same functionality and to limit the functionality of users to just those functions that they have a need to perform; | Y |  | Rejected |
| 1. ensure separation of functions where required (e.g. a user entering a payment to the system would not also be able to authorize that payment for release to the Clearing House); | Y |  | Rejected |
| 1. detection and reporting of illegal attempts to access the system or functions within the system; | Y |  | Rejected |
| 1. the maintenance of a secure, auditable log of access to the system, identifying user-id, date, time, functions accessed, operations performed; and | Y |  | Rejected |
| 1. Encryption of passwords. | Y |  | Rejected |
| 1. The system shall protect the individual images and MICR data from tampering and/or replacement through its life cycle. | Y |  | Rejected |
|  | Images will be encrypted before storing on disk using digital signatures so that misuse/alteration of images will not be possible at OS level. | Y |  | Rejected |
|  | Storage and Archival |  |  |  |
|  | The system shall provide for storage and archival of Images and MICR data at the Head Office or at any other centralized location as decided by the Bank. | Y |  | Rejected |
|  | The system shall provide facilities of storing Image and MICR data for online access for a period specified by the bank.  The detailed mode of storage and retrieval of data / image shall be indicated in the responses of the bidders. | Y |  | Rejected |
|  | * The system shall archive Image and MICR Data from the live system following the period specified by the parameter to a storage medium capable of being stored and offline accessed for the period specified by the bank. | Y |  | Rejected |
|  | The system shall provide facilities to Branches for retrieving together single and / or multiple and / or group(s) and or file(s) of Image(s) and MICR Data presented to or from them in an efficient and least time consuming manner with a high degree of accuracy. | Y |  | Rejected |
|  | The system shall have the facilities and necessary interfaces for data to be transferred to an external Data Warehouse. | Y |  | Rejected |
|  | The Image and MICR Data Archive shall have the facility to store for 10 years and / or any other period as may be required under the law. The period of retention will be set by the Bank as a system parameter. The archive shall be tamper-proof and once archived, it shall remain unalterable. | Y |  | Rejected |
|  | Interfaces |  |  |  |
|  | The system shall conform to the interface standards prescribed by National Bank of Ethiopia for Montran EATS. | Y |  | Rejected |
|  | The system shall provide facilities for MICR data and Image transmission to NBE Clearing House and other functions such as enquiries, reporting as well as security, resilience and recovery requirements etc. | Y |  | Rejected |
|  | The proposed system should provide interfaces with Bank’s CBS for both inward and outward clearings, electronic fund transfers, and bulk payments and file transfers. | Y |  | Rejected |
|  | Branch Access/Participation |  |  |  |
|  | The system shall be open to all Bank branches within the clearing zone set by the NBE for access. The system shall be configurable to set clearing time which may be changed from time to time by the NBE. | Y |  | Rejected |
|  | The system must have the capability to define and add new branches. | Y |  | Rejected |
|  | The system shall support the following participation/access structure: |  |  | Rejected |
|  | Branches shall initiate transactions of their own as a member, | Y |  | Rejected |
| 1. Branches may initiate transactions for other branches as a fall back arrangement. | Y |  | Rejected |
| 1. Branches may initiate transactions for other Banks as Service Bureaus. | Y |  | Rejected |
| 1. The system shall support Participant Suspension and Reinstatement at Head Office level | Y |  | Rejected |
|  | The system shall support Branch Suspension to occur at any time within the operating day. | Y |  | Rejected |
|  | The system shall issue/send Advice of Suspension immediately by broadcast message to all branches by the Head Office. | Y |  | Rejected |
|  | The system shall have Participant Administration Functions to be accessed by Head Office as listed below: | Y |  | Rejected |
|  | Assign Authorized system administrators or users at Head Office and Participant Branches | Y |  | Rejected |
|  | 1. Admitting new Participant branches | Y |  | Rejected |
| 1. Participant branch Profiles Details such as names, identification codes, account numbers, etc. will be recorded at Participant establishment and updated at need. | Y |  | Rejected |
| 1. Assign Participant branches system functions that will be able to use. | Y |  | Rejected |
| 1. Suspend Participant branch from ability to transact within a Clearing House operating day and/or Session. | Y |  | Rejected |
| 1. Revoke Participant branches system functions access. | Y |  | Rejected |
| 1. Reinstate Participant’s ability to transact following a suspension. | Y |  | Rejected |
| 1. Cancel / Removes Participant branches from the system and cancels any Queued transactions. | Y |  | Rejected |
| 1. Broadcast Message issued by the Bank at its discretion advising of changes to a Participant’s status. | Y |  | Rejected |
| 1. The system must track the elapsed period since input of Inward, Outward, Outward and Inward Return Clearing for a clearing cycle. | Y |  | Rejected |
|  | The system shall support to define Operating Calendar such as holidays, working days, working hours, clearing cycles, etc. at Head Office level. | Y |  | Rejected |
|  | The system shall have a facility for the Head Office to use a Broadcast Message to announce scheduled system holidays applicable to the Centre. | Y |  | Rejected |
|  | The system shall have an enquiry facility for branches to enable branches to check the system calendar and access information on all holidays. | Y |  | Rejected |
|  | The system shall have a facility/parameter at Head Office level to extend the Operating/working Hours/Sessions for any given day under exceptional circumstances as approved by the NBE | Y |  | Rejected |
|  | Message Format & Validation Requirements |  |  |  |
|  | The system shall support the message format specified by the NBE. | Y |  | Rejected |
|  | The Head Office and Participant Branches shall perform various validations of incoming Image, MICR Data Transaction and other related messages such as: | Y |  | Rejected |
|  | 1. validate message and file content, format and counterparties; 2. validate Images against the given parameters; 3. validate MICR data against the given parameters such as valid MICR code line, etc.,   validate message and file format, addressing, image formats and its contents, messages formats and its contents, etc. | Y |  | Rejected |
|  | 1. The system shall a validation processing that include, amongst other things: | Y |  | Rejected |
|  | sequence checking, i.e. to ensure against message and or file / data / records / image loss or duplication; | Y |  | Rejected |
|  | 1. message and/or file authentication, double authentication, integrity checking and non-repudiation checking; | Y |  | Rejected |
| 1. checking to ensure data types appropriate to defined fields; | Y |  | Rejected |
| 1. checking dates for correctness (against system calendars); and |  |  | Rejected |
| 1. the direction of transactions to different system processes | Y |  | Rejected |
| 1. The system shall provide the ability to set a minimum and/or maximum value for Clearing House transactions as a system parameter. Transactions below this value and/or above this value would fail validation testing and shall be returned to source with a reason for failure of the validation. | Y |  | Rejected |
|  | The system shall provide for online validations of the fields comprising the MICR read band with provision for balancing and item correction. | Y |  | Rejected |
|  | The Inward Clearing Module shall provide for online validations of the fields comprising the MICR read band. | Y |  | Rejected |
|  | System Administration and Enquiry Requirements |  |  |  |
|  | The system shall support MICR Data and Images Files Outward and Inward queues Enquiries for Head Office and Branches. | Y |  | Rejected |
|  | The system shall support System Administration tasks to know the status of Participant Branches such as: | Y |  | Rejected |
|  | Monitor the status of Participants and take action as required to resolve problems or initiate fallback arrangements. The system must provide facilities to support these tasks. | Y |  | Rejected |
|  | 1. Issue system messages to Participant branches to inform them of problems/operational actions and issues. | Y |  | Rejected |
| 1. The system shall allow Participant branches to enquire on the status of their Settlement of individual MICR Data and Images held in the Clearing House /NBE’s EATS at any time during the day for the current Settlement day as well as any previous Settlement days. | Y |  | Rejected |
|  | The system shall support the monitoring of Participant performance against targets for settlement completion within intraday deadlines, e.g. Participants could be required under system rules to complete a specified percentage of their payments by a specified time within the day. | Y |  | Rejected |
|  | The system shall support Participant Branches to be able to enquire on-line on the system’s daily operating schedule. | Y |  | Rejected |
|  | The system shall support Participant Branches to be able to enquire on system parameters governing their participation in the system, e.g. access to system functions, etc. | Y |  | Rejected |
|  | Reports |  |  | Rejected |
|  | The system shall provide facilities to allow reports to be easily specified and produced by the Head Office and/or the participant branches User. Some of the expected requirements are the following: | Y |  | Rejected |
|  | The system shall provide reconciliation and reporting tools with various combinations such as for images alone, MICR Data alone, images and / or MICR Data in a juxtaposed form etc. | Y |  | Rejected |
|  | 1. The tools provided will be parameter driven. | Y |  | Rejected |
| 1. Facility for the users to reformat the data and import into other applications. | Y |  | Rejected |
| 1. The Report generation toll shall be able to archive and Retrieve Reports on the various flexible parameters. | Y |  | Rejected |
| 1. Reports shall be produced in TEXT and/or PDF format. | Y |  | Rejected |
| 1. Reports will draw on Images and Data | Y |  | Rejected |
| 1. Current day’s data and Images | Y |  | Rejected |
| 1. Images and data retained as available for on-line enquiry; | Y |  | Rejected |
| 1. Archived Images and data. | Y |  | Rejected |
| 1. Exception reporting is a necessity wherever required. | Y |  | Rejected |
| 1. Reports must be available in both electronic form and hardcopy. | Y |  | Rejected |
| 1. Periodic Statements for Participants must also be available in both electronic softcopy and hardcopy form. | Y |  | Rejected |
| 1. Facilitate dynamic generation of queries and reports as part of the system. | Y |  | Rejected |
| 1. The system must provide reports that assist in the early detection and management oversight of potential fraud or error, including but not limited to reports showing: | Y |  | Rejected |
| 1. Very high value payments (high value threshold to be parameterized); | Y |  | Rejected |
| * Unsuccessful login attempts; * Undelivered Images, MICR data transactions, files and other messages; | Y |  | Rejected |
| * Duplicate Images, MICR data transactions, files and other messages; |  |  | Rejected |
| * Application privilege change and access. | Y |  | Rejected |
| * The system shall support to generate report required by the NBE and allow online access by the NBE. | Y |  | Rejected |
|  | Image Processing |  |  |  |
|  | The system shall necessarily support to capture both front and reverse images of individual cheques. | Y |  | Rejected |
|  | The system shall be capable of capturing at branches both black and white as well as Grey Scale. | Y |  | Rejected |
|  | The System shall provide facilities to scan cheque images in the following way:  Minimum DPI Format Comp.  Front Grey Scale 100 DPI JPG JPEG  Front Black & White 200 DPI TIFF CITT G4  Reverse Black & White 200 DPI TIFF CCITT G4  UV Image Grey Scale 100 DPI JPG JPEG | Y |  | Rejected |
|  | Image Quality , Usability Management and Standards |  |  |  |
|  | The system shall support Image Quality Assurance at the scanning stage so that the images meet processing quality standards in accordance with ANSI X9.37. | Y |  | Rejected |
|  | The system shall perform Image Quality Analysis (IQA) validations as formulated by Financial Service Technology Consortium (FSTC) at the capture system or CHI to ensure that the image provided by capture system/CHI contain the correct specification and fall within the threshold standards set by the NBE. | Y |  | Rejected |
|  | The system shall support an IQA indicator tag/flag indicating the outcome of the IQA test carried out on each electronic cheque image by the capture system/CHI. | Y |  | Rejected |
|  | The system shall support to parameterize the threshold values for different IQA parameters which shall be communicated to banks by the Clearing House/NBE from time to time. | Y |  | Rejected |
|  | The System shall check, detect and flag image quality defects for all image renditions such as Grey Scale on the front and black and white on the front and reverse of the cheques. | Y |  | Rejected |
|  | The conditions and definitions shall be definable and based on parameters. Some these parameters may be Partial Image, excessive Image Skew, Piggy Backed Image, Image Too Light or To Dark, Image Contains Streaks and/or Bands, Below Minimum Image Size, Exceeds Maximum Image Size, etc., | Y |  | Rejected |
|  | The Images which do not pass these Image Quality requirements shall be left for judgment for the operator in consultation with Supervisor.  The vendor shall give details on the facilities provided for the above in the System both at the HO/Service Branch System and Presenting Branch System. | Y |  | Rejected |
|  | The System shall be capable of protecting images and MICR data from tampering and /or replacement throughout its life cycle. | Y |  | Rejected |
|  | The System shall reject tampered images and MICR data at various entry points. | Y |  | Rejected |
|  | The system shall support the data formats and field definitions for storing, archiving, retrieving, processing, quality of images and MICR data at the Head Office (Clearing House Interfaces) as well as exchanging between institutions shall meet at the minimum: | Y |  | Rejected |
|  | ANSI X9.90 and ANSI DSTU X9.90 Specifications for an Image Replacement Document (IRD), | Y |  | Rejected |
|  | 1. ANSI X9.37 and ANSI DSTU X9.37 Specifications for Electronic Exchange of Cheque and Image Data; | Y |  | Rejected |
| 1. ANSI X9.81 Specifications for Bulk Image and Data Exchange. Further, the System offered shall adopt the above standards for the Ethiopian Banking environment. | Y |  | Rejected |
| 1. The system shall have utilities to verify different fields like valid MICR code, MICR quality, image size, image quality, image usability, image dimension etc. in real time. | Y |  | Rejected |
|  | 1. The system shall provide facilities to print the images of single, multiple, group, files of instruments from the archive of the Central Image or from the Head Office in the format specified in the Standard DSTU X9.90– 2003 Specifications for an Image Replacement Document – IRD, | Y |  | Rejected |
|  | The system shall keep track of image prints taken, whenever made, in the form of an audit trail / log. The point where such an image is retrieved shall also have the facility to certify that the image represents the document or that payment has been effected and this has been noted by affixing the appropriate system generated stamp. | Y |  | Rejected |
|  | Operational Requirements |  |  |  |
|  | The system shall support Start-of-day, Cut-offs, End-of-Day and Multiple Clearing Sessions that must be synchronized the NBE’s clearing sessions;  The Vendor’s response must describe how the operating times of the various system components will be harmonized and controlled. | Y |  | Rejected |
|  | The End-of-day, for Multiple Clearing Sessions and report printing tasks must be completed in shortest possible time. | Y |  | Rejected |
|  | The System shall provide a high level of resilience/fault tolerance at Hardware, System Software and Application Level at the HO/Service Branch and Presenting Branch Sites resulting in high availability. | Y |  | Rejected |
|  | The system shall have a facility to maximize the automation of backup, archiving and retrieval processes.  The bidder shall propose a methodology for the backup, archiving and retrieval of MICR and Image data | Y |  | Rejected |
|  | The system must have auditable mechanisms for reporting failures in the various components of the system, e.g. communications, host Application Modules, end user devices, End-user Application Modules, database, etc.   * The bidder shall describe the mechanisms for reporting failures in the various system components and the Help Desk facilities for resolving of the problem of the users. | Y |  | Rejected |
|  | The system shall have fully automated control facilities – for initializing the systems, start-of-day, end-of-day, start-of-Clearing Session, end-of-Clearing Session, housekeeping/report printing, closedown, etc.   * The bidder shall describe how the system is operationally managed and what manual and automated processes are required. | Y |  | Rejected |
|  | * The bidder shall specify the Operating Systems, Systems Software such as Data Base Management Systems, Transaction Processing Monitoring Systems, Messaging Middleware, Security System Software including PKI, Access Control Software, Utilities, Archival and Retrieval Software, Back-up and Restore Software, any firmware, etc., | Y |  | Rejected |
|  | Where a business function is set by a parameter, the parameter must be able to be set by the appropriate business user. The timing of parameter changes (i.e. immediate or overnight) must be suited to the function being parameterized.  The bidder shall describe when, how and by whom parameters are set within the system. | Y |  | Rejected |
|  | The system shall have a facility that allow the Bank’s Head Office System Administrator to send free-format messages to individual, all, or selected groups of Presenting Branches. | Y |  | Rejected |
|  | Message, including free format and defined format messages, will be:   * cut-off warnings, * changes in operating hours, * Changes in Clearing Sessions,   notice of Participant suspension, etc. | Y |  | Rejected |
|  | The bidder shall clearly describe the protocols, messages formats, syntax, functionality, type of data, etc., and the corresponding International Standards used for the MICR and Images data files and messages for exchanging from/to the Presenting Branch to/from Head Office, etc. | Y |  | Rejected |
|  | Processing High Value payments (Outgoing and incoming ) |  |  |  |
|  | The application should have different menus to process high value payment instructions and high value cheque/CPO payments. | Y |  | Rejected |
|  | The application should able to scan the cheque image and register paid cheque/CPO no. for high value cheque payments. | Y |  | Rejected |
|  | The application should process high value payment instruction(MT103) and post it to the core banking system | Y |  | Rejected |
|  | The application should be able to validate debit account no., account balance and account restrictions at real time. | Y |  | Rejected |
|  | The application should validate the beneficiary banking details like bank and branch code ,and other details | Y |  | Rejected |
|  | The application should set preauthorization at the center at amounts above certain value to manage liquidity.  Note: - amount limit will be sets as per the bank rule/procedure. | Y |  | Rejected |
|  | The application should be able to generate MT 103 outward RTGS payment message as per swift message standard (Annex R). | Y |  | Rejected |
|  | The application should send the MT103 instruction to EATS –ACH through compatible file format and filed validation | Y |  | Rejected |
|  | The application should receive positive acknowledgment message for accepted files and negative acknowledgment message for rejected files from the EATS and instantly post the transaction to core banking. | Y |  | Rejected |
|  | The application should be able to post reversal entries for MT103 transfers that rejected by the users at the center, queued and rejected by the EATS at the end-of-day. | Y |  | Rejected |
|  | The application should able to generate automatic liquidity request or other means to monitor queued transactions and availability of balance at Net Settlement account for liquidity management. | Y |  | Rejected |
|  | The application should have the rejection reason for rejected transaction should be stated in understandable format (should be decoded). | Y |  | Rejected |
|  | The application should have report/inquiry facility that shows the status of MT103 transactions in EATS Per Branch, Bank, processing date, and other parameters. | Y |  | Rejected |
|  | The application should be able to receive high value payment instructions from EATS | Y |  | Rejected |
|  | The application should be able to validate the account number of the payee and make the necessary posting to the core banking system with single approval at CPC on batch level or any other mechanism (for controlling purpose). | Y |  | Rejected |
|  | The application should have restriction on NRNT , FCY, no post Credit, blocked and other related accounts, if any as per the bank procedure | Y |  | Rejected |
|  | The system should be made Sequence (FIFO) of message and non-duplication of control. | Y |  | Rejected |
|  | The application should queue the incoming high value of transaction at the center if the information are incorrect /for proper action/ | Y |  | Rejected |
