

USAID FINANCIAL SECTOR
TRANSPARENCY ACTIVITY
RETAIL PLATFORM FOR DIRECT SALE
OF GOVERNMENT SECURITIES

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LIST OF ACRONYMS

AIPS	Automated Interbank Payment System
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
CSD	Central Securities Depository (of Moldova)
CSD Participant	Licensed Participant of the CSD
DBMS	Data Base Management System
FSTA	Financial Sector Transparency Activity Project
GS	Government securities
IBAN	International Bank Account Number
ISIN	International Securities Identification Number
MOF	The Ministry of Finance of the Republic of Moldova
NBM	The National Bank of Moldova
PD	Primary Dealer
OS	Operating system
SAML	Security Assertion Markup Language Security Assertion Markup Language
SSO	Single Sign-On

I IDG BACKGROUND AND INFORMATION SHEET

Issue Date	May 20, 2022
Questions Due:	June 13, 2022
Closing Date	June 30, 2022

International Development Group Advisory Services, LLC (International Development Group LLC or IDG), is soliciting proposals from qualified organizations interested in designing, building, and launching a direct sales of government securities (GS) to retail investors platform in Moldova. IDG is a U.S. consulting firm located in the Washington, DC. area. As the implementer of the USAID Moldova Financial Sector Transparency Activity (FSTA), IDG has been contracted by the United States Agency for International Development (USAID) to assist the National Bank of Moldova, the Ministry of Finance, the Central Securities Depository (CSD) and other public administration bodies in Moldova with the objective to design, build and launch a direct sales of government securities (GS) to retail investors platform in Moldova (“platform”, “retail platform”).

The scope of the platform includes primarily the direct purchase of government securities by retail investors and the sale of government securities by retail investors to primary dealers, prior to maturity. The platform will be owned by the Republic of Moldova and operated and managed by the Ministry of Finance of the Republic of Moldova. It will also rely on the services provided by the Moldovan Central Securities Depository Agency, whose business model of the CSD is based on international standards and practices applied in the area of settlement systems, and the national legislation transposes the applicable regulations of the European Union with regard to central depositories’ activity.

This procurement will require formal technical and cost proposal submissions for both the Base Contract and the Option Period as outlined by the Request for Proposals (RFP). This procurement will be conducted as a full and open competition process under which any type of organization is eligible to compete.

The awarded contract will be a firm fixed price contract type and the estimated period of performance will be July 2022 to at least app, May 2023. The firm fixed price will include a Base Contract and an Option Period. Please note that IDG has the right to not exercise the Option Period that includes the Build Phase Part II if Build Phase Part I is delayed. The USAID principal geographic code for this contract is 935. The place of performance is the Republic of Moldova and the successful bidder’s headquarters location.

Any questions regarding this RFP should be submitted no later than 5:00 PM Eastern Standard Time (EST) on June 13, 2022. These submissions should be made by email address to procurement@internationaldevelopmentgroup.com. In the subject line reference: Questions – GS Retail Platform.

RFP proposals must be submitted no later than 3:00 PM EST on June 20, 2022. These submissions must be made by email address to procurement@internationaldevelopmentgroup.com. In the subject line, please reference: RFP – GS Retail Platform.

Bidders must submit both Technical Proposals and Financial Proposals electronically. The proposals must be submitted in separate emails. Proposals must be submitted in English and must remain valid 120 days after the submission date.

Issuance of this solicitation and the submittal of a proposal do not constitute a commitment on the part of IDG to make an award; neither does it constitute an obligation for any costs incurred in the preparation and submission of a proposal.

2 ABOUT THE RFP DOCUMENT

IMPORTANT: This document describes the business objectives, most of the relevant regulatory basis and the business processes that must be supported by the software solution. This document details what functionality the software solution that is being procured must support and provide.

This document also details the expected operating IT environment and the non-functional requirements that the software solution must meet and operate in.

Implementation approach: the successful Bidder will have a period of eight (8) working weeks at the beginning of the project to develop a functional specification, that will include the UI screens, initial DB design and interface specification and agree with the Beneficiary of the project and the Purchaser. It is in that period that detailed level functional specification must be agreed with the Beneficiary and FSTA.

The successful Bidder will receive all detailed specifications of the M-Service family or other interfaces provided by the Moldovan state administration institutions as well as the specification of the relevant file adapters and SWIFT MT message formats required for communication with CSD.

3 SCOPE OF WORK

3.1 FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS SOURCES

3.1.1 REQUIREMENTS SOURCES

The following documents present the sources of the functional and non-functional requirements for the software solution for the future retail platform:

- Ministry of Finance, assisted by the Working Group, developed Project Concept of the Program for the Direct Sale of State Securities to Individuals in the Republic of Moldova, approved by the Moldovan Government Decision No. 192/ 2021
- FSTA Project CONCEPT paper: “Retail platform for government securities and other financial instruments”
- Various official Moldovan standards for implementation and integration of government IT systems incl. usage of various MSERVICES
- Current CSD IT systems
- Current MOF IT systems
- Government Decision nr.128/2014 on Government single technological platform (MCloud)

3.1.2 APPROACH TO THE IDENTIFICATION OF FUNCTIONAL AND SYSTEM REQUIREMENTS AND CONSTRAINTS

- Functional requirements will be:
 - Extracted and based on the:
 - Ministry of Finance Project Concept of the Program for the Direct Sale of State Securities to Individuals in the Republic of Moldova
 - FSTA developed Concept Paper and subsequent business design documents
 - Derived from the functioning current MOF and CSD systems and interfaces
- System and non-functional requirements will be derived from the current eGovernment infrastructure made available by the Moldovan state and managed by the eGovernment Agency (Agentia de Guvernare Electronica)
- Current CSD IT infrastructure and the CSD application access for CSD Participants
- Relevant legislation and best practices in the field of customer compliance, AML/CFT