|  | The application should allow users to make amendment on the payees account number /if required /. | Y |  | Rejected |
|  | The application should raise MT 202 message for any rejected /returned MT103 transaction to ordering bank through EATS | Y |  | Rejected |
|  | The application should have report /inquiry option that shows the inward high value payment (RTGS) by status credited to customers, rejected (returned to the drawer), and credited (account ,branch ,date …) | Y |  | Rejected |
| 18 | Bank to Bank Transfers (Outgoing and Inward ) |  |  |  |
|  | The application should able to accept Bank to Bank transfers (MT202) post it to the core banking system. | Y |  | Rejected |
|  | The application should validate details of bank information and mandatory fields of payment messages should be verified according to swift message standard. | Y |  | Rejected |
|  | The application should send the MT202 instruction to EATS –ACH through compatible file format and filed validation | Y |  | Rejected |
|  | The application should receive positive acknowledgment message for accepted files. | Y |  | Rejected |
|  | The application should receive negative acknowledgment message for rejected files from the EATS and instantly make the necessary reversal entry and send to core banking system. | Y |  | Rejected |
|  | The application should set preauthorization at the center for amounts above certain value (depending on bank procedure) to manage liquidity. | Y |  | Rejected |
|  | The application should be able to post reversal entries for MT202 transfers that rejected by the users at the center or not accepted by the EATS (i.e. for liquidity purpose) | Y |  | Rejected |
|  | The application should have report/inquiry facility that shows the status of MT202 transactions in EATS.(Per Branch and By Bank) | Y |  | Rejected |
|  | The application should validate debit account no. and account restrictions at real time | Y |  | Rejected |
|  | The application should be able to accept Incoming Bank to Bank transfers from EATS. | Y |  | Rejected |
|  | The application should be able to validate the Bank code, and make the necessary queue for authorization at CPC. | Y |  | Rejected |
|  | The application should be interfaced to core banking system and allow users to make amendment /adopt on the credited account number /if required /. | Y |  | Rejected |
|  | The application should able to un-pay the incoming RTGS by using MT202. | Y |  | Rejected |
|  | The application should be able to adopt incoming RTGS transactions at the head office. | Y |  | Rejected |
|  | The application should have report /inquiry option that shows Bank to Bank Transfers by status authorized, rejected (returned to the drawer), and credited account with specific date, range of date and other on demand selection criteria. | Y |  | Rejected |
|  | Bulk Payments Outward credit transfers |  |  |  |
|  | The application should able to initiate bulk credit payments. | Y |  | Rejected |
|  | It should able to validate debit customer account and balance. | Y |  | Rejected |
|  | It should made validation of payment message fields and avail alert message like invalid bank BIC address, invalid amount, etc. | Y |  | Rejected |
|  | It should able to receive debit confirmation message for accepted files and negative acknowledgement for rejected files form EATS and post the necessary accounting entry to the core banking system. | Y |  | Rejected |
|  | The application shall able to make credit transfer cancellation. | Y |  | Rejected |
|  | The application shall be able to receive direct credit transfer. | Y |  | Rejected |
| 20 | Outward Direct Debit transfers |  |  |  |
|  | The application should able to input Direct Debit items, batch files and send to EATS. | Y |  | Rejected |
|  | The application should able to validate credit customer account. | Y |  | Rejected |
|  | The application should able to receive Credit confirmation message for accepted files and negative acknowledgement for rejected files form EATS and able to post the necessary accounting entries to the core banking system. | Y |  | Rejected |
|  | The application shall be able to process direct debit rejection. | Y |  | Rejected |
|  | The application shall be able to receive direct debit transfer. | Y |  | Rejected |
| 21 | Inward SEPA Credit transfers |  |  | Rejected |
|  | It should able to generate transactions based on incoming file and Credit customer account | Y |  | Rejected |
|  | The application should generate a report showing the date, account, amount, order banking and other details of the incoming files. | Y |  | Rejected |
|  | The application should able to produce transaction summery details using different parameters. | Y |  | Rejected |
| 22 | Other functionalities | Y |  |  |
|  | The application should be able to receive MT900 (confirmation of debit on DBE’s Payment and Settlement account is debited at NBE) | Y |  | Rejected |
|  | The application should able to generate transaction based on the incoming file and the authorized user able to amend debit account no., add debit remittance information and authorize the transaction. | Y |  | Rejected |
|  | The application should be able to receive MT910, (confirmation of credit on DBE’s Payment and Settlement account is credited at NBE), The application should able to generate transaction based on the incoming file and the authorized user able to amend Credit account no., add credit remittance information and authorize the transaction. | Y |  | Rejected |
|  | The application should be able to receive and send MT999 messages (free format messages are used to send non-financial messages to other banks) per NBE standard  -The application should validate the participant bank BIC address.  -it should provide maker-checker arrangement | Y |  | Rejected |
|  | The application should be able to send MT920(Balance request for EATS) and receive MT941(Balance confirmation from EATS)  -The application should support the inquiry of balance confirmation request of any date | Y |  | Rejected |
|  | The application should be able to receive  MT 950 from EATS (the statement of each account maintained in NBE-EATS) | Y |  | Rejected |
|  | The application should be able Scan on –us cheques , Store the image ,post the transaction on the core banking system and avail the image on the customer statement | Y |  | Rejected |
|  | The application should allow corporate customers to scan cheques and send the image and the transaction to the bank clearing and payment. | Y |  | Rejected |
|  | The application shall incorporate bank charges i.e., service charge, commission(if any) | Y |  | Rejected |
|  | The application should have a reconciliation module that can reconcile all the transaction passed through it and make available the reconciled transactions as well the expectations reports (with an option of report and reconciliation period parameter i.e. daily, weekly, monthly) and facility for the users to reformat the data and import into other applications. | Y |  | Rejected |
|  | The application should allow corporate customers to scan cheques, validate the image and initiate transaction from their site. | Y |  | Rejected |
| 23 | *General Enquiries and Reports Requirement* |  |  |  |
|  | The application should be able pull at least the following reports and inquiries from NBE EATS ;   1. The states of payment and settlement account with the National Bank of Ethiopia ; 2. The transactions on payment and settlement account in particular the EATS Applications ; 3. The pending queue with individual instructions; 4. Bulk Net Settlement instructions or other Net settlement Instruction still to be processed; 5. Intraday credit position with the National bank(if any); 6. Ad hoc or on request reports not required as officially delivered versions printed from the screen at any time. | Y |  | Rejected |
|  | The application should be able to pull and retrieve the following inquires and reports with regard to MT103 and MT202   * Outward Remittance MT202,MT103 Status Enquiry – Today and per specified day * Outward MT202,MT103 Unauthorized Enquiry - Per Branch * Outward MT202 ,MT103Authorized Enquiry - Per Branch * List of Authorized MT202 ,MT103 outward Remit * List of Authorized MT202 – EATS Status * List of Authorized MT202 – EATS Status Wise * List of all uploaded transactions per specified day. | Y |  | Rejected |
|  | The application should be able to pull and retrieve at least the following inquires and reports in connection with MT 900 and MT910   * List of authorized MT900/910 * List of unauthorized MT900/910 | Y |  | Rejected |
|  | The application should allow users to export reports and inquiries to various file form ATS including Excel and PDF file. | Y |  | Rejected |

* 1. **Technical Evaluation for UV enabled MICR Cheque Scanner**

| **Sr. No** | **Component** | **Minimum Technical Requirement for Scanner** | **Bidder’s Response** | **Bidder’s Remark/Offer** | **Evaluation Result(Accept/Reject)** |
| --- | --- | --- | --- | --- | --- |
| **Moti** | **Moti** |
| 1 | UV Image | * UV Image enabled Cheque scanner | Comply | * The SmartSource UV Elite scanner is designed to meet all international regulatory and industry standards for processing ultraviolet (UV) security features on documents. This second generation UV scanner represents the maturation of UV check scanning technology which began with the highly successful SmartSource Professional UV scanner. | Accepted |
| 2 | UV & IQA imaging Speed (dpm) | * 50 documents per minute or higher with UV imaging and IQA engine analysis running. | Comply | * The SmartSource UV Elite can process checks at up to 155 documents per minute, making it the industry-leading performer in all areas. When capturing UV images however the speed drops to 80dpm with IQA engine analysis running. | Accepted |
| 3 | MICR Recognition | * E13B and CMC7 auto detect MICR reader; * Optical Character Recognition to enhance MICR Read (OCR-A, OCR-B); * Barcode software decoding; | Comply | * E13B and CMC7 read with auto-detect MICR Reader * OCR-A And OCR-B, E13B * Barcode fonts supported   Two(2) 0.50 inch OCR scan bands provided 96 characters per scan band  E13B MICR/OCR combined read | Accepted |
| 4 | Cheque Scanner type | * Table Top (suitable for Remote, Teller or Back office Capture)-most occupy small space with small foot print. | Comply | * The compact, UV Elite series scanner is optimized for front counter applications where desktop space is limited – yet has the processing speed and pocket capacity to excel in branch capture applications. | Accepted |
| 4 | Exit Pockets | * A single exit pocket capable of holding up to 30 or more documents. * Support Pocket Full sensor | Comply | * New output pocket with 150 document capacity * Pocket-full notification can be provided by the capture application | Accepted |
| 5 | Image scan mode Supported | * Supports both 16 and 256 levels of gray at 100dpi, 200dpi, 240dpi, 300dpi image resolution for front and rear Image | Comply | 1. 256 gray level support. 16 levels of gray scale can be provided by application conversion. 2. 100,200,240, and 300 dpi imaging is supported | Accepted |
| 6 | Document Feeder | * 100 document manual/automatic input feeder, with double feed sensors | Comply | * Up to 100 item hopper capacity. * Automatically opens for ease of use. Double feed detection is available | Accepted |
| 7 | ID Scan | * Straight path for Scanning of ID cards, Credit cards, Business cards, or other media of up to 0.030 inches (0.0762mm) thick for additional customer identification purposes etc. | Comply | * Alternate input accepts ID cards & other media up to 0.030 inches thick | Accepted |
| 8 | Image capture | * Resolution: 100, 200 or 300 dpi, selectable * Gray scale levels, 16 or 256 * Ultra Violet Imaging that detect the presence of UV ink logo, UV characters i.e. cheque serial number, UV fibers, etc. on the cheques * Grayscale Image to Black & White Image conversion | Comply | * The UV Elite supports the following resolution levels: * 100dpi/200dpi/240dpi/300dpi * It also supports 256 grayscale levels. 16 gray scale levels can be available through the application conversion. * The proposed scanner is equipped with UV cameras that enable banks to detect UV logos, characters and fibers by generating separate UV images. | Accepted |
| 9 | UV Print identification | * UV Ink printed Logo, account number, etc. identification for anti-counterfeit; * UV Fibers identification for anti-counterfeit; * UV band/overlays for ant-tampering evidence inspection and observation of cheques vulnerable areas such as – date, pay name, amount in words and figure, signature, and MICR code line for possible fraud and alteration; * UV Barcode identification and verification; and * Other UV ink print related security features to be introduced in the future. | Comply | * Taking advantage of Digital Check’s UV camera technology not available with older devices, the SmartSource UV Elite incorporates improved UV image quality and enhanced fraud detection capabilities. * The UV camera of the Elite is generating separate UV images that allow for identification of printed UV marks (logos, bands/overlays and any other UV printed security related features) on the documents for identifying possible fraudulent and suspect items. Any alteration or tampering of the printed security features will become visible on the UV generated images. * Any other UV features to be introduced in the future will also be detected. * UV Barcodes will also be identified and exposed on the UV images. Verification can be done by the application software through the scanner’s API. * The UV Elite is compatible with UV standards worldwide. | Accepted |
| 10 | UV Cheque for Anti Counterfeit and Anti Tampering control tasks | * Visual Cheque Image Verification to authenticate the genuineness of cheques such as counterfeit, tampering or alteration by displaying the electronic cheque image on the operator computer screen; * Automatic Recognition of counterfeit, tampering or alteration of cheques at the application level processing based on the UV image captured by the Scanner. | Comply | 1. The SmartSource UV Elite scanner incorporates an anti-fraud camera that uses ultraviolet (UV) and infrared (IR) light to detect security features not visible to the human eye or traditional scanning equipment. This technology is consistent with regulatory or bank standards for UV check security in all countries that have adopted UV technologies as a deterrent to check fraud. The UV properties of the physical document are recognized and alterations to the original document will cause a disturbance in the UV or IR coating in such a way that is invisible to the human eye on the physical document but visible in the UV image. 2. UV images can be passed on to the application software for Automatic Recognition of counterfeit, tampering or alteration of cheques | Accepted |
| 11 | Fulfilling Ethiopian Banks Cheque Standard | * The Cheque Scanner should have the capabilities and features to scan and capture information from instruments adhering to Ethiopian Banks Cheque standard and format | Comply | 1. The SmartSource UV Elite scanner is designed to meet all international regulatory and industry standards, including the Ethipian Banks Cheque standard and format, for processing ultraviolet (UV) security features on documents. This second generation UV scanner represents the maturation of UV check scanning technology which began with the highly successful SmartSource Professional UV scanner. | Accepted |
| 12 | Image captured formats Supported | * JPEG, BMP, CCITT, JPEG TIFF, CCITT Gr 4. Lowest image size compression using JPEG TIFF Image file format of about 8KB per image file. * JPEG Image quality software selectable parameters (2-55) to reduce image file size | Comply | 1. The scanner supports the required compression formats JPEG, BMP, CCITT, JPEG TIFF,CCITT Group 4 B/W,JPEG TIFF image compression can generate a file format of about 8Kb. 2. TIFF and JPEG image quality and size are programmable. The UV elit also supports 300 dpi color mode (reduced throughput ) 3. Front pseudo-color image, 24-bit bitmap (Infrared, Gray, Ultraviolet) 4. Rear color image, 24-bit bitmap (Red, Green, blue) | Accepted |
| 13 | Number of Images supported in one check pass | 1. Front Grayscale image Merged with UV, 2. Front Image as either UV only, UV BW or UV BW reversed for high security; 3. Front Grayscale image 4. Back Grayscale Image 5. Front BW image (Bitonal) 6. Back BW image (Bitonal) | Comply | All requested images are supported in one pass:   * Front UV (one of the following )   + Full resolution UV BW   + Full resolution UV inverted BW   + ½ resolution UV JPEG * Front High Res gray scale * Rear BW- full resolution * Front BW – full resolution * Rear Gray scale – ½ or full resolution   A 6th “merged” image would need to be created by the application from the above images. | Accepted |
| 14 | IQA Requirements | * Scanner must be fully compliant to Image Quality Assurance (IQA) standard as formulated by Financial Service Technology Consortium (FSTC) * All IQA parameter related changes must be made free of cost from time to time. | Comply | * Digital check scanner including the UV Elite, fully comply with ANSI standard, as well as with the FSTC IQA requirement for image quality defects. * Digital check frequently updates its software to incorporate new features and market requirement at no cost to customers. | Accepted |
| 15 | Connectivity/  Communication and software | * USB 2.0 and with Optional onboard USB hub host port * Common API/DLL for Windows Vista/7/8/10 (32/64 bit), * Ranger API for scanner and application portability Option * Optional TWAIN interface driver * Exerciser and diagnostic application | Comply | * USB 2.0 interface. No on-board USB Hub (external USB Hub can be attached) * Common API/DLL for windows 2000/XP/Vista/7 (32/64) is available. * Ranger API supports the UV Elite scanner and can be available * TWAIN API is available * Exerciser and diagnostics are available | Accepted |
| 16 | Endorsement | * Rear Ink jet Endorsement –1 or 4 lines (If one line printing, it must be capable of printing in two selectable positions. | Comply | * Ink jet print cartridge (600dpi)  One (1) to four (4) line endorsement Any True Type font Graphics capable for logos. * Three(3) levels of print quality (economy, standard or premium) | Accepted |
| 17 | Diagnostic Utility program (MTRs) | * On Board Maintenance Test Routines (MTRs) * On Board Diagnostics: Tests the functionality of the scanner * Power-on Self-Testing: Automatic self-testing and photocells calibration when powering the scanner. | Comply | * On Board Maintenance Test Routines (MTRs) can be offered by an application through the solution provider * On Board Diagnostics: Tests the functionality of the scanner. Can be offered by an application through the solution provider. * Power-on Self-Testing: Automatic self-testing and photocells calibration when powering the scanner. This is available by the scanner on-board. | Accepted |
| 18 | Documentation, Tools and Training | * Users/Operators Manual * Demo Cheque Scanning software for testing, the API (Application Programming Interface) with its SDK details & documentation, * Training on the use, operation and minor maintenance of the scanner * User/operator self-maintenance and diagnostic tools to reduce downtime * Software based service, maintenance, adjustment and calibration tools available for onsite tests and repair for easy and quick repairs. | Comply | 1. User Manual for the UV Elite is available 2. An API is available for integration and interfacing t their party software along with documentation. Demo Cheque Scanning and Testing and Diagnostics software is also include in the API 3. Training and Documentation will be provided 4. User/operator self-maintenance and diagnostic tools to reduce downtime will be provided and it is included in the User Manual and the API (Diagnostic /Testing Tools), and its documentation. 5. Software based service, maintenance, adjustment and testing will be provided as part of the API. | Accepted |
| 19 | Scanner Maintenance Log | * Non Erasable Maintenance and service History including  1. The Start date on which the scanner is first powered on 2. Number of cheques processed 3. Scanner logic ID and serial number within scanner firmware. 4. Scanner Power on cycles History, paper Jam history, Ink cartridge counter etc. 5. Scanner configuration parameters | Comply | Non Erasable Maintenance and service history is available as follows:   1. Start date is not available 2. Number of cheques is available 3. Scanner logic ID and serial number within scanner firmware is available. 4. Scanner Power on cycles History, paper Jam history, Ink cartridge counter etc. 5. Scanner configuration parameters are available | Accepted |
| 20 | Operating Systems Supported | * Windows Vista® (32 / 64 bit), * Windows 7® (32 / 64 bit), Windows 8® (32 / 64 bit), Windows 10 (32/64bit) | Comply | * Windows XP professional 32-bit-no longer supported as it has been discontinued by Microsoft. * Windows 7 Professional 32 and 64-bit * Windows 8/8.1 Professional 32 and 64-bit * Windows 10 Professional 32 and 64-bit | Accepted |
| 21 | Input Voltage: | * 100 to 240 VAC, 50/60 Hz | Comply | * 100 -240 VAC @50/60 Hz * Operating Power: 20W * Standby Power: 3W | Accepted |
| 22 | Warranty Period | * Minimum 12 months | Comply | * 12 months | Accepted |
| 23 | Scanner Demonstration | * Vendor/Supplier (or Partner) to demonstrate all features to meet all mandatory specifications | Comply | * Vendor/Supplier (Partner) can demonstrate the scanner for confirmation that it meets all mandatory specifications. Digital check personnel can also be present if required. | Accepted |
| 24 | Technical Support | * Vendor/Supplier (or partners) to demonstrate technical support ability, training, and experience with support plan methodology on response and resolution time windows | Comply | * Vendor/Supplier (Partner) can demonstrate technical support ability, training, and experience with support plan methodology on response and resolution time windows | Accepted |
| 25 | Reference sites/Installations | * Vendor/Supplier (or partners) to demonstrate similar references sites where product is installed in the last 2-5 years and relevant testimonials and a contact person of the respective institution (s). | Comply | Below we reference the Digital Cheque Scanning Machine we supplied for the Ethiopian Banks:   1. Awash Bank 2. Cooperative Bank of Oromia 3. Oromia International Bank 4. Bunna International Bank 5. Abay Bank 6. Debub Global Bank 7. Enat Bank   Please kindly find the enclosed testimonials | Accepted |

1. **Functional Requirement for Cheque Truncation System**

| **Sr. No** | **Functional Minimum Requirement** | **Feature** | **Bidder**  **Response** | **Bidder Remark** | **Evaluation Result(Accept/Reject)** |
| --- | --- | --- | --- | --- | --- |
| **Sybrin Systems** | **Sybrin Systems** |
|  | Scope of the Solution to be deployed |  |  |  |  |
|  | Supply, Installation and Commissioning of Cheque Truncation System (CTS) | M | Comply | Sybrin will be able to source hardware and supply our software to be deployed on said hardware and fulfil the need for a CTS solution. | Accept |
| 1 | General Mandatory Requirement of the CTS |  |  |  | Accept |
| 1.1 | The Cheque Truncation System (CTS) to be deployed at Head Office of the DBE shall have Clearing House Interface (CHI). | M | Comply | Sybrin has deployed similar solutions and will be able to implement the solution on infrastructure that supports a centralized structure with a central point of communication with the Clearing House. | Accept |
| 1.2 | The Clearing House Interface (CHI) shall provide connectivity between the Capture System of DBE branch and the Clearing House (CH) at the National Bank EATS. | M | Comply | Sybrin has complied to many countries' requirements to provide connectivity and transact successfully to their respective ACH transmission requirements to participate with interbank clearing. | Accept |
| 1.3 | The CTS of the Clearing House Interface shall support to: |  | Comply |  | Accept |
| 1.3.1 | * Scan and archive both “on-us and off-us” cheques deposited by the customers at DBE branch; | M | Comply | Sybrin's CTS solution allows for the digitization of cheques from the DBE branches. Once the images are scanned into Sybrin's system, the images with the relevant captured metadata can be shared within the Sybrin system, communicated to third party systems, processed through workflows, or archived. | Accept |
| 1.3.2 | * Provide a gateway for transmission of MICR data and electronic cheque images to Clearing House; | M | Comply | Sybrin has complied to many countries' requirements to provide connectivity and transact successfully to their respective ACH transmission requirements to participate with interbank clearing. | Accept |
| 1.3.3 | * Perform the required validations to ensure that MICR data and cheque image capturing process from a participant capture system is free from operational errors; | M | Comply | Sybrin has complied to many countries' requirements to provide connectivity and transact successfully to their respective ACH transmission requirements to participate with interbank clearing. Required validation for sending and/or receiving information is expected and will be handled by Sybrin. | Accept |
| 1.3.4 | * Generate exchange files/ posting files from MICR data and electronic cheque images for “off-us cheques” at each session for outward transmission to Clearing House; | M | Comply | Sybrin complies to file and/or API integration methods to meet the requirement stated by DBE. | Accept |
| 1.3.5 | * Sort “off-us cheques” MICR data and their related electronic cheque images into bundles as per Clearing House requirement and validate these bundles against the session window to which they will be attached at the Clearing House; | M | Comply | Sybrin adheres to the requirement to ensure the correct data is batched/ grouped/included in the integration method required by the Clearing House. | Accept |
| 1.3.6 | * authenticate and archive internally and transmit each “off-us” exchange file to Clearing House after digitally signed and encrypted as per Clearing House requirement; | M | Comply | Sybrin will be able to authenticate and archive the exchange files. Sybrin has security capabilities like digitally signing and encrypting information. These security methods are utilized at existing customers with similar requirements. | Accept |
| 1.3.7 | * settle internally all “on-us” cheques and archive accordingly; | M | Comply | Sybrin's system does settlement on "on­us" transactional information gathered from the branches or any other source. | Accept |
| 1.3.8 | * change posting file format and size, as and when required by the CH; | M | Comply | Sybrin's system can comply to changes that DBE need to adhere to set by the Clearing House. | Accept |
| 1.3.9 | * reconcile outward cheques presented after end of session at the Clearing House, by accessing reports as stated on the EATS System Rule; and | M | Comply | The statement seems to be incomplete. Sybrin's system can reconcile outward flows with the information received from the branches and the clearing house | Accept |
| 1.3.10 | * Receive digitally signed inward financial data and image exchange files from the Clearing House. | M | Comply | Sybrin's system is able to receive and process inward data (metadata and images) transmitted from the Clearing House. | Accept |
| 1.4 | The Clearing House Interface/Capture System with function of the UV enabled cheque scanner shall have the capability to control “Anti Counterfeit and Anti Tampering” by analyzing features and character of cheques such as: | M | Comply | Sybrin's system is able to utilize and interface with multiple cheque scanning devices that carries described functionality. | Accept |
| * + 1. 1.4.1 | * UV Ink printed Logo, account number, etc. identification for anti-counterfeit; | M | Comply | Sybrin has implemented functionality as described in systems with other customers. The technical detail will be work shopped to ensure full compliance. | Accept |
|  | * UV Fibers identification for anti-counterfeit; | M | Comply | Sybrin can utilise the scanner functionality that has the ability to address the requirement stated by DBE. | Accept |
|  | * UV band/overlays for anti-tampering evidence inspection and observation of cheques vulnerable areas such as – date, pay name, amount in words and figure, signature, and MICR code line for possible fraud and alteration; | M | Comply | Sybrin can utilise the scanner functionality that has the ability to address the requirement stated by DBE. | Accept |
|  | * Barcode identification and verification; | M | Comply | Sybrin can utilise the scanner  functionality that has the ability to address the requirement stated by DBE. | Accept |
|  | * Other UV ink print related security features to be introduced in the future. | M | Comply | Sybrin can utilise the scanner  functionality that has the ability to address the requirement stated by DBE. | Accept |
| 1.5 | The Clearing House Interface/capture system shall support: | M | Comply | Sybrin supports the requirements that  should be produced by the scanning devices when DBE needs to send this information to the clearing house. | Accept |
|  | * to generate gray scale, black and white and UV and combined UV and gray scale electronic images during scanning cheques; | M | Comply | Sybrin is also capable of consuming the data transmitted from the clearing house to DBE regarding the described images requirements | Accept |
|  | * Visual Cheque Image Verification to authenticate the genuineness of cheques such as counterfeit, tampering or alteration by displaying the electronic cheque image on the operator computer screen; | M | Comply | Sybrin supplies a Technical Verification  screen that allows the capability described in the requirements. | Accept |
|  | * Automatic Recognition counterfeit, tampering or alteration of cheques at its application level processing; | M | Comply | Sybrin's Nitro platform has the capability  to integrate with devices that offer this functionality on a hardware level toproduce the statistics to a workflow where Sybrin can push suspected items to the workflow for processing. | Accept |
|  | * Image Replacement Document (IRD) printing that is printing of image / cheque replacement documents when physical items are required; | M | Comply | Sybrin can print an IRD. | Accept |
|  | * Image Quality Assurance (IQA) as formulated by Financial Service Technology Consortium (FSTC); | M | Comply | Sybrin can comply with IQA | Accept |
|  | * To provide/generate various reports and audit trial reports that could help control staff of participants to oversee the cheque truncation operations. | M | Comply | Sybrin's system supplies reports and audit reports. Sybrin allows the ability for custom reports and audit reports as required and scoped by DBE. | Accept |
| 1.6 | The proposed solution should be able to cater to Bank’s clearing system and should provide Straight through Processing for inward clearing to the Bank’s Host/ CBS. | M | Comply | Sybrin's CTS solution can supply STP functionality throughout the system as agreed and where possible. | Accept |
| 1.7 | The proposed system should provide for Web-based ad-hoc query, Web-based APIs for batch queries and application specific integration, multiple participant access control, PKI integrated security, flexible database management, indexing, etc. | M | Comply | Sybrin's CTS solution complies with the requirement stated by DBE. | Accept |
| 1.8 | The proposed solution should provide the capture system along with the consolidated application software to receive from the capture system i.e. to and from branch host to CHI, validate, build, and send clearing data (MICR data and Images) including returns. | M | Comply | Sybrin's CTS solution consists of a comprehensive end-to-end processing capability that covers the requirement stated by DBE. | Accept |
| 1.9 | The system should receive processes, validate, and reconcile clearing data (MICR data and Images) including returns. | M | Comply | Sybrin’s CTS solution allows the capability to securely process transactional data through outward, inward, and return streams. | Accept |
| 1.10 | It should provide interfaces to the capture, archive, Host and other System. | M | Comply | The requirement is not very clear.  Sybrin is able to interface with 3rd party systems and provide APIs that allows for the access of information in Sybrin to 3rd parties systems securely. | Accept |
| 1.11 | It should control and monitor the outward and inward clearing (MICR data and Images) process by providing: | M | Comply | This requirement is addressed in more detail with the grouped requirements to follow. | Accept |
| 1.12 | User Interfaces to monitor and control of the clearing processes, administer the clearing processes such as participation management, payment type definition, calendar, clearing session definition, return codes, exclude a branch and unwind all transactions, etc. | M | Comply | Sybrin's CTS system has the capability to do maintenance and exception handling within the system. A workshop will be needed to ensure the requirements are understood, documented, and addressed in full. | Accept |
|  | * Security to all financial transactions and provides the security by integrating the PKI for privacy, authentication, data integrity, and non-repudiation using the digital signature. | M | Comply | Sybrin can comply with the security requirements stated by DBE. | Accept |
|  | * The system should process, route and archive the images as per the requirements of the NBE guideline and standard, etc., apart from generation of reports, providing research facilities, statistics, billing, and the like. | M | Comply | Sybrin's CTS system can process, route, and archive images as required by DBE. The NBE guideline will need to be shared and made available to Sybrin to ensure compliance. Sybrin will be able to supply information to other parts of the business that will need to be workshopped and agreed upon. | Accept |
| 1.13 | The system should be user friendly, modular, flexible for future enhancements. | M | Comply | Sybrin's Nitro platform is at the forefront of innovation and Sybrin is a leader in technology. | Accept |
| 1.14 | The system should have storage and retrieval module which is robust, scalable, flexible, secured so that images and data are temper proof and reliable. | M | Comply | Sybrin's platform can store and retrieve images on a scalable and secure platform with an industry leading high availability capability. | Accept |
| 1.15 | The system should comply and provide for appropriate security so that images and data remain safe and retrievable till the duration stipulated by NBE. | M | Comply | Sybrin stores and secures all data within the system as per DBE requirements. | Accept |
| 1.16 | The system should have “CD Delivery System” capability to cut and deliver drawee and/or presenting bank and/or branch wise image and MICR data files of cheques on a CD. | M | Comply | Sybrin's CTS system complies with the Continuous Delivery of services to the end user and expected third parties as required by DBE. | Accept |
| 1.17 | One Month Support after implementation. | M | Comply | Sybrin will ensure that the implementation of the system is followed by an agreed stability period. | Accept |
| 1.18 | The proposed system shall support Oracle database, preferably 12c version, and shall be installed/run on Linux operating system. | M | Comply | Sybrin is compatible with the listed software. | Accept |
|  | Outward Clearing Module |  | Comply |  | Accept |
|  | The system at the truncation point shall capture cheques image and the full MICR (Magnetic Ink Character Recognition) code line data both ON-US and OFF-US. | M | Comply | Sybrin's CTS solution caters for the compliance to the country and bank's MICR requirements to capture accurate data. | Accept |
|  | The system shall read particulars available on the MICR Code line as specified by NBE and create data file for further processing. | M | Comply | Sybrin's CTS solution can comply with the MICR Code line specifications specified by the NBE. | Accept |
|  | The system shall have the functionality of repairing MICR data fields through supervisor approval when failed to be red automatically by the scanner. | M | Comply | Sybrin's CTS solution at a teller and supervisor level has the capability for human intervention and correction where any automated process fails | Accept |
|  | The system shall have a provision for performing data entry of additional fields such as customer name, Reject, Repair, Balancing, etc. to be defined by the bank. The details of these shall be made available during implementation. | M | Comply | Sybrin's CTS system allows for opportunity at a teller and/or back office stage to add additional data to a transaction through an automated API, manual intervention, and/or additional required automated processing. | Accept |
|  | The system shall support maker-checker during image scanning and data capturing process as per bank requirement such as transaction amount, Repair, Reject, etc. | M | Comply | Sybrin's CTS solution has the capability for maker-checker functionality within the cheque processing workstream. A workshop will allow the opportunity to discuss and unpack STP and maker- checker capabilities. | Accept |
|  | The system shall support to prompt/signal to the maker & checker indicating that the image quality defects, is found needs verification of checker. | M | Comply | Sybrin's CTS solution can route transactions through workstreams, and verification steps defined and required by DBE. | Accept |
|  | The system shall support centralized digital signature to be applied automatically at the time of checking (approval). | M | Comply | The Sybrin platform has the capability to do centralized signatures. The application will need to be workshopped as the information in the requirements is very high level of application. | Accept |
|  | The system shall provide the capabilities for branches/truncation point to track the status of the files/images sent to/ received from EATS through Head Office. | M | Comply | Sybrin can deliver dashboards and tracking mechanisms throughout the systems. More information around EATS needs to be workshopped to ensure that the requirement is fully understood and adhered to. | Accept |
|  | The system shall support to assign/attach a unique key / identifier to identify and link the image of each instrument with its MICR line data as well as for any other cross reference which may be required for the entire clearing process using truncation as also any post-processing reconciliation. | M | Comply | Sybrin's CTS solution caters for the unique identification of records and successfully linking corresponding images and/or linked transactional records for reconciliation or batching requirements | Accept |
|  | The system shall support transmitting captured images and MICR data from Branches/Point of Truncations to consolidation Server at Head Office via the Bank’s Network in user defined ways such as batches of instruments (images and data) or in real time i.e. instrument by instrument (images and data) or through CD/magnetic media. | M | Comply | Sybrin's CTS solution is designed around a branch and CPC (Central Processing Centre) infrastructure design. Branch information and images will be consolidated and stored in the CPC. The CPC will be the single point of contact to and from the clearing house. | Accept |
|  | The system shall support to be digitally signed individual Images and the MICR Code Line data as well as their respective files using the Public Key Infrastructure. | M | Comply | Sybrin's platform supports security methodologies like Public and private Key infrastructure. | Accept |
|  | The CTS to be installed at Head Office shall receive the images and the MICR data from the branches where cheques have been truncated for outward clearing. | M | Comply | Sybrin's CTS solution is designed around a branch and CPC (Central Processing Centre) infrastructure design. Branch information and images will be consolidated and stored in the CPC. The CPC will be the single point of contact to and from the clearing house. | Accept |
|  | The CTS to be installed at Head Office shall have the provision to carry out clearing cycle-wise balancing; consolidation of all the images and MICR data received and make user defined batches to be forwarded to the EATS as required by NBE. | M | Comply | Sybrin's CTS solution offers a central component that will handle 3rd party interfaces for information distribution and central processing requirements. | Accept |
|  | The CTS to be installed at Head Office that shall receive the files containing the MICR data and images from the various branches/Point of Truncations: | M | Comply | Sybrin's CTS solution directly streams and stores the transactional information centrally and will not need to use files to transfer data within the system from branches to the central processing centre. | Accept |
|  | * consistency checks that the data and the images only are received and that the complete MICR line for each image has been received and whether for each MICR line received there is a corresponding image; | M | Comply | Sybrin's CTS solution caters for the integrity of data on point of capturing and follows through with integrity throughout the system. | Accept |
|  | * checks the correctness of each filed in the batch file are in line with NBE’s EATS requirement | M | Comply | Sybrin's CTS solution will ensure the validation requirements are met to ensure batch files are complying to specification set by the NBE. | Accept |
|  | * produce exception report/s for excess /short images, excess / short MICR line data and forward them to the presenting branch in a message based interface | M | Comply | Sybrin's CTS solution has exception handling functionality to comply with the requirements set by DBE. | Accept |
|  | * segregate the data and images into “ON-US (intra-bank) and OFF-US (inter-bank) | M | Comply | Sybrin's CTS solution provides the capability to easily identify intra-bank and inter-bank information within the system. | Accept |
|  | * perform consistency checks like images and data file match, image quality verification, availability of the entire MICR line for each image shall have to be done | M | Comply | Sybrin's CTS solution has verification capability to comply with the requirements set by DBE. | Accept |
|  | * Process/transmit the ON-US (intra-bank) MICR data and cheques images to the bank’s CBS without manual intervention | M | Comply | Sybrin's CTS solution will be able to implement STP and adhere to the requirement stated by DBE. | Accept |
|  | * Process/transmit the OFF-US (inter-bank) cheques images and MICR data electronically to NBE’s Clearing House System (EATS) using the National Payment System Network. | M | Comply | Sybrin's CTS solution will be able to implement STP and adhere to the requirement stipulated by DBE. | Accept |
|  | * write the OFF-US (inter-bank) cheques images and MICR data files on magnetic / electronic media to be send to NBE | M | Comply | Sybrin's CTS solution can comply with the interface requirements of the NBE in full. | Accept |
|  | * The System shall have enquiry facilities which will enable tracking of the status of the cheques images and MICR data submitted by branches/truncation points in batches or real-time basis | M | Comply | Sybrin's CTS solution has the capability of tracking and monitoring the progress and flow of data throughout the system. Sybrin will be able to query the status of information on 3rd parties as required by DBE. | Accept |
|  | The System shall have a provision that the Image and Data forwarded to the Clearing House/NBE have fulfilled all the data format and content requirements of NBE. | M | Comply | Sybrin's CTS solution can comply with the interface requirements of the NBE in full. | Accept |