3.2 OVERVIEW OF FUNCTIONAL REQUIREMENTS THE SOFTWARE SOLUTION MUST FULFILL

3.2.1 DESCRIPTION OF THE UNDERLYING BUSINESS OBJECTIVES AND REQUIREMENTS FOR THE IT SYSTEM TO SUPPORT

3.2.1.1 BUSINESS OBJECTIVE

The main business objective is the creation, launch and operation of an Internet based, direct sales of government securities platform in Moldova, for the purpose of sales and subsequent market operations, of government securities issued for the retail investors in Moldova. The platform, that will be accessible only through the Internet, will cater to non-professional individual retail investors that

will be able to directly buy, redeem and sell government securities issues. Given the retail platform's primary goals to attract, promote, educate the retail investors on the capital markets, and bridge the gap between professionals and simple investors, the platform should also include educational and training content.

3.2.1.2 RETAIL PLATFORM SOFTWARE SOLUTION SCOPE

In-Scope

The software solution supporting the Retail Platform must support:

- Internet based access, from PCs, tablets and smart telephones to the retail platform using HTML5 based responsive user interface
- All required and specified functions and interfaces
- Self-service registration and account opening on the platform in line with the relevant regulation in Moldova incl. AML/ CFT regulation and recognized international practices
- View of the own account holdings i.e. Retail Platform portfolio and own account master data
- Self-service change of own master data, such as bank account, , in line with the relevant regulation in Moldova incl. KYC/AML/CFT regulation
- Interfaces to the CSD, managing communication for all relevant data as per CSD rules and regulations
- Interfaces to other relevant Moldovan public administration systems, such as the Moldovan State Registry of Population, or MPAY or other M-family of services that will enable two-way communication as per defined business requirements and in line with regulation in Moldova
- Secure messaging to the retail platform account holders incl. possibility to attach documents into the secure messages to be viewed on the Platform and send notification thru MNOTIFY
- Access to direct purchase of government securities process and subsequent market operations for retail platform account holders
- Order management functionality supporting both the defined market operations examples of such being:
 - Initial direct purchases of government securities
 - Sales of government securities before their maturity by the Retail investor to a Primary Dealer (PD)
 - Automated early redemption by MOF as the Issuer
 - Order Size and Maximum Ownership limits
 - Possibility for digital signing of Orders in line with relevant Moldovan regulation governing digital signatures and digital documents
- Calculation of interest and generation of interest payment orders
- Interfaces to MPAY or the State Treasury payment modules for payment and funds transfer, for the purposes of executing trades in line with the relevant regulation in Moldova incl. AML/CFT regulation
- “Back-end” Retail Platform Administration Application incl. a Graphical User Interface to all administrative and configuration functionalities for the management, administration and operation of the Retail Platform software solution
- Access to relevant Retail Platform market operations for Primary Dealers through a Web application

- Analog to E-bond system, the MOF must have access to reports on transactions with GS
- Interfaces to the CSD systems to enable two-way communications that will enable the CSD to execute and settle relevant Orders received from the Retail Platform
- Generation, formatting and sending of reports, such as account statements or other regulatory required documents
- Generation and formatting of required Management or Regulatory reports
- If Required DBMS licenses
- Applicable training of IT administrators, key users and software developers and provision of training materials documentation

Out of Scope

- Hardware, network or security devices or OS
- Reporting or BI tools, outside of the tools to generate In-scope reports

3.2.2 SHORT NARRATIVE DESCRIPTION OF THE SOFTWARE SOLUTION AND ITS ARCHITECTURE TO SUPPORT RETAIL PLATFORM

The Retail Platform for selling of Moldovan GS, must be accessed through the Internet and support self-service user registration and securities orders/transactions of retail investors in Moldovan GS. Access must be allowed through industry standard Internet browsers and all front-end functionalities for retail investors must be rendered using HTML5 standard only and using “responsive design” implementation techniques. Administrative and Primary Dealer user interface must be intuitive and enable efficient work from a desktop environment. The retail platform software solution must be constructed using a modular design, for example one for account management of retail investors and one for order management, and software solution must be developed in-line with Moldovan standards for government IT systems – please see Section 3.1.2, for some of the relevant standards.

3.2.2.1 RETAIL PLATFORM ACCOUNT MANAGEMENT MODULE

The account management module must enable the users to perform self-service registration for account opening and subsequent management of relevant account master data. Account opening will be governed by relevant regulation in Moldova incl. AML/CFT regulation and in line with regulatory requirements. Furthermore, the users will be able to view of the own account holdings i.e. their portfolio (also in graphic rendering) and own master data. Account Management module will support self-service change of own master data.

Natural person accounts will be managed directly by the Retail Platform and this must be supported by the software solution, while the Retail Platform itself will have and use a relevant set of accounts in the CSD, much like the CSD Participants accounts are managed by the CSD.

Eligibility criteria for a Retail Investor to open an account on the Platform:

- Natural persons (legally major age)
- Moldovan Citizens
 - Who have a valid Moldovan electronic signature
 - Who have a valid payments account in Moldovan Lei (MDL) open in a bank licensed in the Republic of Moldova or non-bank payment service provider

3.2.2.2 RETAIL PLATFORM ORDER MANAGEMENT MODULE

The Order Management module must support market operations as per specification listed in the Functional Requirements section below. Please note some market operations on the platform could be accessed also by established CSD participants (i.e. PDs). The order management module will also ensure fund availability and reservation, through MPAY. In case of respective order success or cancellation it also must support exception processing.