|  | The application should be able to show/give alert the number of cheques image and transactions to be exported to the core banking system and ACH –EATS | M | Comply | Sybrin's CTS solution will be able to show/alert DBE and its personnel as to what is happening within the system through many visual methods and screens. | Accept |
|  | The application should be able to give the user the option to modify/delete the data or the captured image | M | Comply | Sybrin's CTS solution can comply with the requirement to modify or delete the data as needed through proper processes. | Accept |
|  | The application shall validate whether the cheque amount is within the range of bulk cheque process limit as per NBE rules (parameter) and also identify the maximum length of each fields that is supported. | M | Comply | Sybrin's CTS solution has the capability to set various transaction limits throughout the system. Sybrin's CTS solution can comply with the interface requirements of the NBE in full. | Accept |
|  | The application should be able to validate the Payees account maintained in the core banking at real time. | M | Comply | Sybrin CTS solution allows for account validation at the point of capture. | Accept |
|  | The application should be able to give alert on successful completion of transaction (the image and data capture). | M | Comply | Sybrin's CTS solution gives visual confirmation after full validation has passed that the transaction is successful to the end user. | Accept |
|  | The application should receive acknowledgement from EATS. | M | Comply | Sybrin's CTS solution can comply with the interface requirements of the NBE in full. | Accept |
|  | The application should post on the core banking of customer statement takes place only when cheque is cleared (at exposure date) until then the application can use suspense accounts or other suggested mechanisms. | M | Comply | Sybrin's CTS solution can interface with the CBS to submit transactional instructions. | Accept |
|  | The application should be able to receive rejection files from the ACH through EATS and make appropriate reversal. | M | Comply | Sybrin's CTS solution can comply with the interface requirements of the NBE in full. | Accept |
|  | The application should be able to apply accounting entries for rejected files for accepted cheques per the ACH rule | M | Comply | Sybrin's CTS solution can comply with the interface requirements of the NBE in full. | Accept |
|  | The application shall provide alternate option to cancel cheques that could be returned by participant bank manually (without being rejected on EATS) and also able to pass the considered necessary accounting entries. | M | Comply | Sybrin's CTS solution can comply with the interface requirements of the NBE in full and will be able to handle the exception listed in the requirements. A workshop will be required to ensure the exception is understood and complied with fully. | Accept |
|  | The application should have a report/inquiry that shows daily outward check status sent to EATS; the accepted and rejected checks by participant bank, branch by booking date, value or Clearing date. | M | Comply | Sybrin's CTS solution has reports that will be able to supply the required information as per the requirement stated by DBE. | Accept |
|  | The application should able to provide all information related to a single cheque no. by accepting a single parameter (cheque no., amount, processing date, etc) from the user. | M | Comply | Sybrin's CTS solution has the search capability described in the requirement. Entering a single field such as the amount could return more than one record that can match the criteria. | Accept |
|  | The application shall have enquiry at branch level as well as at center that can enable tracking of the status of the batches submitted by branches. | M | Comply | Sybrin's CTS solution will be able to comply with the requirement stated by DBE. | Accept |
|  | The application should be able to inquiry list all of all processed cheques ; authorized, unauthorized, deleted by specific date and range of dates and make inquiry by amount of transaction and range of transactions ,cheque numbers ,bank and branch codes and other parameter to provide capabilities for branches to track status of the files sent to/received from EATS. | M | Comply | Sybrin's CTS solution allows for the search capability described in the requirement. | Accept |
|  | Inward Clearing Module |  | Comply |  | Accept |
|  | On receipt of the images and data from Clearing House, the CTS system installed at the bank’s Head Office will verify the files/individual images and MICR data for digital signature under Public Key Infrastructure (PKI). | M | Comply | Sybrin's CTS solution can comply with the  interface requirements of the NBE in full | Accept |
|  | The CTS system installed at the bank’s Head Office shall have the functionality to return cheques for any valid reason(s) specified by the NBE | M | Comply | Sybrin's CTS solution can return transactions in line with the NBE specification and return reasons with their respective codes. The reasons and respective codes can be maintained by the system. | Accept |
|  | The system shall provide for the processing of unpaid cheques, the matching system for locating the returned images / data and the associated handling routines. The Vendor has to describe clearly the return process. | M | Comply | Sybrin's CTS system has a return process which has been developed and implemented in over 20 countries. It consists of reconciliation processes. More detail can be shared during the design process. | Accept |
|  | Whenever the presenting branch has handed over the physical cheque to the drawee bank, the system shall have a facility to mark that the physical cheque is no longer available with it from the date it has been handed over to the drawee bank along with some additional details. | M | Comply | Sybrin's CTS solution does not currently track the location of the physical instrument. Sybrin's Nitro platform allows for adding such functionality if required by DBE. This would be customised according to the requirement. | Accept |
|  | The system shall be capable for storing Return Reasons and corresponding codes and properly map during returning the cheque. | M | Comply | Sybrin's CTS solution allows the return  reasons with their respective codes to be maintained by the system. | Accept |
|  | The System should be integrated with Core Banking System for the return processing process. | M | Comply | Sybrin's CTS system will interface with the CBS for many interactions which includes this requirement. | Accept |
|  | The CTS system installed at the bank’s Head Office shall verify the images and data shall upload and posted to the CBS database | M | Comply | Sybrin's CTS solution will be able to  ensure the data integrity when uploading to the CBS. Images are stored within Sybrin and the metadata will be uploaded to the CBS as required. The originating data will be stored in Sybrin. | Accept |
|  | The system shall provide for storage of images and MICR data received from EATS at the Head Office. | M | Comply | Sybrin's CTS solution complies with this requirement. | Accept |
|  | The System shall have the facilities to view the front and reverse side of cheque images along with the MICR data of individual instruments using any standard browser interface for passing of cheques. | M | Comply | Sybrin's CTS solution complies with this requirement | Accept |
|  | The System shall have the facilities of various features for processing/viewing of images like reverse video, zoom, black and white views, cropping, flip, rotate, gray scale, UV image etc. | M | Comply | Sybrin's CTS solution complies with this requirement | Accept |
|  | The System shall have the facility to the Drawee/payee bank Branches to: | M | Comply |  | Accept |
|  | withhold cheques and ask for the physical instruments from the presenting banks | M | Comply | Sybrin's CTS solution can be configured to allow for a workstream and ACH interface to request information from OLB. A workshop around this functionality is be recommended to fully understand the requirement. | Accept |
|  | * mark and store these items separately and shall allow them to be retrieved later and processed individually for finality | M | Comply | Sybrin's CTS solution allows for the storage of images with their relative metadata that can be further enriched via required workflows | Accept |
|  | * Indicate that the physical instrument in such cases has been retained. | M | Comply | Sybrin's CTS solution does not currently track the location of the physical instrument. Sybrin's Nitro platform allows for adding such functionality to its platform through its roadmap. | Accept |
|  | * The proposed system shall support Application Programming Interface (API) to third party signature verification systems for automating the process of signature verification. | M | Comply | Sybrin's CTS solution has the API capability to integrate with third party systems to display and verify signatures within the system. | Accept |
|  | The proposed system shall support that the Signature Verification application to provide facilities to authorized user/authorizer to visualize the signature from core banking server/ signature database server while verifying manually the signatures from the images of the cheques with the signatures stored in the data server/ core banking server. This should happen on the same screen i.e. image of instrument and specimen signature one above the other with various option to view i.e. upside down, zooming etc. | M | Comply | Sybrin's CTS solution has the API capability to integrate with third party systems to display and verify signatures within the system. | Accept |
|  | The System shall reformat (if necessary) the posting data to the specific needs of the CBS. | M | Comply | Sybrin's CTS solution will enrich data with interactions with third parties and manual screens, where applicable to comply with CBS requirements | Accept |
|  | The system should provide user defined functionality for fraud detection/alerts for large value debits. | M | Comply | Sybrin’s CTS solution can handle transactions based on value limits (High value processing). Sybrin also has AML/FRM modules that can be explored to extend the capabilities at a later stage. | Accept |
|  | The application should have the facilities to view the front and reverse of cheque images along with the MICR data of individual instruments using any standard browser interface for passing of cheques. | M | Comply | Sybrin’s CTS solution has the capability described in the requirement in terms of viewing the images and their respective metadata. | Accept |
|  | The application should retain /show files in the center for any validation error, e.g. for missed branch codes and the user at CPC should able to take further action. | M | Comply | Sybrin’s CTS solution has workflows to ensure possible problematic or missing information is acquired in the correct logical areas and ensure that unnecessary work eliminated. | Accept |
|  | The application should send validation request to the core banking system to validate the cheque number, account restrictions and consequently the authorized users can take appropriate action (pay /reject). | M | Comply | Sybrin’s CTS solution can use API communication to apply validation to transactional data with other systems. | Accept |
|  | The application shall provide facilities to authorized user/authorizer to visualize the signature verification. This should happen on the same screen i.e. image of instrument and specimen signature one above the other with various option to view i.e. upside down, zooming etc. | M | Comply | Sybrin’s CTS solution has the API capability to integrate with third party systems to display and verify signatures within the system. | Accept |
|  | The application should post to the core banking system for accepted payments transactions. | M | Comply | Sybrin’s CTS solution uses API functionality to post transactions to the CBS. | Accept |
|  | The application should send rejection file to the ACH-EATS for rejected transactions. | M | Comply | Sybrin’s solution can comply to changes that DBE need to adhere to set by the clearing house. | Accept |
|  | The application should have a report /inquiry facilitate that shows incoming cheques by bank, branch, cheque number, business date, clearing date, transaction status, transaction reference, specific date, range of date and other on demand selection fields. | M | Comply | Sybrin’s CTS solution can allow for the search functionality requested and report requirements as specified by DBE. | Accept |
|  | Identification of Image and Data |  | Comply |  | Accept |
|  | The system should have provision of unique ID/number to track the front and back images of an instrument with the corresponding MICR Data of that Instrument and the linkages such as Before handing over to Head Office, after submitting to NBE’s EATS, after archival and storage, for unpaid return instrument processing, etc. | M | Comply | The Sybrin CTS solution will handle the storage of images and the metadata that is coupled to the respective images. | Accept |
|  | The system shall have user defined format of Endorsement/Identification Number (ID) to be generated by the system such as inter alia, the time, date, cheque no, sort code of the presenting branch, etc. | M | Comply | This requirement will need to be workshopped as there are various options of how this can be handled by the system. Sybrin's understanding of the requirement at this stage gives us the confidence that we are complying with the requirement. | Accept |
|  | The system shall have the facilities of printing / at least one line endorsement identifier/s on the reverse side of the cheque and the printing thereon shall be large enough to enable reading and identification on the browser, apart from other user friendly features at the stage of image capture itself. | M | Comply | This requirement will need to be workshopped as there are various options of how this can be handled by the system. Sybrin's understanding of the requirement at this stage gives us the confidence that we are complying with the requirement | Accept |
|  | The system shall be capable of endorsing the cheque if presented again by the branch at different places i.e. if endorsement is done at one place then second endorsement shall at another place. | M | Comply | This requirement will need to be workshopped as there are various options of how this can be handled by the system. Sybrin's understanding of the requirement at this stage gives us the confidence that we are complying with the requirement | Accept |
|  | Sorting and Batching of MICR Data |  | Comply |  | Accept |
|  | The system shall have the facilities to Sort the MICR Data on various parameters or a combination of parameters e.g. sorting of the MICR Data of all the instruments above a threshold amount and / or sorting of MICR Data of instruments of a particular presenting bank branch on a given clearing cycle, date and between specified amount ranges etc. | M | Comply | Sybrin’s CTS solution handles data within the system to ensure the specified requirements are adhered to. | Accept |
|  | The system shall have facilities of merging/ batching of MICR Data received from various branches for generation of a consolidated transmission to NBE’s EATS. | M | Comply | Sybrin’s CTS solution handles data within the system to ensure the specified requirements are adhered to. | Accept |
|  | The system should support Data and image formats of the files to be sent to the presenting and drawee bank branches shall be in conformity with the exact structure and format set by NBE. | M | Comply | Sybrin's CTS solution will be able to comply with the image standards used to capture the image and be able to comply with the standards set by NBE. | Accept |
|  | Reconciliation |  | Comply |  | Accept |
|  | The system shall provide reconciliation and reporting tools: | M | Comply | Sybrin’s CTS solution has the capability for reconciliation and reporting | Accept |
|  | with various combinations such as for images alone, MICR Data alone, images and / or MICR Data in a juxtaposed/ compared form etc. | M | Comply | The requirement is not clear from this document. From our understanding of the requirement at this stage, Sybrin handles this requirement within the system that does not need intervention. | Accept |
|  | * Which will be parameter driven | M | Comply | The requirement is not very clear from this document. From our understanding of the requirement at this stage, Sybrin handles this requirement within the system that does not need intervention. | Accept |
|  | * Facilitates dynamic generation of queries and reports as part of the system. | M | Comply | As per Sybrin's understanding of this requirement at this stage, Sybrin's CTS solution caters for this requirement. | Accept |
|  | * The system shall provide a facility for the users to reformat the data and import into other applications. | M | Comply | Sybrin's Nitro platform has the capability for rapid development of export capabilities to comply with the requirement. | Accept |
|  | The system shall provide online reconciliation and research tools between the branches and Head Office point of truncation. | M | Comply | As per Sybrin's understanding of this requirement at this stage, Sybrin's CTS solution caters for this requirement. | Accept |
|  | The system shall have tools to track whether the single and / or multiple and / or groups and / or file(s) of (entire) Images and MICR Data which have been dispatched from branches / truncation point have been received by Head Office and vice versa. | M | Comply | Sybrin's CTS solution provides granular level information regarding the state of all processes in the solution to allow for easy oversight on all data movement | Accept |
|  | Security |  | Comply |  | Accept |
|  | The system shall have the Public Key Infrastructure (PKI) to secure the data and image transmission especially between the Capture System (Bank Branches/Truncation points) to the Head Office. | M | Comply | The Sybrin platform fully manages its own PKI Scheme for the purpose of secure storage and transit of all data | Accept |
|  | The system shall provide explicitly for digital signature based data transfer under the PKI especially between the Capture System (Bank Branches/Truncation points) the head office. | M | Comply | Sybrin's CTS solution is one system, and the handling of all data images are handled securely within the system that only leaves the eco system through API's or other interface requirements set by DBE. | Accept |
|  | The system shall provide for encryption both for data and image transfer and data and image storage to ensure that data transmitted/stored cannot be subjected to alteration at a later point of time and legally recognized as per the laws of the country. | M | Comply | Sybrin's CTS solution caters for a variety of encryption methods and standards to secure data across the system | Accept |
|  | The system shall have minimum features like user authentication, storing images in encrypted form etc. | M | Comply | The Sybrin platform has all of these requirements built in supporting multiple encryption types and advanced user authentication schemes such as LDAP, SAML, and Oauth. | Accept |
|  | The system shall have a facility that Images will be encrypted before storing on disk using digital signatures so that misuse/alteration of images will not be possible at OS level. | M | Comply | The Sybrin platform at the point of capture digitally signs the image to ensure its integrity, the image is encrypted in transit and at rest in the file store | Accept |
|  | The system shall have an application level security features to be used while storage of images and data and during transmission. | M | Comply | Sybrin's CTS solution has built in capabilities to provide for secure transmission and storage of data and files | Accept |
|  | The System shall be fully integrated with the Public Key Infrastructure (PKI) using the Digital Certificates. | M | Comply | Sybrin's CTS solution can comply with the usage of Digital Certificates. | Accept |
|  | The system must apply rigorous controls to ensure the security of Images, MICR data transactions, files and associated messages in transit. These shall at least include :( Proof of endpoints)   1. unique sequence numbering; 2. encryption 3. authentication and double authentication; 4. integrity; 5. immediate delivery acknowledgement and notification 6. automatic reconciliation of acknowledgements; 7. duplicate detection; 8. digital signature based non-repudiation of both source and origin; and 9. Complete, secure audit trail. 10. It is anticipated that the system shall have two discrete security domains, as follows : | M | Comply | Sybrin's Nitro Platform complies to most of the points and at the very least has partial compliance to some points. The capability of the platform allows for the partial compliance points to be progressed to a full compliance status once more detailed discussions and workshops are taking place between Sybrin and DBE. | Accept |
|  | The system will have Presenting Branch security domain that will send/receive Outward/Inward Clearing Images, MICR data transactions, files and associated messages, receive acknowledgements and enquiries from the Head Office and will receive acknowledgements, enquiry responses; will send/receive Outward and, Inward Return Clearing Images, MICR data transactions, files and associated messages, and rejected MICR data transactions and files related messages, reports. | M | Comply | Sybrin in assuming the communication from head office in this requirement will be going to the clearing house. If our assumption is correct, Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | * 1. The system will have the Head Office System domain, which receives Images, MICR data transactions, files and associated messages from Branches/point of truncations, processes them for generating the settlements, safe stores it for archival and retrieval and forwards them to NBE’s EATS. (Please note that NBE has established secured connection between Bank’s Head Office and EATS) | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | * 1. Key Usage and Management: | M | Comply | Sybrin's platform allows for key usage and maintenance | Accept |
|  | For performance considerations, confidentiality will be implemented through use of symmetric cryptography. | M | Comply | Sybrin's Platform supports both symmetric and asymmetric encryption. | Accept |
|  | * Integrity digests may be calculated using a one-way function (e.g. MD5, SHA-1) or Message Authentication Codes (MACs) may be calculated using a recognized methodology such as cipher block chaining. | M | Comply | Sybrin's Platform supports this functionality and provides additional algorithms | Accept |
|  | * For greater assurance, non-repudiation of both source and destination shall be implemented using recognized asymmetric cryptographic methods such as digital signature. | M | Comply | The Sybrin platform fully supports asymmetric encryption with multiple options available such as PGP and RSA | Accept |
|  | * Symmetric keys used for message encryption shall only be used in one direction (i.e. there will be “send” and “receive” key for each link). | M | Comply | Sybrin's Nitro Platform complies to the encryption methods stipulated by DBE. | Accept |
|  | * All cryptographic operations shall be performed in tamper resistant hardware, sited in secure premises. | M | Comply | Sybrin's Platform provides support for the integration of HSM devices | Accept |
|  | * All cryptographic keys shall be encrypted under the appropriate variant of the domain master key (which will ensure sound key separation and minimize the potential for procedural attacks), when stored outside the tamper resistant module. | M | Comply | Sybrin's Platform supports both symmetric and asymmetric encryption. | Accept |
|  | * The Vendor’s response shall propose, in detail, a key management scheme supported by user procedures, which shall maximize the automation of key management without compromising its security. | M | Comply | Sybrin's encryption technology provides the following functionality:   * The data protection layer provides support for the following key encryption types for data level encryption:   o Passphrase  o Certificates using provided key lengths and defaulting to 2048-bit keys  o RSA encryption algorithm o PGP encryption algorithm   * Content is encrypted using the following supported algorithms:   o Passphrase (via zip file format) o AES256 encryption algorithm with support for the Rijndael with both Electronic Code Book (ECB) and Cipher Block Chaining (CBC) encryption modes o TripleDes  o RSA encryption algorithm o PGP encryption algorithm o Supports digitally signing of xml files using SignedXML   * BCrypt hashing is used to secure sensitive user information as a one­way hash (based on the blowfish cipher) * RSA (with a key size of 2048) encryption for hashing of user session values whilst using the JSON Web Tokens (JWT) standard * Supports file data signature verification * SHA256 is the default hashing algorithm used * Settable initialization vector for Cipher Block Chaining encryption mode. | Accept |
|  | * Asymmetric keys used for key management shall have a length of not less than 1024 bits. | M | Comply | Sybrin's Platform supports both symmetric and asymmetric encryption. | Accept |
|  | * Vendor’s response shall describe the security architecture (including algorithms used) and describe the results of any independent security audits the system has been subject to. | M | Comply | Sybrin's encryption technology provides the following functionality: | Accept |
|  | * All symmetric key operations shall use “Triple DES” or equally secure technology. | M | Comply | Sybrin’s platform supports 3DES and AES | Accept |
|  | * The system shall make provision for the introduction of new algorithms and key structures, post implementation. Vendor’s response shall propose how this facility will be implemented. | M | Comply | Adding new algorithms can be requested at any time. | Accept |
|  | The system should have Audit Trail that must capture sufficient information to allow the Head Office and Branch authorized users to identify and track events in the system, including but not limited to: | M | Comply | The Sybrin platform’s audit capabilities capture all changes whether the changes are made to configuration or to data in the system.  Audit trails are stored securely and cannot be modified. | Accept |
|  | Branch associated with each transaction and each step in a transaction; | M | Comply |  | Accept |
|  | * Identification of repairs and the repairer; | M | Comply | Audit captured | Accept |
|  | * Time of all significant process steps; | M | Comply | Audit captured | Accept |
|  | * Time and details of all user access; etc. | M | Comply | Audit captured | Accept |
|  | * The audit trail and its contents must not be capable of being compromised or destroyed. Vendor’s response shall: | M | Comply | Audit captured | Accept |
|  | * explain the event logging/safe-storing process and the event log retention and archiving facilities; | M | Comply |  | Accept |
|  | 1. describe the end-to-end system auditing capabilities as Images, MICR data transactions, files and other messages are processed through the various components of the system and interfaces; and | M | Comply | The platform manages auditing at the data layer level ensuring that whenever information is accessed, created, updated, or deleted, it is recorded at a transactional level. Additionally, the platform follows open tracing standards, which allows for seamless integration into industry standard monitoring applications such as Microsoft Azure AppDynamics, OpenTracing, etc. | Accept |
|  | 1. Describe the information retained in audit logs. | M | Comply | The platform manages auditing at the data layer level ensuring that whenever information is accessed, created, updated, or deleted, it is recorded at a transactional level. Additionally, the platform follows open tracing standards, which allows for seamless integration into industry standard monitoring applications such as Microsoft Azure AppDynamics, OpenTracing, etc. | Accept |
|  | 1. The system shall provide Detection of Error and Fraud tools to allow speedy access to audit trail information. | M | Comply | The system allows for fraud rules to be put into place. To provide aggregate weights to fraud typologies that will flag activity for investigation. | Accept |
|  | The system shall provide tools for detection of fraudulent instruments. | M | Comply | The system allows for fraud rules to be put into place. To provide aggregate weights to fraud typologies that will flag activity for investigation. | Accept |
|  | The system shall provide controls to minimize the potential for fraud and error which would include amongst other things: | M | Comply | The system allows for fraud rules to be put into place. To provide aggregate weights to fraud typologies that will flag activity for investigation | Accept |
|  | Input data validation; |  | Comply |  | Accept |
|  | * 1. User authentication; | M | Comply | The platforms authentication layer follows a disconnected model by making use of a JWT token. A token needs to be  acquired from the Core application service before any of the business logic services and web / mobile applications can interact with each other or the supporting core services.  The Sybrin platform supports the below Authentication providers:   * Sybrin . LDAP * OAUTH2.0 * SAML2.0 * Windows Authentication   See below diagram illustrating how to retrieve a Sybrin platform JWT token using OAUTH2.0 provider. A larger image is available in Attachment 9.3.2.1 | Accept |
| * 1. Restricted user intervention, i.e. limited to low risk fields or processes; | M | Comply | Access to system processes are restricted by security schemes and group membership | Accept |
| * 1. Connection time limitation; | M | Comply | Timeouts are fully configurable and limitusers' sessions to only one active session at a time. | Accept |
|  | * 1. User access restricted by transaction types, amount limits and functions; | M | Comply | Thresholds are available to configure  this. | Accept |
| * 1. Privileges granted on a case-by-case basis; | M | Comply | Access can be granted on a granular | Accept |
| * 1. Controlled access to functions, e.g. via menus; | M | Comply | Access can be granted on a granular | Accept |
| * 1. Automated repair facilities; | M | Comply | Comply Input validation is rigorously checked to ensure completeness. | Accept |
| * 1. Error handling mechanisms; | M | Comply | Sybrin's CTS solution can handle errors through screens, services, and notifications | Accept |
| * 1. Automatic cut-offs | M | Comply | These can be threshold and time based | Accept |
| * 1. The system shall provide for systems balancing and controls between interfaces to detect duplicate or missing messages or batches or Images, MICR data transactions, files and other messages. | M | Comply | Duplicate detection is built into the system. The system is fully ACID compliant so that we cannot lose data. | Accept |
|  | Vendor’s response shall specify in detail the proposed access control regime, including administration, operational and audit operations | M | Comply | **User Authentication:**  The Sybrin Solutions supports the following user authentication providers:  • Sybrin  level.  LDAP OATH 2.0 SAML2.0  Windows Authentication  **Organisations:**  The Sybrin platform supports a multitenant architecture. Organisations is for the configuration of user access to data and processes based on multiple business entities using Sybrin Enterprise Suite. Users are added to organisations to allow an additional layer of access control to be applied. These organisations are set up to allow specific access and control over certain processes, data, and tools in Nitro.  **Groups:**  Sybrin Enterprise Studio allows for the creation of different groups for users to belong to. A group is a means of organising users. Typical example is grouping users by department or location. Groups can also be used to link which content server the specific set of users will access documents from. For example, first look in branch server before accessing documents from centralserver.  Groups focus on identity, not role or activity. This simplifies the setup process and increases the ease of maintenance. Users or teams which perform similar functions and purposes within a business structure can be placed together to form a group. Typical examples of members performing similar and specific jobs would be a Sales Team, Human Resources, Public Relations or Marketing team. Groups provide an additional layer of security.  **Roles:**  A role is a means of organising permissions and rights. Roles are where different groups and users are organised according to their descriptions or purposes. A role often references a position, responsibilities, or a purpose a particular user (or group of users) has within a business structure or group. Users (or groups of users) are then assigned to roles based on the responsibility they play in the system. Typical examples of such roles are Administrator, Manager, Consultant, Team Leader, or Business Unit Head. Roles offer an additional layer of security as well as ease of maintenance before permissions are granted in security schemes. Roles also offer an addition layer of flexibility between groups and security schemes.  **Security Schema:**  Security schemes (also called schemes) is the place where the access, rights and permissions of roles are set up. Based on their groups and the roles these groups (or users) belong to, users are given access to specific Documents, processes and definitions and their rights are set up on a per-item basis. Users can be given rights to create, update, save, authorise, view, execute or delete these items in Nitro. | Accept |
|  | The system must provide mechanisms to prevent fraud or error arising in the course of implementing changes to the system. These mechanisms would be expected to include segregation of duties, acceptance testing and computerized processes for introducing and authorizing new applications or changes. | M | Comply | The system allows for fraud rules to be put into place. To provide aggregate weights to fraud typologies that will flag activity for investigation | Accept |
|  | Vendor’s response shall describe how the system protects the confidentiality of customer information and what data protection and database access controls are included in the system. | M | Comply | A role is a means of organizing permissions and rights. Roles are where different groups and users are organised according to their descriptions or purposes. A role often references aposition, responsibilities, or a purpose a particular user (or group of users) has within a business structure or group. Users (or groups of users) are then assigned to roles based on the responsibility they play in the system. Typical examples of such roles are Administrator, Manager, Consultant, Team Leader, or Business Unit HeadSecurity schemes (also called schemes) is the *place* where the access, *rights and permissions of roles are set up. Based on their groups and the roles these groups (or users) belong to, users are given* access to specific Documents, processes and definitions and their rights are set up on a per-item basis. Users can be given rights to create, update, save, authorise, view, execute or delete these items in Nitro. | Accept |
|  | The system shall enforce segregation of duties  Such as: | M | Comply | Groups:  Sybrin Enterprise Studio allows for the creation of different groups for users to belong to. A group is a means of organising users. Typical example is grouping users by department or location. Groups can also be used to link which content server the specific set of users will access documents from. For example, first look in branch server before accessing documents from central server.  Groups focus on identity, not role or activity. This simplifies the setup process and increases the ease of maintenance. Users or teams which perform similar functions and purposes within a business structure can be placed together to form a group. Typical examples of membersperforming similar and specific jobs would be a Sales Team, Human Resources, Public Relations or Marketing team. Groups provide an additional layer of security.  **Roles:**  A role is a means of organising permissions and rights. Roles are where different groups and users are organised according to their descriptions or purposes. A role often references a position, responsibilities, or a purpose a particular user (or group of users) has within a business structure or group. Users (or groups of users) are then assigned to roles based on the responsibility they play in the system. Typical examples of such roles are Administrator, Manager, Consultant, Team Leader, or Business Unit Head. Roles offer an additional layer of security as well as ease of maintenance before permissions are granted in security schemes. Roles also offer an addition layer of flexibility between groups and security schemes.  **Security Schema:**  Security schemes (also called schemes) is the place where the access, rights and permissions of roles are set up. Based on their groups and the roles these groups (or users) belong to, users are given access to specific Documents, processes and definitions and their rights are set up on a per-item basis. Users can be given rights to create, update, save, authorise, view, execute or delete these items in Nitro. | Accept |
|  | segregation between data entry/repair and verification/authorization; and | M | Comply |  | Accept |
|  | 1. between data entry/repair, first verification/authorization and second verification / authorization / release; the level of authorization shall be determined by the bank based on value or other factors | M | Comply | Four eyes maker checker process is standard in the system | Accept |
| 1. The system shall allow for the allocation of value limits for each and every user and shall allow for individual user daily value limits that, when exceeded, trigger exception processing (e.g. requiring dual authorization/supervisor approval for each transaction exceeding the daily limit). | M | Comply | This type of process is standard functionality of the platform.Security schemes (also called schemes) is the place where the access, rights and permissions of roles are set up. Based on their groups and the roles these groups (or users) belong to, users are given access to specific Documents, processes and definitions and their rights are set up on a per-item basis. Users can be given rights to create, update, save, authorise, view, execute or delete these items in Nitro. | Accept |
|  | The system shall have Access Control mechanism such as: | M | Comply | See Below | Accept |
|  | secure, auditable management of user-ids, access rights, passwords and others; | M | Comply | See Below | Accept |
|  | 1. Passwords to be a minimum of eight characters and to have a parameter driven lifespan after which users will be required to change their passwords. There will be a parameter driven inactivity delay after which users will be logged off. 2. the ability to setup user groups of users with access to the same functionality and to limit the functionality of users to just those functions that they have a need to perform; | M | Comply | Password complexity and autolock outs based on dormancy is fully configurable.  Security schemes (also called schemes) is the place where the access, rights and permissions of roles are set up. Based on their groups and the roles these groups (or users) belong to, users are given access to specific Documents, processes and definitions and their rights are set up on a per-item basis. Users can be given rights to create, update, save, authorise, view, execute or delete these items in Nitro. | Accept |
| 1. ensure separation of functions where required (e.g. a user entering a payment to the system would not also be able to authorize that payment for release to the Clearing House); | M | Comply | Maker checker process provided by the platform | Accept |
| 1. detection and reporting of illegal attempts to access the system or functions within the system; | M | Comply | The platform has full auditing and alerting capabilities | Accept |
| 1. the maintenance of a secure, auditable log of access to the system, identifying user-id, date, time, functions accessed, operations performed; and | M | Comply | The platform has full auditing and alerting capabilities | Accept |
| 1. Encryption of passwords. | M | Comply | BCrypt hashing is used to secure sensitive user information as a one-way hash (based on the blowfish cipher) | Accept |
| 1. The system shall protect the individual images and MICR data from tampering and/or replacement through its life cycle. | M | Comply | The solution supports file data signature verification | Accept |
|  | Images will be encrypted before storing on disk using digital signatures so that misuse/alteration of images will not be possible at OS level. | M | Comply | The solution supports file data signature verification | Accept |
|  | Storage and Archival |  | Comply | See Below | Accept |
|  | The system shall provide for storage and archival of Images and MICR data at the Head Office or at any other centralized location as decided by the Bank. | M | Comply | Sybrin Nitro Platform complies with this expectation regarding the centralised storage of images and metadata | Accept |
|  | The system shall provide facilities of storing Image and MICR data for online access for a period specified by the bank.  The detailed mode of storage and retrieval of data / image shall be indicated in the responses of the bidders. | M | Comply | Sybrin Nitro Platform complies with this expectation regarding the centralised storage of images and metadata. Availability of images will be indefinite depending on the storage and compliance rules. | Accept |
|  | * The system shall archive Image and MICR Data from the live system following the period specified by the parameter to a storage medium capable of being stored and offline accessed for the period specified by the bank. | M | Comply | Sybrin Nitro Platform complies with this expectation regarding the centralised storage of images and metadata. Availability of images will be indefinite depending on the storage space and compliance rules. | Accept |
|  | The system shall provide facilities to Branches for retrieving together single and / or multiple and / or group(s) and or file(s) of Image(s) and MICR Data presented to or from them in an efficient and least time consuming manner with a high degree of accuracy. | M | Comply | Sybrin's CTS solution allows for the search and retrieval of image and metadata to anywhere in the Sybrin accessible network. | Accept |
|  | The system shall have the facilities and necessary interfaces for data to be transferred to an external Data Warehouse. | M | Comply | Sybrin CTS solution has the capability to create an API that can be utilized to request and transfer information to an external Data Warehouse. | Accept |
|  | The Image and MICR Data Archive shall have the facility to store for 10 years and / or any other period as may be required under the law. The period of retention will be set by the Bank as a system parameter. The archive shall be tamper-proof and once archived, it shall remain unalterable. | M | Comply | The Sybrin Nitro Platform complies with this expectation regarding the centralised storage of images and metadata. Availability of images will be indefinite depending on the space and compliance rules. | Accept |
|  | Interfaces |  | Comply | See Below | Accept |
|  | The system shall conform to the interface standards prescribed by National Bank of Ethiopia for Montran EATS. | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding interfacing with the NBE Central bank's solution. | Accept |