The detailed functional requirements specification that the order management functionality must fulfill will be detailed below. Relevant orders for the Retail Platform must be communicated to the CSD using file adapters i.e. two-way interfaces as per CSD requirements and using standard message types such as SWIFT type MT5XX messages, as described below.

Retail Platform orders will be managed directly by the Retail Platform and this must be supported by the software solution, while the Retail Platform will send relevant Orders to CSD.

3.2.2.3 INTERFACES

The Retail Platform will communicate with relevant external systems using interfaces, that must be supported by the software solution:

- File Adapter based communication as per CSD standard
- Order Management Interfaces to CSD using two-way interfaces using standard message types such as SWIFT MT5XX messages
- Interface to relevant government owned payment facilities such as MPAY, MNOTIFY, MLOG or the interface to query the relevant registries of persons and bank accounts

3.2.2.4 INTEGRATION OF M-SERVICES.

IMPORTANT NOTE: The software solution for the Retail Platform must be integrated with all available and implemented M-Services and installable on M-CLOUD:

MPass

MPass is the national service, which allows authentication and access to digital public services. The service offers different authentication mechanisms: mobile signature, digital certificate, user name and password.

MPass Server offers a SAML-based Single Sign-On (SSO) authentication that provides partners with full control over the authentication and authorization of hosted user accounts.

Security Assertion Markup Language (SAML) is an XML standard that allows secure web domains to exchange user authentication and authorization data. Using SAML, an online service provider can contact a separate online identity provider to authenticate users who are trying to access secure content.

It is important to note that the SSO solution only applies to web applications and applications, which employ SAML SOAP binding, as it requires direct or indirect user interaction with MPass web site. The MPass SSO implementation is based on the SAML v2.0 specifications adopted for using single method for data transfer (POST/POST, SOAP).

Users which have valid digital certificates will be able to create accounts that do not need validation. The MPass server automatically extracts data from the trusted digital certificate and creates a validated user account.

The Information Systems registered with MPass are required to assign a certain level of authentication. Thus, systems which require high assurance of user identity will be requesting authentication with client digital certificate and those which consider the login/password as sufficient will allow both forms authentication and digital certificate authentication

eGovernment Agency will provide the MPass Integration Guide, which provides a high-level view on the system architecture, and details the process of system interaction using SAML 2.0 to provide authentication services to third party Information Systems and Service Providers.

MPay

MPay is a reusable and shared platform-level service the main scope of which is to enable the payment for any e-Service with any available payment instrument.

The unified technical interface used for integrating e-Services with MPay significantly simplifies integrations by hiding differences in technical protocols and formats. There are many non-technical advantages enabled by MPay, such as easier contract management and simplified clearance.

The availability of MPay depends on the availability of the Service Provider implementation, i.e. a payer will not be able to query for an order or an invoice for a particular e-Service and pay for it, if the e-Service provider's web-service is not available.

MPay exposes WS-I Basic Profile 1.1 interoperable service over HTTPS which corresponds to basic Http Binding in WCF. MPay uses SOAP faults for error reporting.

MPay uses WS-Security (X.509) XML Signature (at message level) to enable non-repudiation.

Electronic Government Center will provide the MPay Integration Guide, which describes the technical interfaces that must be exposed by information systems that integrate with MPay and the technical interfaces that MPay exposes for them. Its target audience is the development teams for those information systems. The document also contains all of the relevant information required for a complete understanding of MPay from the integration point of view. It contains integrations development details, security and e-Service registration considerations and an API reference.

Interoperability Platform MConnect

The Interoperability Governmental Platform MConnect facilitates the exchange of data between the authorities to increase the efficiency and quality of delivery of public services. Through the interoperability platform, the public authorities exchange data in real time without requesting it from citizens and the business environment in the form of certificates, reports, etc.

MConnect aims to assure the following objectives:

- increase the efficiency and effectiveness of information systems through which electronic public services are delivered;

- increase the efficiency of the use of public funds;
- increase citizens' comfort;
- increase the security of information systems of the local and central public administration;
- reuse the resources involved in the information systems;
- improve the collaboration between the institutions of public administration;
- promote the web accessibility;
- comfort for citizens.

The data exchange will be performed through secured channels, using dedicated standards and protocols such as XML, SOAP and HTTPS.

MConnect is compatible with the following databases:

- Microsoft SQL Server
- Oracle
- MySQL
- Informix
- IBM DB2
- Cassandra
- MongoDB and other non-relational databases

MSign

MSign allows signing of various digital content: web forms, offline documents, images.

MLog

Log is a centralized service which aims to provide a secure and flexible mechanism for logging and auditing, ensuring conservation of the transactions (events), produced in an information system at a given time.

eGovernment Agency provides the MLog Integration Guide, which describes the technical interfaces that must be exposed by information systems that integrate with MLog and the technical interfaces that MLog exposes for them.

MNotify

MNotify is a software application for sending of notifications within the information systems owned by public authorities within their jurisdiction and other public institutions of public service.

In this context, "Service" implies a message that is automatically generated by the information systems of the institutions with the purpose to notify users about changes of certain services or methods of service provision.

Thus, users may be notified of any changes in terms of reduced time, by e-Mail, SMS, instant messaging or other communication channels, as needed.

eGovernment Agency will provide the MNotify Integration Guide, which describes the technical interfaces that must be exposed by information systems that integrate with MNotify and the technical interfaces that MNotify exposes for them.

3.2.2.5 LIST OF RELEVANT REGULATORY DOCUMENTS GOVERNING THE BUSINESS OBJECTIVES AND REQUIREMENTS

Development and operations must be also in compliance with the following regulatory documents, in addition to the relevant NB; MOF or CSD regulation:

1. Law Nr. 91/2014 on electronic signature and electronic document, Monitorul Oficial Nr. 174-177 from 04.07.2014;
2. Law Nr. 71/2007 on registries, Monitorul Oficial Nr. 70-73 from 25.11.2007;
3. Law Nr. 467/2003 on informatics and state informational resources, Monitorul Oficial nr. 6-12/44 from 01/01/2004;
4. Law Nr. 982/ 2000 on access to information, Monitorul Oficial Nr. 88 art. Nr. 664 from 28.07.2000;
5. Law Nr. 133/2011 on personal data protection, Monitorul Oficial Nr. 170-175 from 14.10.2011;
6. Law Nr. 1069/2000 on informatics, Monitorul Oficial Nr. 73-74 from 05.07.2001;
7. Law Nr. 142 /2018 on data exchange and interoperability, Monitorul Oficial Nr. 295-308 from 10.08.2018;
8. Government Decision Nr. 1123/2010 on approving requirements regarding security of personal data during its processing by systems designed to work with personal data, Monitorul Oficial Nr. 254-256 from 24.12.2010;
9. Government Decision Nr. 945 from 05.09.2005 on requirements regarding certification of public keys, Monitorul Oficial Nr. 123-125 from 16.09.2005;
10. Government Decision nr. 710/2011 on approving strategic programme of technological modernization of government (e-Transformation), Monitorul Oficial Nr. 156-159 from 23.09.2011;
11. Government Decision nr. 128 /2014 on Government single technological platform (MCloud), Monitorul Oficial Nr. 47-48 from 25.02.2014;
12. Government Decision nr. 1090 /2013 on the governmental electronic service of authentication and access control (MPass), Monitorul Oficial Nr. 4-8 from 10.01.2014;
13. Government Decision nr. 405 /2014 on the governmental electronic integrated service for digital signature (MSign), Monitorul Oficial Nr. 147-151 from 06.06.2014;
14. Government Decision nr. 708 /2014 on the governmental electronic journalling service (MLog), Monitorul Oficial Nr. 261-267 05.09.2014;
15. Government Decision Nr. 916 /2007 on the concept of a Government Portal, Monitorul Oficial Nr. 127-130/952 from 17.08.2007;
16. Government Decision nr. 330 /2012 on development and administration of a single public services portal, Monitorul Oficial Nr. 104-108 from 01.06.2012;
17. Government Decision nr. 701/2014 approving the methodology of government open data publication, Monitorul Oficial Nr. 256-260 from 29.08.2014;
18. Government Decision Nr. 320 from 28.03.2006 on approving the regulations regarding digital signature of public authority documents, Monitorul Oficial Nr. 51-54 from 31.03.
19. Law on public finances and budget-fiscal liability nr.181/2014;
20. Government Decision on the government electronic payments service (Mpay) nr.712/2020;

21. Order of the Ministry of Finance regarding the approval of the methodological norms for the cash execution of the constituent budgets of the national public budget and extra budgetary means through the Single Treasury account (CUT) of the Ministry of Finance nr.215/2015.
22. Government Decision No. 376/2020 approving the concept of Government Electronic notification Service (MNotify) and the Regulation on how to operate and use the Government Electronic notification Service (MNotify).

3.3 RETAIL PLATFORM ARCHITECTURE DESCRIPTION

3.3.1 ARCHITECTURE DESCRIPTION

The following diagrams display an architecture proposal to meet the identified requirements and the standards given by the existing operational systems in CSD or in the Moldovan eGovernment Agency (i.e. the MCONNECT and related services) and under the assumptions made and documented in Ch. 3.4.1.3 and Ch. 3.4.4:

Architecture allows for reuse of existing eGovernment systems services for validation of personal identity, electronic identity, electronic signatures etc.