|  | The system shall provide facilities for MICR data and Image transmission to NBE Clearing House and other functions such as enquiries, reporting as well as security, resilience and recovery requirements etc. | M | Comply | Sybrin's CTS solution can comply with thespecifications set forward regarding interfacing, security, resiliency, and recovery with the NBE Central bank's solution. | Accept |
|  | The proposed system should provide interfaces with Bank’s CBS for both inward and outward clearings, electronic fund transfers, and bulk payments and file transfers. | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding interfacing with the DBE's CBS solution. | Accept |
|  | Branch Access/Participation |  | Comply | See Below | Accept |
|  | The system shall be open to all Bank branches within the clearing zone set by the NBE for access. The system shall be configurable to set clearing time which may be changed from time to time by the NBE. | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding interfacing with the NBE Central bank's solution. | Accept |
|  | The system must have the capability to define and add new branches. | M | Comply | Sybrin's CTS solution has maintenance capability on information that includes Branch Maintenance | Accept |
|  | The system shall support the following participation/access structure: | M | Comply | Please see comments for sub items | Accept |
|  | Branches shall initiate transactions of their own as a member, | M | Comply | Sybrin's CTS solution can split transaction statistics and capturing to a branch level | Accept |
| 1. Branches may initiate transactions for other branches as a fall back arrangement. | M | Comply | Sybrin's CTS solution allows for the capture of transactions from any branch. | Accept |
| 1. Branches may initiate transactions for other Banks as Service Bureaus. | M | Comply | Sybrin will need to workshop the clearing centre responsibilities of the bank with the clearing house to ensure the different banks clearing through the clearing centre (DBE) is identifiable and the accounting is accurate to comply to the requirement. | Accept |
| 1. The system shall support Participant Suspension and Reinstatement at Head Office level | M | Comply | Sybrin's CTS solution has maintenance capability on information that can include Participant administration information and participation statuses at DBE | Accept |
|  | The system shall support Branch Suspension to occur at any time within the operating day. | M | Comply | Sybrin's CTS solution have maintenance capability on capability and information that includes Branch Maintenance | Accept |
|  | The system shall issue/send Advice of Suspension immediately by broadcast message to all branches by the Head Office. | M | Comply | Sybrin's Nitro platform has the capability such as notifications and information distribution. | Accept |
|  | The system shall have Participant Administration Functions to be accessed by Head Office as listed below: | M | Comply | Sybrin's CTS solution has maintenance capability on information that can include Participant administration information and participation statuses at DBE | Accept |
|  | Assign Authorized system administrators or users at Head Office and Participant Branches | M | Comply | Sybrin's Nitro Platform can allow for a multi-tenant capability configuration that will include security logic for segregation of security and functionality. | Accept |
|  | 1. Admitting new Participant branches | M | Comply | Sybrin's Nitro Platform allows for the onboarding of new users to multi-tenant environments. | Accept |
| 1. Participant branch Profiles Details such as names, identification codes, account numbers, etc. will be recorded at Participant establishment and updated at need. | M | Comply | Sybrin's CTS solution has maintenance capability on information that can include Participant administration information and participation statuses at DBE. | Accept |
| 1. Assign Participant branches system functions that will be able to use. | M | Comply | Sybrin's CTS solution has maintenance capability on information that can include Participant administration information, status, and participation capability at DBE. | Accept |
| 1. Suspend Participant branch from ability to transact within a Clearing House operating day and/or Session. | M | Comply | Sybrin's CTS solution has maintenance capability on information that can include Participant administration information, status, and participation capability at DBE. | Accept |
| 1. Revoke Participant branches system functions access. | M | Comply | Sybrin's CTS solution has maintenance capability on information that can include Participant administration information, status, and participation capability at DBE. | Accept |
| 1. Reinstate Participant’s ability to transact following a suspension. | M | Comply | Sybrin's CTS solution has maintenance capability on information that can include Participant administration information, status, and participation capability at DBE. | Accept |
| 1. Cancel / Removes Participant branches from the system and cancels any Queued transactions. | M | Comply | Sybrin's CTS solution has maintenance capability on information that can include Participant administration information, status, and participation capability at DBE. | Accept |
| 1. Broadcast Message issued by the Bank at its discretion advising of changes to a Participant’s status. | M | Comply | Sybrin's Nitro platform allows for notification functionality that can be configured and implemented to DBE's requirements. | Accept |
| 1. The system must track the elapsed period since input of Inward, Outward, Outward and Inward Return Clearing for a clearing cycle. | M | Comply | Sybrin's CTS solution can be configured to add the capability of tracking the transactions by participants via dashboards and reports | Accept |
|  | The system shall support to define Operating Calendar such as holidays, working days, working hours, clearing cycles, etc. at Head Office level. | M | Comply | Sybrin's CTS solution has the ability to maintain a business calendar that feeds through to the operational side of the business. | Accept |
|  | The system shall have a facility for the Head Office to use a Broadcast Message to announce scheduled system holidays applicable to the Centre. | M | Comply | Sybrin's Nitro platform allows for notification functionality that can be configured and implemented to DBE's requirements. | Accept |
|  | The system shall have an enquiry facility for branches to enable branches to check the system calendar and access information on all holidays. | M | Comply | The functionality required will need to be scoped and configured accordingly as this is custom functionality to DBE | Accept |
|  | The system shall have a facility/parameter at Head Office level to extend the Operating/working Hours/Sessions for any given day under exceptional circumstances as approved by the NBE | M | Comply | Sybrin's CTS solution has the ability to maintain clearing session parameters specified by the NBE to allow for participation on extended and emergency clearing sessions. | Accept |
|  | Message Format & Validation Requirements |  | Comply | See Below | Accept |
|  | The system shall support the message format specified by the NBE. | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding message formats with the NBE Central bank's solution. | Accept |
|  | The Head Office and Participant Branches shall perform various validations of incoming Image, MICR Data Transaction and other related messages such as: | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding validation on metadata and images with the NBE Central bank's solution. | Accept |
|  | 1. validate message and file content, format and counterparties; 2. validate Images against the given parameters; 3. validate MICR data against the given parameters such as valid MICR code line, etc.,   validate message and file format, addressing, image formats and its contents, messages formats and its contents, etc. | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding validation on metadata and images with the NBE Central bank's solution. | Accept |
|  | 1. The system shall a validation processing that include, amongst other things: | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding validation on metadata and images with the NBE Central bank's solution. | Accept |
|  | sequence checking, i.e. to ensure against message and or file / data / records / image loss or duplication; | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding validation on metadata and images with the NBE Central bank's solution. | Accept |
|  | 1. message and/or file authentication, double authentication, integrity checking and non-repudiation checking; | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding validation on metadata and images with the NBE centeral bank’s solution. | Accept |
| 1. checking to ensure data types appropriate to defined fields; | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding validation on metadata and images with the NBE Central bank's solution. | Accept |
| 1. checking dates for correctness (against system calendars); and | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding validation on metadata and images with the NBE Central bank's solution. | Accept |
| 1. the direction of transactions to different system processes | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding validation on metadata and images with the NBE Central bank's solution. | Accept |
| 1. The system shall provide the ability to set a minimum and/or maximum value for Clearing House transactions as a system parameter. Transactions below this value and/or above this value would fail validation testing and shall be returned to source with a reason for failure of the validation. | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding validation on metadata and images with the NBE Central bank's solution. | Accept |
|  | The system shall provide for online validations of the fields comprising the MICR read band with provision for balancing and item correction. | M | Comply | Sybrin's CTS solution complies with the processes and functionality needed to adequately process with Outward, Inward, and Inward unpaid streams. | Accept |
|  | The Inward Clearing Module shall provide for online validations of the fields comprising the MICR read band. | M | Comply | Sybrin's CTS solution complies with the processes and functionality needed to adequately process with Outward, Inward, and Inward unpaid streams. | Accept |
|  | System Administration and Enquiry Requirements |  | Comply | See below | Accept |
|  | The system shall support MICR Data and Images Files Outward and Inward queues Enquiries for Head Office and Branches. | M | Comply | Sybrin's CTS solution complies with the processes and functionality needed to adequately process with Outward, Inward, and Inward unpaid streams. | Accept |
|  | The system shall support System Administration tasks to know the status of Participant Branches such as: | M | Comply | Sybrin's Nitro platform can configure dashboards and mechanisms to monitor and report on the status of Participant Branches administration information, status, and participation capability at DBE. | Accept |
|  | Monitor the status of Participants and take action as required to resolve problems or initiate fallback arrangements. The system must provide facilities to support these tasks. | M | Comply | These requirements will be customised for DBE, but can be workshopped and configured. | Accept |
|  | 1. Issue system messages to Participant branches to inform them of problems/operational actions and issues. | M | Comply | Sybrin's Nitro platform allows for notification functionality that can be configured and implemented to DBE's requirements. | Accept |
| 1. The system shall allow Participant branches to enquire on the status of their Settlement of individual MICR Data and Images held in the Clearing House /NBE’s EATS at any time during the day for the current Settlement day as well as any previous Settlement days. | M | Comply | Sybrin's Nitro platform can configure dashboards and mechanisms to monitor and report on the status transactions to Participant Branches. | Accept |
|  | The system shall support the monitoring of Participant performance against targets for settlement completion within intraday deadlines, e.g. Participants could be required under system rules to complete a specified percentage of their payments by a specified time within the day. | M | Comply | Sybrin's Nitro platform has SLA mechanisms to monitor and give visual representation of transaction progress where workshops can be done to apply targets. | Accept |
|  | The system shall support Participant Branches to be able to enquire on-line on the system’s daily operating schedule. | M | Comply | Sybrin's Nitro platform allows for this functionality to be configured through dashboards. | Accept |
|  | The system shall support Participant Branches to be able to enquire on system parameters governing their participation in the system, e.g. access to system functions, etc. | M | Comply | Sybrin's Nitro platform allows for this functionality to be configured through dashboards. | Accept |
|  | Reports |  | Comply | See Below | Accept |
|  | The system shall provide facilities to allow reports to be easily specified and produced by the Head Office and/or the participant branches User. Some of the expected requirements are the following: | M | Comply | Sybrin's Nitro platform has the ability for custom reports to be built within by citizen developers or made part of the project development tasks. | Accept |
|  | The system shall provide reconciliation and reporting tools with various combinations such as for images alone, MICR Data alone, images and / or MICR Data in a juxtaposed form etc. | M | Comply | Sybrin's Nitro platform allows for this functionality to be configured through dashboards or reports. | Accept |
|  | 1. The tools provided will be parameter driven. | M | Comply | Sybrin's CTS solution provides a parameter-based approach to maintain and configure the system for adaptability and flexibility | Accept |
| 1. Facility for the users to reformat the data and import into other applications. | M | Comply | Sybrin Nitro Platform supplies the ability to configure the requirement and tools needed to address the requirement. | Accept |
| 1. The Report generation toll shall be able to archive and Retrieve Reports on the various flexible parameters. | M | Comply | Sybrin's Nitro platform has the ability for custom reports to be built within by  citizen developers or made part of the project development tasks. | Accept |
| 1. Reports shall be produced in TEXT and/or PDF format. | M | Comply | Sybrin Nitro Platform has the ability to export reports in multiple formats that satisfies the requirements of DBE. | Accept |
| 1. Reports will draw on Images and Data | M | Comply | Sybrin's Nitro platform has the ability for custom reports to be built by citizen developers or made part of the project development tasks that contains images, graphs, and data. | Accept |
| 1. Current day’s data and Images | M | Comply | Sybrin's Nitro platform has the ability for custom reports to be built by citizen developers or made part of the project development tasks that can supply filters prior to generating the report from an end user perspective | Accept |
| 1. Images and data retained as available for on-line enquiry; | M | Comply | Sybrin CTS platform allows for the access to images and data at any time the system is available to end users with security groups as an option to restrict sensitive data to certain senior personnel. | Accept |
| 1. Archived Images and data. | M | Comply | Sybrin CTS platform allows for any data within the system to be queried or pushed to a report format where required by DBE. | Accept |
| 1. Exception reporting is a necessity wherever required. | M | Comply | Sybrin's Nitro platform has the ability for custom reports to be built by citizen developers or made part of the project development tasks. | Accept |
| 1. Reports must be available in both electronic form and hardcopy. | M | Comply | Sybrin's Nitro platform has the ability for custom reports to be built within the Sybrin system by citizen developers or made part of the project development tasks. All reports can be printed to a connected printing device. | Accept |
| 1. Periodic Statements for Participants must also be available in both electronic softcopy and hardcopy form. | M | Comply | Sybrin's Nitro platform has the ability for custom reports to be built within the Sybrin system by citizen developers or made part of the project development tasks. All reports can be printed to a connected printing device | Accept |
| 1. Facilitate dynamic generation of queries and reports as part of the system. | M | Comply | Sybrin's Nitro platform has the ability for custom reports to be built within the Sybrin system by citizen developers or made part of the project development tasks. | Accept |
| 1. The system must provide reports that assist in the early detection and management oversight of potential fraud or error, including but not limited to reports showing: | M | Comply | Sybrin's Nitro platform has the ability forcustom reports to be built within the Sybrin system by citizen developers or made part of the project development tasks. | Accept |
| 1. Very high value payments (high value threshold to be parameterized); | M | Comply | Sybrin's Nitro platform has the ability for custom reports to be built within the Sybrin system by citizen developers or made part of the project development tasks. | Accept |
| * Unsuccessful login attempts; * Undelivered Images, MICR data transactions, files and other messages; | M | Comply | Sybrin's Nitro platform has the ability for pre-built reports and audit reports. Custom reports to be built by citizen developers or made part of the project development tasks. | Accept |
| * Duplicate Images, MICR data transactions, files and other messages; | M | Comply | Sybrin's Nitro platform has the ability for pre-built reports and audit reports. Custom reports to be built within the Sybrin system by citizen developers or made part of the project development tasks. | Accept |
| * Application privilege change and access. | M | Comply | Sybrin's Nitro platform has the ability for pre-built reports and audit reports. Custom reports to be built within the Sybrin system by citizen developers or made part of the project development tasks. | Accept |
| * The system shall support to generate report required by the NBE and allow online access by the NBE. | M | Comply | Sybrin's Nitro platform has the ability for pre-built reports and audit reports. Custom reports to be built within the Sybrin system by citizen developers or made part of the project development tasks. | Accept |
|  | Image Processing |  | Comply | See below. | Accept |
|  | The system shall necessarily support to capture both front and reverse images of individual cheques. | M | Comply | Sybrin's CTS solution complies with leading scanning hardware and receives all images and information that the hardware can supply. | Accept |
|  | The system shall be capable of capturing at branches both black and white as well as Grey Scale. | M | Comply | Sybrin's CTS solution complies with leading scanning hardware and receives all images and information that the hardware can supply. | Accept |
|  | The System shall provide facilities to scan cheque images in the following way:  Minimum DPI Format Comp.  Front Grey Scale 100 DPI JPG JPEG  Front Black & White 200 DPI TIFF CITT G4  Reverse Black & White 200 DPI TIFF CCITT G4  UV Image Grey Scale 100 DPI JPG JPEG | M | Comply | Sybrin's CTS solution complies with leading scanning hardware and receives all images and information that the hardware can supply. | Accept |
|  | Image Quality , Usability Management and Standards |  | Comply | Sybrin'sWebAssist module allows for the activation and interface with the hardware device. | Accept |
|  | The system shall support Image Quality Assurance at the scanning stage so that the images meet processing quality standards in accordance with ANSI X9.37. | M | Comply | Sybrin's CTS solution complies with leading scanning hardware and receives all images and information that the hardware can supply. | Accept |
|  | The system shall perform Image Quality Analysis (IQA) validations as formulated by Financial Service Technology Consortium (FSTC) at the capture system or CHI to ensure that the image provided by capture system/CHI contain the correct specification and fall within the threshold standards set by the NBE. | M | Comply | Sybrin's CTS solution will be able to validate the images scanned and received to ensure that the images are complying to the standards supplied by the NBE. | Accept |
|  | The system shall support an IQA indicator tag/flag indicating the outcome of the IQA test carried out on each electronic cheque image by the capture system/CHI. | M | Comply | Sybrin's CTS solution will be able to validate the images scanned and received to ensure that the images are complying to the standards supplied by the NBE. | Accept |
|  | The system shall support to parameterize the threshold values for different IQA parameters which shall be communicated to banks by the Clearing House/NBE from time to time. | M | Comply | Sybrin's CTS solution will be able to validate the images scanned and received to ensure that the images are complying to the standards supplied by the NBE. | Accept |
|  | The System shall check, detect and flag image quality defects for all image renditions such as Grey Scale on the front and black and white on the front and reverse of the cheques. | M | Comply | Sybrin's CTS solution will be able to validate the images scanned and received to ensure that the images are complying to the standards supplied by the NBE. | Accept |