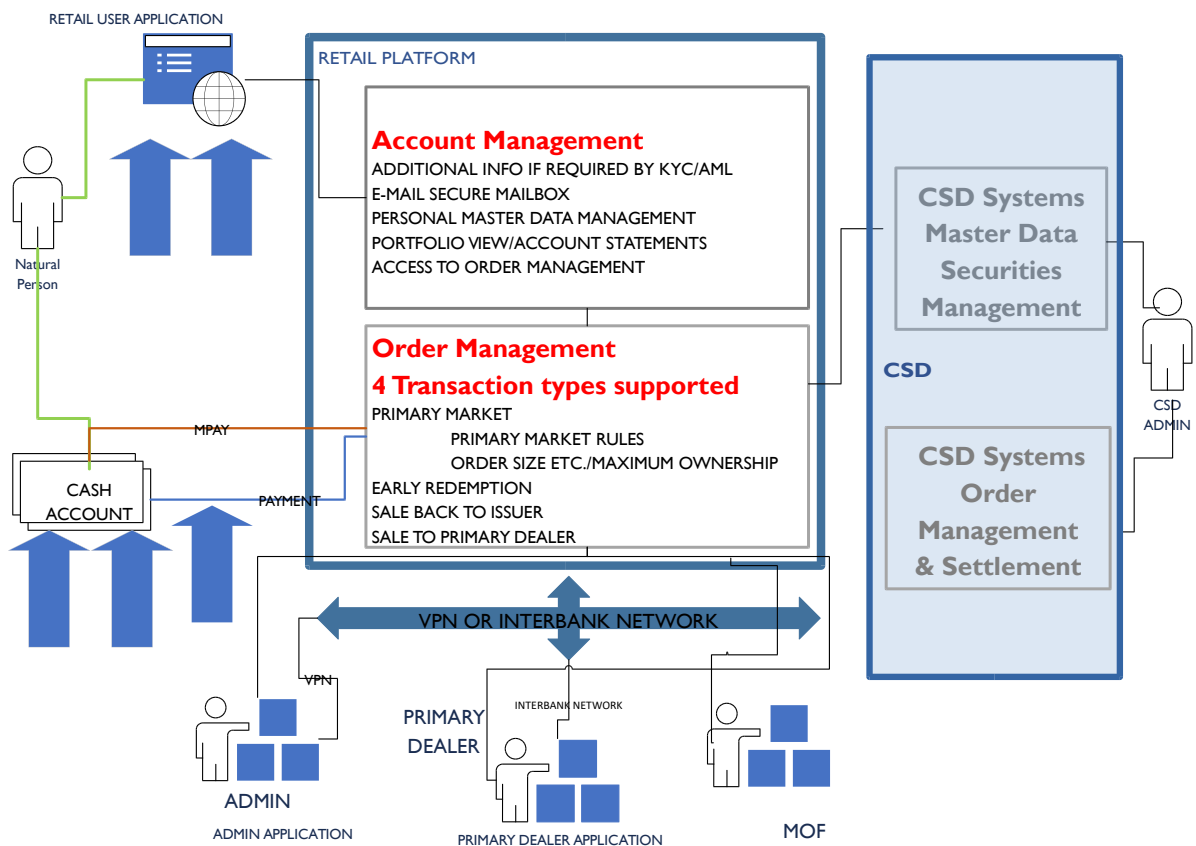


Figure 1 - Conceptual Logical Architecture Proposal of Main Functional Blocks, Functions and User Types

- Architecture allows for reuse of existing CSD systems for securities management, securities settlement, and allows the reuse of existing CSD interfaces (file adapter, SWIFT MT)
- Architecture allows the operation of the Retail Platform independent of the future ownership or future operational custody of the Retail Platform

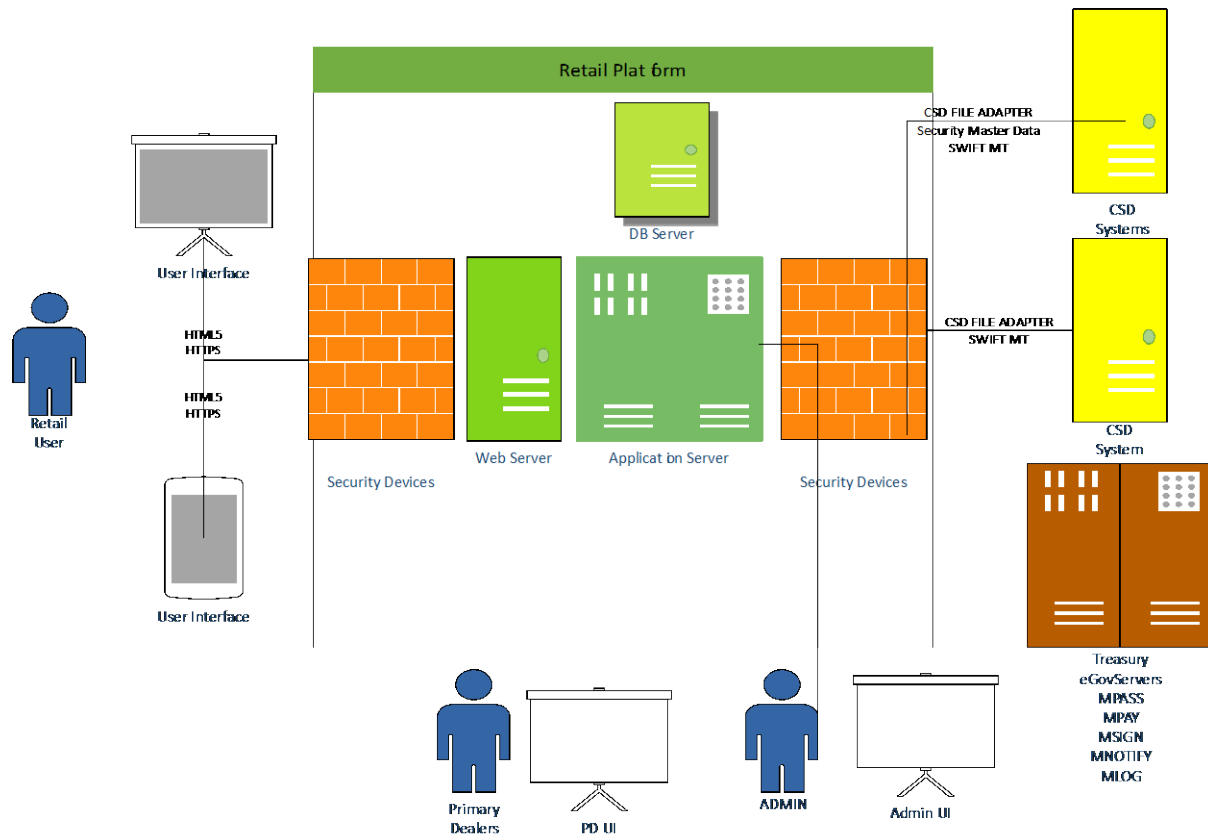


Figure 2 - Conceptual Physical Architecture Proposal of Main Functional Blocks, Functions and User Types

3.3.1.1 SECURITY MASTER DATA MANAGEMENT ARCHITECTURE OPTIONS FOR RETAIL PLATFORM

Architecture approach: All retail security master data will be managed in CSD systems, additional attributes, specific to Retail Platform will be managed on the Retail Platform

All retail security master data will be managed in CSD systems as per current practice. Additional attributes of securities sold on the Platform, relevant just for trading rules of the Retail Platform will be managed on the retail platform. The diagram below illustrated the required architecture. Relevant administration functionality must be available on the Retail Platform.

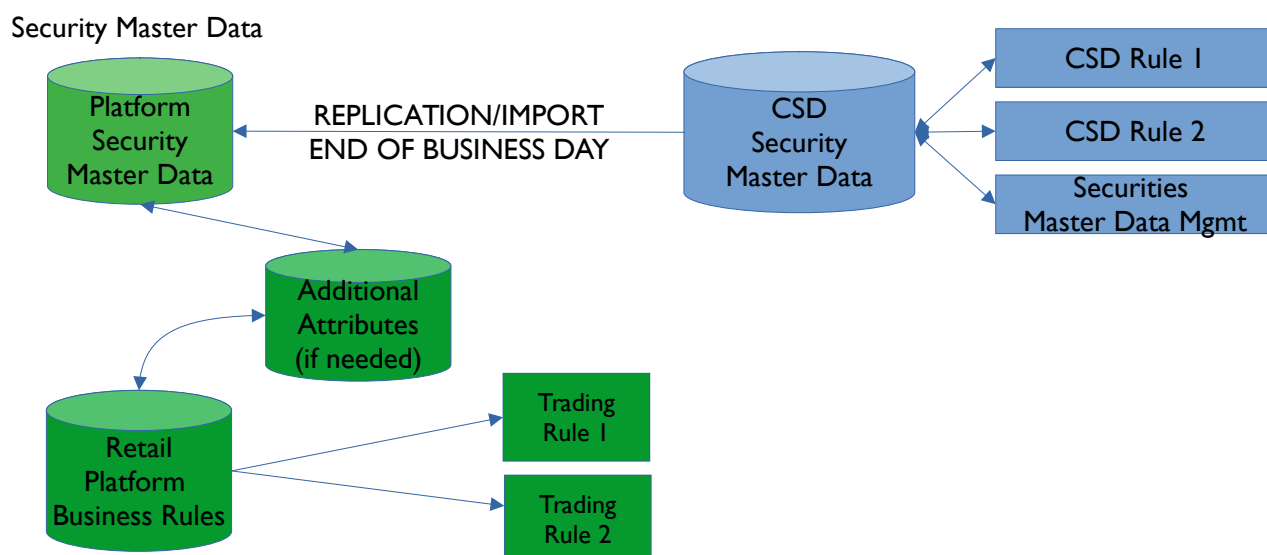


Figure 3 - Security Master Data Management Concept

- Retail securities master data are managed in CSD – As-Is
- Securities Master Data will be defined in CSD systems and exported to Retail Platform through the CSD File Interface detailed below. The details of the file format must be agreed with CSD and MOF in the Analysis phase and will be based on SWIFT MT 5XX message formats
- Retail Platform software must be able to read the files and import the securities master data from the files into the software solution
- An unused field in the ISIN definition, will be used to flag the ISIN is for the retail platform
- No changes to the Securities Master Data definition needed in CSD systems
- If needed for specific Retail Platform business rules, additional attributes on ISIN level will be defined in the Retail Platform itself
- Retail Platform relevant business rules will be implemented in the Retail Platform

3.3.1.2 ACCOUNT MANAGEMENT ARCHITECTURE OPTIONS FOR RETAIL PLATFORM

The diagram below describes a proposal for the account opening process on the retail platform, assumption is that an on-site, face-to-face client identification is not required.

Architecture approach Retail Platform accounts are managed in the Retail Platform systems, CSD manages the Retail Platform Omnibus account belonging to the Retail Platform Owner, the MOF.

As per diagram below:

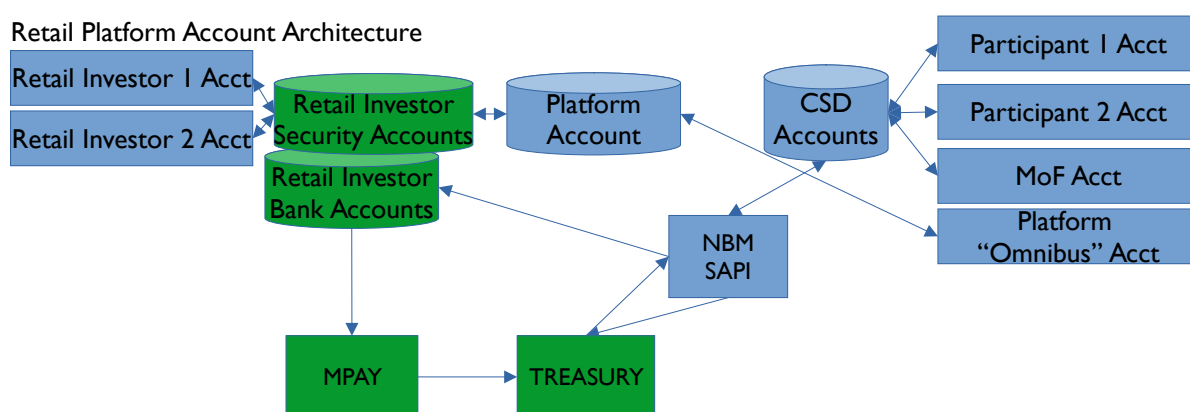


Figure 4 - Account Management Architecture, Retail Platform

- Retail Investor securities account positions are consolidated in one “omnibus” Retail Platform securities account in the CSD
- CSD Participants accounts stay As-Is in CSD
- CSD Participants have access to Platform for quotes thru a separate Web application that must be supported by the Retail Platform
- Retail Investor accounts are managed on the Retail Platform
 - Retail Platform account balances including account balance history and all transaction history data required will be managed on the Platform
- CSD settles retail platform account transactions between Retail Platform Omnibus Account and other CSD Participant accounts such as the MOF or PDs