|  | The conditions and definitions shall be definable and based on parameters. Some these parameters may be Partial Image, excessive Image Skew, Piggy Backed Image, Image Too Light or To Dark, Image Contains Streaks and/or Bands, Below Minimum Image Size, Exceeds Maximum Image Size, etc., | M | Comply | Sybrin's CTS solution will be able to validate the images scanned and received to ensure that the images are complying to the standards supplied by the NBE. | Accept |
|  | The Images which do not pass these Image Quality requirements shall be left for judgment for the operator in consultation with Supervisor.  The vendor shall give details on the facilities provided for the above in the System both at the HO/Service Branch System and Presenting Branch System. | M | Comply | Sybrin's CTS solution can handle exceptions through screens, services, and notifications. | Accept |
|  | The System shall be capable of protecting images and MICR data from tampering and /or replacement throughout its life cycle. | M | Comply | Sybrin's CTS solution has secure protocols and security measures to ensure that the requirements are adhered to. | Accept |
|  | The System shall reject tampered images and MICR data at various entry points. | M | Comply | Sybrin's CTS solution can handle exceptions through screens, services, and notifications. | Accept |
|  | The system shall support the data formats and field definitions for storing, archiving, retrieving, processing, quality of images and MICR data at the Head Office (Clearing House Interfaces) as well as exchanging between institutions shall meet at the minimum: | M | Comply | Sybrin CTS solution complies with the requirements of capturing metadata and images stated by DBE. | Accept |
|  | ANSI X9.90 and ANSI DSTU X9.90 Specifications for an Image Replacement Document (IRD), | M | Comply | Sybrin's Nitro platform can comply with the set standards. | Accept |
|  | 1. ANSI X9.37 and ANSI DSTU X9.37 Specifications for Electronic Exchange of Cheque and Image Data; | M | Comply | Sybrin's Nitro platform can comply with the set standards. | Accept |
| 1. ANSI X9.81 Specifications for Bulk Image and Data Exchange. Further, the System offered shall adopt the above standards for the Ethiopian Banking environment. | M | Comply | Sybrin's Nitro platform can comply with the set standards. | Accept |
| 1. The system shall have utilities to verify different fields like valid MICR code, MICR quality, image size, image quality, image usability, image dimension etc. in real time. | M | Comply | Sybrin's Nitro platform can comply with the set standards. | Accept |
|  | 1. The system shall provide facilities to print the images of single, multiple, group, files of instruments from the archive of the Central Image or from the Head Office in the format specified in the Standard DSTU X9.90– 2003 Specifications for an Image Replacement Document – IRD, | M | Comply | Sybrin's Nitro platform can comply with the set standards. | Accept |
|  | The system shall keep track of image prints taken, whenever made, in the form of an audit trail / log. The point where such an image is retrieved shall also have the facility to certify that the image represents the document or that payment has been effected and this has been noted by affixing the appropriate system generated stamp. | M | Comply | Sybrin's Nitro platform allows for the addition of auditing throughout the system than can be achieved through configuration and additions to processes and actions throughout the system. | Accept |
|  | Operational Requirements |  | Comply | See Below | Accept |
|  | The system shall support Start-of-day, Cut-offs, End-of-Day and Multiple Clearing Sessions that must be synchronized the NBE’s clearing sessions;  The Vendor’s response must describe how the operating times of the various system components will be harmonized and controlled. | M | Comply | Sybrin's CTS solution complies with the processes and functionality needed to adequately process with Outward, Inward, and Inward unpaid streams. The system will be able to comply with NBE requirements as stated. | Accept |
|  | The End-of-day, for Multiple Clearing Sessions and report printing tasks must be completed in shortest possible time. | M | Comply | The Sybrin CTS solution can reconcile and do settlement at the end of day for multiple clearing session. The standard Sybrin reports can be adjusted to adhere to the settlement reporting requirements or custom reports requested. | Accept |
|  | The System shall provide a high level of resilience/fault tolerance at Hardware, System Software and Application Level at the HO/Service Branch and Presenting Branch Sites resulting in high availability. | M | Comply | Sybrin Nitro platform can comply to high availability standards and scale with the hardware configuration and setup that DBE supplies. A workshop can be used to supply recommendations and coordination with DBE IT to ensure that the requirement is adhered to. | Accept |
|  | The system shall have a facility to maximize the automation of backup, archiving and retrieval processes.  The bidder shall propose a methodology for the backup, archiving and retrieval of MICR and Image data | M | Comply | Sybrin has implemented solutions with the stated requirement with our other customers in the past.  Sybrin will be able to propose a methodology to the bank and assist DBE to put in place a plan for the resources and capability that is available to both parties. | Accept |
|  | The system must have auditable mechanisms for reporting failures in the various components of the system, e.g. communications, host Application Modules, end user devices, End-user Application Modules, database, etc.   * The bidder shall describe the mechanisms for reporting failures in the various system components and the Help Desk facilities for resolving of the problem of the users. | M | Comply | Sybrin's Nitro Platforms allows for standard system auditing and logging as well as custom auditing and logging that can be agreed upon in a workshop.  The platform has visual and process- based notification to inform end users and supervisors of exception queues.  Dashboard functionality can be incorporated to display needed data to information to assist in managing failures within the system.  Sybrin's Helpdesk is available to log incident and request for assistance with the Sybrin solution. | Accept |
|  | The system shall have fully automated control facilities – for initializing the systems, start-of-day, end-of-day, start-of-Clearing Session, end-of-Clearing Session, housekeeping/report printing, closedown, etc.   * The bidder shall describe how the system is operationally managed and what manual and automated processes are required. | M | Comply | Sybrin's Nitro platform allows for the implementation of STP with automation opportunities throughout the system that complies to DBEs governance and requirements. | Accept |
|  | * The bidder shall specify the Operating Systems, Systems Software such as Data Base Management Systems, Transaction Processing Monitoring Systems, Messaging Middleware, Security System Software including PKI, Access Control Software, Utilities, Archival and Retrieval Software, Back-up and Restore Software, any firmware, etc., | M | Comply | The Sybrin platform supports the  following:   * operating systems: Windows and Linux. * Database: MSSQL, Oracle, PostgreSQL * Transaction Management/ monitoring: Sybrin's CTS solution * We are vendor agnostic for backup utilities we will use the software defined by the Bank.   All other mentioned components are  built into the Sybrin Platform. | Accept |
|  | Where a business function is set by a parameter, the parameter must be able to be set by the appropriate business user. The timing of parameter changes (i.e. immediate or overnight) must be suited to the function being parameterized.  The bidder shall describe when, how and by whom parameters are set within the system. | M | Comply | Sybrin's Nitro platform allows for these requirements to be configured into the systems to meet DBE's requirements. Sybrin will coordinate a workshop with DBE to ensure that the flexibility of the Sybrin Nitro platform in this requirement is applied to meet the requirement and recommend options and capability. | Accept |
|  | The system shall have a facility that allow the Bank’s Head Office System Administrator to send free-format messages to individual, all, or selected groups of Presenting Branches. | M | Comply | Sybrin's Nitro platform allows for these requirements to be configured into the system to meet DBE's requirements. Sybrin will coordinate a workshop with DBE to ensure that the flexibility of the Sybrin Nitro platform is applied to meet the requirement and recommend options and capability. | Accept |
|  | Message, including free format and defined format messages, will be:   * cut-off warnings, * changes in operating hours, * Changes in Clearing Sessions,   notice of Participant suspension, etc. | M | Comply | Sybrin's Nitro platform allows for these requirements to be configured into the system to meet DBE's requirements. Sybrin will coordinate a workshop with DBE to ensure that the flexibility of the Sybrin Nitro platform is applied to meet the requirement and recommend options and capability. | Accept |
|  | The bidder shall clearly describe the protocols, messages formats, syntax, functionality, type of data, etc., and the corresponding International Standards used for the MICR and Images data files and messages for exchanging from/to the Presenting Branch to/from Head Office, etc. | M | Comply | Sybrin's Nitro platform allows for these requirements to be configured into the system to meet DBE's requirements. Sybrin will coordinate a workshop with DBE to ensure that the flexibility of the Sybrin Nitro platform is applied to meet the requirement and recommend options and capability. | Accept |
|  | Processing High Value payments (Outgoing and incoming ) |  | Comply | See below | Accept |
|  | The application should have different menus to process high value payment instructions and high value cheque/CPO payments. | M | Comply | Sybrin's CTS solution can be configured in the manner described in the requirement but will use logical workflows to route and group the transactions for easy access and bulk processing. | Accept |
|  | The application should able to scan the cheque image and register paid cheque/CPO no. for high value cheque payments. | M | Comply | Sybrin's CTS solution has configurable logic and process flows to classify and route transactions to appropriate workflows and queues that can be STP or Checker based. Interfaces and the upload of payments is possible to the CBS | Accept |
|  | The application should process high value payment instruction(MT103) and post it to the core banking system | M | Comply | Sybrin's CTS solution has configurable logic and process flows to classify and route transactions to appropriate workflows and queues that can be STP or Checker based. | Accept |
|  | The application should be able to validate debit account no., account balance and account restrictions at real time. | M | Comply | Sybrin's CTs solution will be able to connect to the CBS via API to do the validation/lookups. | Accept |
|  | The application should validate the beneficiary banking details like bank and branch code ,and other details | M | Comply | Sybrin's CTS solution will be able to comply with the required validation requirement. | Accept |
|  | The application should set preauthorization at the center at amounts above certain value to manage liquidity.  Note: - amount limit will be sets as per the bank rule/procedure. | M | Comply | Sybrin's Nitro platform allows for the addition of validation and accessibility rules to satisfy the needs to DBE in this requirement. | Accept |
|  | The application should be able to generate MT 103 outward RTGS payment message as per swift message standard (Annex R). | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | The application should send the MT103 instruction to EATS –ACH through compatible file format and filed validation | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | The application should receive positive acknowledgment message for accepted files and negative acknowledgment message for rejected files from the EATS and instantly post the transaction to core banking. | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. Transaction instructions can be coordinated to be uploaded to the CBS in the timing and conditions specified in the requirement | Accept |
|  | The application should be able to post reversal entries for MT103 transfers that rejected by the users at the center, queued and rejected by the EATS at the end-of-day. | M | Comply | Sybrin's CTS solution complies with the  processes and functionality needed to adequately process with Outward, Inward, and Inward unpaid streams. The system will be able to comply with NBE requirements as stated. | Accept |
|  | The application should able to generate automatic liquidity request or other means to monitor queued transactions and availability of balance at Net Settlement account for liquidity management. | M | Comply | Sybrin's Nitro Platform allows for the  configuration and integration of this functionality to DBE in the system. A workshop will be advised to ensure the extent and reach of the functionality is fully understood | Accept |
|  | The application should have the rejection reason for rejected transaction should be stated in understandable format (should be decoded). | M | Comply | Sybrin's CTS solution will be maintaining  rejection reason with their respective codes that will be able to translate codes for visual and end user usages and user- friendly messages. | Accept |
|  | The application should have report/inquiry facility that shows the status of MT103 transactions in EATS Per Branch, Bank, processing date, and other parameters. | M | Comply | Sybrin's Nitro Platform allows for the  configuration and integration of this functionality for DBE. A workshop will be advised to ensure the extent and reach of the functionality is fully understood. | Accept |
|  | The application should be able to receive high value payment instructions from EATS | M | Comply | Sybrin’s CTS solution compiles with the processes and functionality needed to adequately process with Outward, Inward, and Inward unpaid streams. The system will be able to comply with NBE requirements as stated. | Accept |
|  | The application should be able to validate the account number of the payee and make the necessary posting to the core banking system with single approval at CPC on batch level or any other mechanism (for controlling purpose). | M | Comply | Sybrin's CTS solution will be able to  comply with the required validation requirement. | Accept |
|  | The application should have restriction on NRNT , FCY, no post Credit, blocked and other related accounts, if any as per the bank procedure | M | Comply | Sybrin's CTS solution will be able to  comply with the required validation requirement to the CBS. | Accept |
|  | The system should be made Sequence (FIFO) of message and non-duplication of control. | M | Comply | Sybrin’s CTS solution will be able to comply with the required validation requirement as well as ordering in requirement stated. | Accept |
|  | The application should queue the incoming high value of transaction at the center if the information are incorrect /for proper action/ | M | Comply | Sybrin's CTS solution has configurable logic and process flows to classify and route transaction to appropriate workflows and queues that can be STP or Checker based. | Accept |
|  | The application should allow users to make amendment on the payees account number /if required /. | M | Comply | Sybrin's CTS solution has configurable logic and process flows to classify and route transaction to appropriate workflows and queues that can be STP or Checker based. | Accept |
|  | The application should raise MT 202 message for any rejected /returned MT103 transaction to ordering bank through EATS | M | Comply | Sybrin's CTS solution complies with the processes and functionality needed to adequately process with Outward, Inward, and Inward unpaid streams. The system will be able to comply with NBE requirements as stated. | Accept |
|  | The application should have report /inquiry option that shows the inward high value payment (RTGS) by status credited to customers, rejected (returned to the drawer), and credited (account ,branch ,date …) | M | Comply | Sybrin's CTS solution will be able to comply with the required validation requirement. | Accept |
| 18 | Bank to Bank Transfers (Outgoing and Inward ) |  | Comply | See below | Accept |
|  | The application should able to accept Bank to Bank transfers (MT202) post it to the core banking system. | M | Comply | Sybrin's CTS solution has configurable logic and process flows to classify and route interface files to appropriate workflows and queues that can be STP or Checker based. Interfaces and the upload of information is possible to the CBS. | Accept |
|  | The application should validate details of bank information and mandatory fields of payment messages should be verified according to swift message standard. | M | Comply | Sybrin's CTS solution will be able to comply with the required validation requirement set by SWIFT. | Accept |
|  | The application should send the MT202 instruction to EATS –ACH through compatible file format and filed validation | M | Comply | Sybrin's CTS solution can comply with the specifications set forward regarding validation on file formats specified by the NBE Central bank's solution. | Accept |
|  | The application should receive positive acknowledgment message for accepted files. | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | The application should receive negative acknowledgment message for rejected files from the EATS and instantly make the necessary reversal entry and send to core banking system. | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. Transaction instructions can be coordinated to be uploaded to the CBS in the timing and conditions specified in the requirement. | Accept |
|  | The application should set preauthorization at the center for amounts above certain value (depending on bank procedure) to manage liquidity. | M | Comply | Sybrin’s Nitro platform allows for the provisioning of exceptions through its low code and configuration platform to cater for the requirement. | Accept |
|  | The application should be able to post reversal entries for MT202 transfers that rejected by the users at the center or not accepted by the EATS (i.e. for liquidity purpose) | M | Comply | Sybrin’s CTS solution has configurable logic and process flows to classify and route transaction to appropriate workflows and queues that can be STP or check based. | Accept |
|  | The application should have report/inquiry facility that shows the status of MT202 transactions in EATS.(Per Branch and By Bank) | M | Comply | Sybrin’s CTS solution can be configured using Sybrin’s Nitro platform capabilities to create monitoring capabilities and report to address the requirement. | Accept |
|  | The application should validate debit account no. and account restrictions at real time | M | Comply | Sybrin’s CTS solution will be able to comply with the required validation requirement. | Accept |
|  | The application should be able to accept Incoming Bank to Bank transfers from EATS. | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | The application should be able to validate the Bank code, and make the necessary queue for authorization at CPC. | M | Comply | Sybrin’s CTS solution will be able to comply with the required validation requirement to the CBS.  Approval mechanisms can be agreed upon in a workshop as manual intervention and automation is possible. | Accept |
|  | The application should be interfaced to core banking system and allow users to make amendment /adopt on the credited account number /if required /. | M | Comply | Sybrin’s Nitro platform allows for the configuration of APIs to access and interact with 3rd party systems.  Sybrin is assuming that the requirement here is to override information based on what is received from the CBS query. | Accept |
|  | The application should able to un-pay the incoming RTGS by using MT202. | M | Comply | Sybrin’s CTS solution compiles with the processes and functionality needed to adequately process with Outward, Inward unpaid streams. The system will be able to comply with NBE requirements as stated. | Accept |
|  | The application should be able to adopt incoming RTGS transactions at the head office. | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable to comply with the regulatory requirement to participate in interbank clearing and settlement. RTGS can be compiled with the specification set by NBE. | Accept |
|  | The application should have report /inquiry option that shows Bank to Bank Transfers by status authorized, rejected (returned to the drawer), and credited account with specific date, range of date and other on demand selection criteria. | M | Comply | This functionality to be configured through dashboards or reports in Sybrin’s Nitro platform | Accept |
|  | Bulk Payments Outward credit transfers |  | Comply | See Blow | Accept |
|  | The application should able to initiate bulk credit payments. | M | Comply | Sybrin’s CTS solution compiles with the processes and functionality needed to adequately process with Outward, Inward, and Inward unpaid streams. The system will be able to comply with NBE requirements as stated. | Accept |
|  | It should able to validate debit customer account and balance. | M | Comply | Sybrin’s CTS solution will be able to comply with the required validation requirement. | Accept |
|  | It should made validation of payment message fields and avail alert message like invalid bank BIC address, invalid amount, etc. | M | Comply | Sybrin’s CTS solution will be able to comply with the required validation requirement. | Accept |
|  | It should able to receive debit confirmation message for accepted files and negative acknowledgement for rejected files form EATS and post the necessary accounting entry to the core banking system. | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement.  Transaction instructions can be coordinated to be uploaded to the CBS in the timing and conditions specified in the requirement. | Accept |
|  | The application shall able to make credit transfer cancellation. |  | Comply | Sybrin’s CTS solution compiles with the processes and functionality needed to adequately process with Outward, Inward, and Inward unpaid streams. The system will be able to comply with NBE requirements as stated. | Accept |
|  | The application shall be able to receive direct credit transfer. |  | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
| 20 | Outward Direct Debit transfers |  | Comply | See Below | Accept |
|  | The application should able to input Direct Debit items, batch files and send to EATS. | M | Comply | Sybrin will comply with the interfacestandards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | The application should able to validate credit customer account. | M | Comply | Sybrin’s CTS solution will be able to comply with the required validation requirement. | Accept |
|  | The application should able to receive Credit confirmation message for accepted files and negative acknowledgement for rejected files form EATS and able to post the necessary accounting entries to the core banking system. | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement.  Transaction instructions can be coordinated to be uploaded to the CBS in the timing and conditions specified in the requirement. | Accept |
|  | The application shall be able to process direct debit rejection. |  | Comply | Sbrin’s CTS solution has the capability to process direct debit rejections. | Accept |
|  | The application shall be able to receive direct debit transfer. |  | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
| 21 | Inward SEPA Credit transfers |  | Comply | See Below | Accept |
|  | It should able to generate transactions based on incoming file and Credit customer account | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | The application should generate a report showing the date, account, amount, order banking and other details of the incoming files. |  | Comply | Sybrin’s system supplies reports and audit reports. Sybrin allows the ability for custom reports and audit reports as required and to be scoped. | Accept |
|  | The application should able to produce transaction summery details using different parameters. | M | Comply | Sybrin’s system supplies reports and audit reports. Sybrin allows the ability for custom reports and audit reports as required and to be scoped. | Accept |
| 22 | Other functionalities |  | Comply | See Below | Accept |
|  | The application should be able to receive MT900 (confirmation of debit on DBE’s Payment and Settlement account is debited at NBE) | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | The application should able to generate transaction based on the incoming file and the authorized user able to amend debit account no., add debit remittance information and authorize the transaction. |  | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | The application should be able to receive MT910, (confirmation of credit on DBE’s Payment and Settlement account is credited at NBE), The application should able to generate transaction based on the incoming file and the authorized user able to amend Credit account no., add credit remittance information and authorize the transaction. | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement.  Transaction instructions can be created and coordinated to be uploaded to the CBS in the timing and conditions specified in the requirement.  Checker processes can be introduced to the flow to cater for the requirement. | Accept |
|  | The application should be able to receive and send MT999 messages (free format messages are used to send non-financial messages to other banks) per NBE standard  -The application should validate the participant bank BIC address.  -it should provide maker-checker arrangement | M | Comply | Sybrin’s CTS solution can be configured to include a workflow around MT999 message internal processing as per DBE requirements.  A workshop will ensure the requirement is accurately met. | Accept |
|  | The application should be able to send MT920(Balance request for EATS) and receive MT941(Balance confirmation from EATS)  -The application should support the inquiry of balance confirmation request of any date | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | The application should be able to receive  MT 950 from EATS (the statement of each account maintained in NBE-EATS) | M | Comply | Sybrin will comply with the interface standards set by the clearing house to enable DBE to comply with the regulatory requirement to participate in interbank clearing and settlement. | Accept |
|  | The application should be able Scan on –us cheques , Store the image ,post the transaction on the core banking system and avail the image on the customer statement | M | Comply | Sybrin’s CTS solution can comply with capturing the transaction and make information available 3rd party applications that need data or images from the Sybrin solution to meet their requirements.  Sybrin would suggest an API for the statements solution to pull image data from Sybrin’s CTS solution as and when required. | Accept |
|  | The application should allow corporate customers to scan cheques and send the image and the transaction to the bank clearing and payment. | M | Comply | Sybrin has Corporate to Bank solution that will be able to address the requirement. | Accept |
|  | The application shall incorporate bank charges i.e., service charge, commission(if any) | M | Comply | Sybrin has commission and charged module that can be incorporated into the CTS solution to address the requirement. | Accept |
|  | The application should have a reconciliation module that can reconcile all the transaction passed through it and make available the reconciled transactions as well the expectations reports (with an option of report and reconciliation period parameter i.e. daily, weekly, monthly) and facility for the users to reformat the data and import into other applications. | M | Comply | Sybrin’s CTS solution has reconciliation functionality that can be reported on that forms part of the standard reports. These reports can be customized to adhere to the requirement if there is a misalignment on requiremnts. | Accept |
|  | The application should allow corporate customers to scan cheques, validate the image and initiate transaction from their site. | M | Comply | Sybrin has a Corporate to Bank solution that will be able to address the requirement. | Accept |
| 23 | *General Enquiries and Reports Requirement* |  | Comply | See Below | Accept |
|  | The application should be able pull at least the following reports and inquiries from NBE EATS ;   1. The states of payment and settlement account with the National Bank of Ethiopia ; 2. The transactions on payment and settlement account in particular the EATS Applications ; 3. The pending queue with individual instructions; 4. Bulk Net Settlement instructions or other Net settlement Instruction still to be processed; 5. Intraday credit position with the National bank(if any); 6. Ad hoc or on request reports not required as officially delivered versions printed from the screen at any time. | M | Comply | Sybrin’s CTS solution will be able to adhere to and configure the required interface instructions to request the needed reports that is made available by the NBE. | Accept |
|  | The application should be able to pull and retrieve the following inquires and reports with regard to MT103 and MT202   * Outward Remittance MT202,MT103 Status Enquiry – Today and per specified day * Outward MT202,MT103 Unauthorized Enquiry - Per Branch * Outward MT202 ,MT103Authorized Enquiry - Per Branch * List of Authorized MT202 ,MT103 outward Remit * List of Authorized MT202 – EATS Status * List of Authorized MT202 – EATS Status Wise * List of all uploaded transactions per specified day. | M | Comply | Sybrin’s CTS solution will be able to adhere to and configure therequired interface instructions to request the needed reports that is made available by the NBE. | Accept |
|  | The application should be able to pull and retrieve at least the following inquires and reports in connection with MT 900 and MT910   * List of authorized MT900/910 * List of unauthorized MT900/910 | M | Comply | Sybrin’s CTS solution will be able to adhere to and configure the required interface instructions ti request the needed reports that is made available by the NBE. | Accept |
|  | The application should allow users to export reports and inquiries to various file form ATS including Excel and PDF file. | M | Comply | Sybrin’s Nitro platform report capabilities allows for the export of various report export types that includes the listed export requirements. | Accept |

1. **Functional Specifications for UV enabled MICR Cheque Scanner**

| **Sr. No** | **Component** | **Minimum Technical Requirement for Scanner** | **Bidder’s Response** | **Bidder’s Remark** | **Evaluation Result** |
| --- | --- | --- | --- | --- | --- |
| **Sybrin Systems** | **Sybrin Systems** | **DBE** |
| 1 | UV Image | * UV Image enabled Cheque scanner | Comply | The scanners have ultraviolet or infrared front imaging options for security applications. | Accept |
| 2 | UV & IQA imaging Speed (dpm) | * 50 documents per minute or higher with UV imaging and IQA engine analysis running. | Comply | The scanner has the capability to scan 50, 75, and 100+ documents per minute (DPM) based on 6" check specification. | Accept |
| 3 | MICR Recognition | * E13B and CMC7 auto detect MICR reader; * Optical Character Recognition to enhance MICR Read (OCR-A, OCR-B); * Barcode software decoding; | Comply | The proposed scanners have advanced MICRPIus® magnetic reading including OCR correction - bundled with API for optimal MICR read accuracy. | Accept |
| 4 | Cheque Scanner type | * Table Top (suitable for Remote, Teller or Back office Capture)-most occupy small space with small foot print. | Comply | The cheque scanners have an extremely compact footprint — ideal for teller, back office and business installations. | Accept |
| 5 | Exit Pockets | * A single exit pocket capable of holding up to 30 or more documents. * Support Pocket Full sensor | Comply | The scanners have double feed detection with ultrasonic technology and can hold up to 50 documents.  The scanners also have auto-tuning separator rollers designed to process documents with varied thickness and to compensate for normal wear. | Accept |
| 6 | Image scan mode Supported | * Supports both 16 and 256 levels of gray at 100dpi, 200dpi, 240dpi, 300dpi image resolution for front and rear Image | Comply | * Scanning: next generation Contact Image Sensor (CIS) technology (front and rear).   Image format: bitmap in B/W, 256 shades of gray, color (Fast and True) drop out mode. TIFF, JPEG and G4 compression.  Image resolution: 100, 200 or 300 dpi. Advanced dynamic thresholding.  Superior auto calibrated image quality.  Dual image: up to five images (three front + two rear) in one document pass. | Accept |
| 7 | Document Feeder | * 100 document manual/automatic input feeder, with double feed sensors | Comply | The scanners an automatic document feeder and can hold up to 100 documents. There is also double feed detection.  The scanners have auto­tuning separator rollers designed to process documents with varied thickness and to compensate for normal wear.  . | Accept |
| 8 | ID Scan | * Straight path for Scanning of ID cards, Credit cards, Business cards, or other media of up to 0.030 inches (0.0762mm) thick for additional customer identification purposes etc. | Non-Compliant | Cheque Scanners that Support ID Scan do not Support UV imaging. For CTS Solution, UV imaging takes precedence. | Reject |
| 9 | Image capture | * Resolution: 100, 200 or 300 dpi, selectable * Gray scale levels, 16 or 256 * Ultra Violet Imaging that detect the presence of UV ink logo, UV characters i.e. cheque serial number, UV fibers, etc. on the cheques * Grayscale Image to Black & White Image conversion | Comply | Scanning: Contact image sensors (CIS) technology (front and rear).  Image capture in the  following  specifications:  Front and rear image capture.  Black-and-white CCITT image compression at 200 DPI.  Full bitonal, grayscale and UV image. Resolution:  200 DPI.  256 Levels of grayscale  Compression: CCIT-200 DPI bitonal. JPEG-200 DPI grayscale | Accept |
| 10 | UV Print identification | * UV Ink printed Logo, account number, etc. identification for anti-counterfeit; * UV Fibers identification for anti-counterfeit; * UV band/overlays for ant-tampering evidence inspection and observation of cheques vulnerable areas such as – date, pay name, amount in words and figure, signature, and MICR code line for possible fraud and alteration; * UV Barcode identification and verification; and * Other UV ink print related security features to be introduced in the future. | Comply | E13B/CMC7/automatic Panini MICR Plus® exclusive technology with OCR assist feature.  Superior MICR recognition and management.  Superior auto calibrated image quality.  Easy integration of ICR/barcode/OCR recognition technology. | Accept |
| 11 | UV Cheque for Anti Counterfeit and Anti Tampering control tasks | * Visual Cheque Image Verification to authenticate the genuineness of cheques such as counterfeit, tampering or alteration by displaying the electronic cheque image on the operator computer screen; * Automatic Recognition of counterfeit, tampering or alteration of cheques at the application level processing based on the UV image captured by the Scanner. | Comply | The scanners have Infrared and Ultraviolet front imaging options for security applications. | Accept |
| 12 | Fulfilling Ethiopian Banks Cheque Standard | * The Cheque Scanner should have the capabilities and features to scan and capture information from instruments adhering to Ethiopian Banks Cheque standard and format | Comply | Height: Min. 54 mm (2.12”)-Max. 106 mm (4.17”).  Length: Min. 80 mm (3.14”)-Max. 235 mm (9.25”).  Weight: Min. 60 gr/m2 (16 lbs.)-Max. 120 gr/m2 (32 lbs.). | Accept |
| 13 | Image captured formats Supported | * JPEG, BMP, CCITT, JPEG TIFF, CCITT Gr 4. Lowest image size compression using JPEG TIFF Image file format of about 8KB per image file. * JPEG Image quality software selectable parameters (2-55) to reduce image file size | Comply | Image format: bitmap in B/W, 256 shades of gray, color (Fast and True) drop out mode. TIFF, JPEG and G4 compression.  Image resolution: 100, 200 or 300 dpi. Advanced dynamic thresholding.  Superior auto calibrated image quality.  Dual image: up to five images (three front + two rear) in one document pass. | Accept |
| 14 | Number of Images supported in one check pass | 1. Front Grayscale image Merged with UV, 2. Front Image as either UV only, UV BW or UV BW reversed for high security; 3. Front Grayscale image 4. Back Grayscale Image 5. Front BW image (Bitonal) 6. Back BW image (Bitonal) | Comply | There is dual image: up to five images (three front + two rear) in one document pass. | Accept |
| 15 | IQA Requirements | * Scanner must be fully compliant to Image Quality Assurance (IQA) standard as formulated by Financial Service Technology Consortium (FSTC) * All IQA parameter related changes must be made free of cost from time to time. | Comply | The scanner shave optional OCR decoding, Barcodes decoding, IQA library. | Accept |
| 16 | Connectivity/  Communication and software | * USB 2.0 and with Optional onboard USB hub host port * Common API/DLL for Windows Vista/7/8/10 (32/64 bit), * Ranger API for scanner and application portability Option * Optional TWAIN interface driver * Exerciser and diagnostic application | Comply | The proposed scanners are USB 2.0 port/backward compatible with USB 1.1. connectivity with Microsoft WHQL certification for device recognition and simplified implementation.  There is also a RS232 port for external device connection. | Accept |
| 17 | Endorsement | * Rear Ink jet Endorsement –1 or 4 lines (If one line printing, it must be capable of printing in two selectable positions. | Comply | There is rich endorsement (multi-line text up to 4 lines, graphics or intermixed), validation.  The scanners have front/rear Printing capability: Multiple lines of text with graphic logo. | Accept |
| 18 | Diagnostic Utility program (MTRs) | * On Board Maintenance Test Routines (MTRs) * On Board Diagnostics: Tests the functionality of the scanner * Power-on Self-Testing: Automatic self-testing and photocells calibration when powering the scanner. | Comply | The scanner comes with API drivers, DEMO application and configuration Application. | Accept |
| 19 | Documentation, Tools and Training | * Users/Operators Manual * Demo Cheque Scanning software for testing, the API (Application Programming Interface) with its SDK details & documentation, * Training on the use, operation and minor maintenance of the scanner * User/operator self-maintenance and diagnostic tools to reduce downtime * Software based service, maintenance, adjustment and calibration tools available for onsite tests and repair for easy and quick repairs. | Comply | This is available in every package of scanner | Accept |
| 20 | Scanner Maintenance Log | * Non Erasable Maintenance and service History including  1. The Start date on which the scanner is first powered on 2. Number of cheques processed 3. Scanner logic ID and serial number within scanner firmware. 4. Scanner Power on cycles History, paper Jam history, Ink cartridge counter etc. 5. Scanner configuration parameters | Comply | Data is Stored in the EPROM and ID Card contained in the scanners.  The Scanner Config Application will display all other DataThe Scanner Config Application will display all other Data. | Accept |
| 21 | Operating Systems Supported | * Windows Vista® (32 / 64 bit), * Windows 7® (32 / 64 bit), Windows 8® (32 / 64 bit), Windows 10 (32/64bit) | Comply | Panini Vision API control running on: Windows 2000 S.P. 3, Windows XPS.P. 1, Windows Vista, Windows 7 & 8 with USB 2.0 or USB 1.1. | Accept |
| 22 | Input Voltage: | * 100 to 240 VAC, 50/60 Hz | Comply | There is autosensing from 100 to 240 VAC, 50 to 60 Hz. | Accept |
| 23 | Warranty Period | * Minimum 12 months | Non-Compliant | The manufacturer has provided 3 Months Warranty from date of Delivery. | Reject |
| 24 | Scanner Demonstration | * Vendor/Supplier (or Partner) to demonstrate all features to meet all mandatory specifications | Comply | A Demo can be done on request. | Accept |
| 25 | Technical Support | * Vendor/Supplier (or partners) to demonstrate technical support ability, training, and experience with support plan methodology on response and resolution time windows | Comply | Sybrin Hardware Technical team available on Call.  Bi-Annual Preventive Maintenance offered as part of Scanner SLA. | Accept |
| 26 | Reference sites/Installations | * Vendor/Supplier (or partners) to demonstrate similar references sites where product is installed in the last 2-5 years and relevant testimonials and a contact person of the respective institution (s). | Comply | Sidian Bank:  James Muigai, [immuigai@sidianbank.co.k](mailto:immuigai@sidianbank.co.k)   * KCB Kenya:   Lucy Mworia  Imworiaffi@kcbgroup.com   * KCB Uganda:   Vincent Nyangweso  vnyangweso@ug.kcbbankgr  oup.com   * Family Bank:   Anthony Njoroge anioroge@ffifamilybank.co.ke | Accept |

**Technical Evaluation Summary report:**

1. Bidder Moti Engineering does not respond according to the amended bid document under reference No DBE/ICB/IT/CTUVS/2021 and leaves the remark column empty on Cheque Truncation System which results disqualification.
2. MotiEngineering responded as comply with all the mandatory requirements of UV enabled MICR Cheque Scannerand provided detailed description in the remarks column of the bid document.
3. Bidder **Fintech International Ltd** responded as **C (customization will need to be done)** to the mandatory requirements of **Cheque Truncation System** under [**2.18, 7.11, 7.11.1, 7.11**](callto:2.18,7.11,7.11.1,7.11)**.**[**3,7.11.4,7.20,10.3,10**](callto:3,7.11.4,7.20,10.3,10)**.7 part 7,13.3 part 14,15.11 ,parts 1 and 2, and 17.13** .The bid document clearly states that bidders should respond as '**Comply**' or **'Not Comply'** to the mandatory requirements. This shows that the bidder didn't follow the updated instructions of the bid **[**sent to all bidders **under reference No DBE/ICB/IT/CTUVS/2021]**. Hence the reason for its disqualification.
4. **Fintech International Ltd** responded as **comply** with all the mandatory requirements of **UV enabled MICR Cheque Scanner** and provided detailed description in the remarks column of the bid document.
5. **Sybrin Systems** has complied all the mandatory requirements stated in RFP of Cheque Truncation System. However on the non-functional requirement section serial number 1 DBE wants the training’s cost to be included together with the implementation of the system but the bidder specifically stated that the training cost should be on DBE, for this reason the bidder’s proposal is rejected.
6. **Sybrin Systems** has explicitly stated that under the Functional Specifications for UV enabled MICR Cheque Scanner serial numbers **8** and **23** it will not comply with the mandatory requirement which results in the rejection of the proposal.
7. The table below summarizes the technical evaluation:

|  |  |  |  |
| --- | --- | --- | --- |
| **Bidder** | **Technical Evaluation Result** | | **Final Result** |
| **UV enabled MICR Cheque Scanner** | **Cheque Truncation System** |
| **Moti Engineering** | **Pass** | **Fail** | **Fail** |
| **Fintech International Ltd** | **Pass** | **Fail** | **Fail** |
| **Sybrin Systems** | **Fail** | **Fail** | **Fail** |

**Prepared By: Signature Date**

1. Alemtsadik Tadesse \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Kiros Abreha \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Mikiyas Tadele \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Checked By: Signature Date**

Fantahun Tilahun \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_