3.3.1.3 PRIMARY SALE OF SECURITIES FROM ISSUER/MOF TO RETAIL INVESTOR ARCHITECTURE FOR RETAIL PLATFORM

Primary Sale Architecture

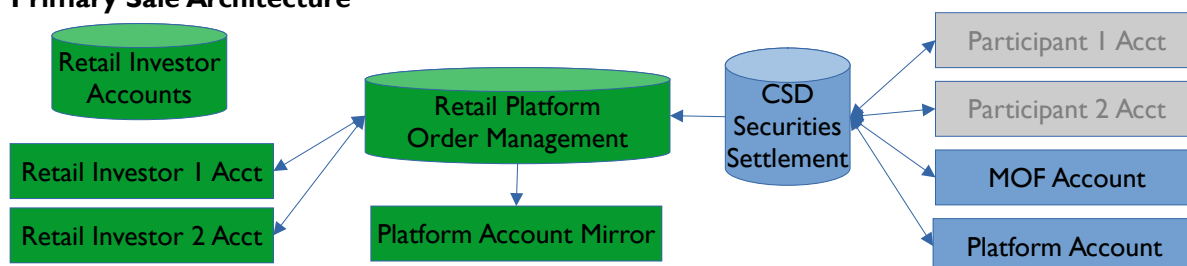


Figure 5 - Architecture of the Primary Sales Process for Government Securities, Retail Platform

- ISINs for GS traded on the Retail Platform registered in the CSD, according to the CSD Rules; Additional GS issues attributes to be used only on the Retail Platform and managed on the Retail Platform
- Primary sales take place on the Retail Platform using a purchasing process similar to a standard “eCommerce” purchase process; Sales process takes place prior to the date of Issuance
- Retail Investors pay through MPAY, access to MPAY through Internet/M-Banking
- At the end of the sales period, Retail Platform will inform CSD how many units were sold and they will be registered by the CSD on the MOF Issuer account. On the day of issuance

settlement from MOF to Retail Platform Account in the CSD using one consolidated Order, using Free of Payment securities settlement will be made

- For primary sales of GS, securities are settled into Retail Investor account at the end of day on the date of Issuance by the Retail Platform, after obtaining confirmation from the CSD that Retail Platform securities account has been credited
- Individual ownership records for Retail Investors are kept only on the Platform

3.3.1.3.1 Primary sale Order confirmation and order settlement flow

Securities Order Confirmation and Settlement

- Individual orders by Retail Investors are made before the end of a sales period; Payment is executed using MPAY
- Confirmed orders are settled after the CSD settlement of securities
- At the end of sales period, Retail Platform sends one cumulative FOP Securities Order to CSD for settlement. Securities are debited from MOF account in CSD and credited to Retail Platform “omnibus” account in CSD.
- Once the securities are settled in the Retail Platform “omnibus” account, settlement confirmation is sent to the Retail Platform
- Securities are credited into the individual Retail Investor accounts by the Retail Platform after Retail Platform “omnibus” securities account is credited in CSD

Cash payment and subsequent settlement

- Retail Investor chooses the security issue and amount of securities
- Retail Investors pay through MPAY, access to MPAY through Internet/M-Banking
- At the end of the business day, the relevant accounts of payment service providers for the cumulative amounts for the retail securities Orders, confirmed since the Close of the last business day, are debited. Accounts are debited using AIPS as per standard MPAY procedure
- MPAY will credit the Treasury settlement account in AIPS and provide a specification of payments made to the Treasury

3.3.1.4 SALE OF SECURITIES FROM RETAIL INVESTOR TO PRIMARY DEALERS FOR RETAIL PLATFORM

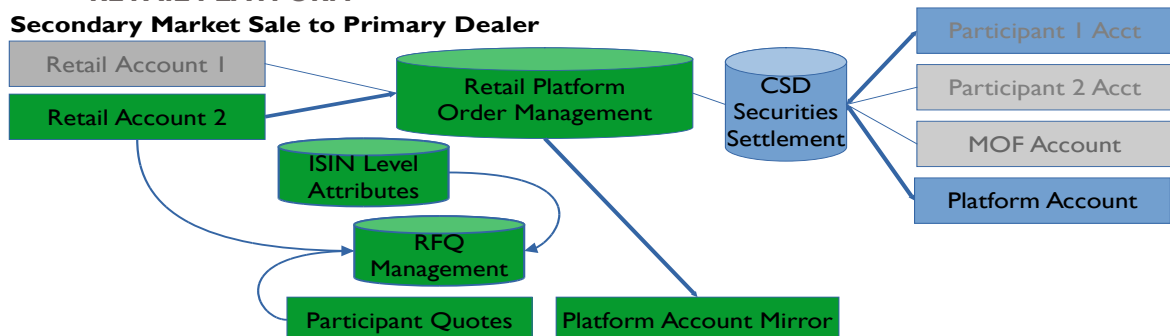


Figure 6 - Architecture of Government Securities Sales from Retail Investors to Primary Dealers, Retail Platform

- Sales to Primary Dealer take place in a 2-step process using a Request for Quote system

- Retail Investors request a Quote from Primary Dealers registered on ISIN level. The quote must contain the ISIN and the number of securities Retail Investor wants a quote for. The Request cannot be modified later by either the Retail Investor or Primary Dealer
- Retail Platform sends the Request for Quote to Primary Dealers registered in the ISIN
- Primary Dealers receive a Notification and have to login to the Retail Platform Web Application for Primary Dealers to respond
- Primary Dealers quote a price valid for the working day only
- The Retail Platform sends a response to Retail Investors stating the obtained quotes or optionally only the Best Quote
- If Retail Investor accepts the Quote the Platform, then transaction is considered as “matched”, the Platform reserves the securities in the Retail Investor Account, submits an order confirmation to the PD and an individual settlement Order, that will be sent by the Platform to the CSD, using a SWIFT message
- CSD securities settlement takes place between Retail Platform Account, and CSD Participant Account
- Individual ownership records for Retail Investors are always kept only on the Platform
- Settlement takes place to the Treasury account in AIPS that CSD uses for settlement and then Retail Platform must generate a payment order for Treasury to pay Retail Investor

3.3.1.5 AUTOMATED EARLY REDEMPTION OF GOVERNMENT SECURITIES BY THE ISSUER FOR RETAIL PLATFORM

Early Redemption Sale Architecture

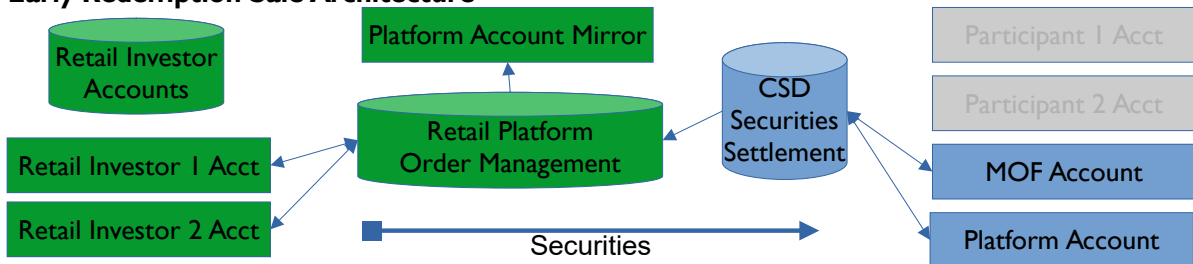


Figure 7 - Architecture of Government Securities Early Redemption Process

- In case MOF wants to pull an issue from the market, it can use the “Early Redemption” process
- Price of the security at “Early Redemption” time will be formed according to the standard valuation rules for Moldovan GS
- Order will be issued to settle all securities with a certain ISIN from the Retail Platform Omnibus Account or CSD Participant Accounts. In the CSD system, at redemption, GS are being annulled from the Participants and investors’ securities accounts managed by the CSD.
- Cash settlement to CSD Participants will be executed together with the settlement of securities into the CSD Participants’ account.
- Cash settlement to Retail Investors will be done by the Treasury. Securities will be annulled from the individual Retail Account and payment at redemption will be disbursed to the Retail Investor cash accounts
- Retail Investors must be informed about the “Early Redemption” in due time, so they can plan what actions to take with the liquidity

3.3.1.6 SALE OF SECURITIES FROM RETAIL INVESTOR TO ISSUER IN “BUY-BACK” WINDOWS FOR RETAIL PLATFORM

Issuer “buy back”Architecture

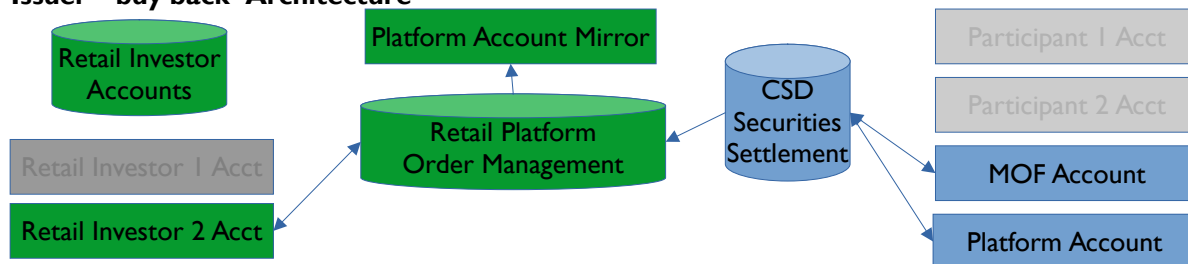


Figure 8 - Architecture of Government Securities Sales Issuer "Buy-Back" process

- MOF will offer periodic “buy back” windows to Retail Investors wishing to sell the securities before their maturity
- Price of the security will be formed according to the standard valuation rules for Moldovan GS
- During the “buy back” period, Retail Investors will be able to register Orders to sell their securities back to the MOF
- Retail Platform will send one “cumulative” Order per business day to the CSD for settlement
- Order will be settled on the Retail Platform omnibus account
- Cash will be settled from MOF Treasury directly to Retail Investors
- On the Retail Platform the securities will be annulled from the individual Retail Accounts and payment will be disbursed to the Retail Investor cash accounts

3.3.2 INTERFACES

3.3.2.1 INTERFACES BETWEEN RETAIL PLATFORM AND CSD

The interface details must be analyzed and agreed during the analysis phase of the project. The interfaces must comply and be based on the following statements

- Interface for Security Master Data, or security price data – file interface as per CSD standard. File Adapter will take and place files on the file folder structure in a file system
- Message interface, based on SWIFT MT messages to CSD for Orders exchanged as per CSD standards
- Message interface to confirm the end of the daily settlement process

3.3.2.2 INTERFACES TO MOLDOVAN STATE E-GOVERNMENT SYSTEMS

The interface details must be analyzed and agreed during the analysis phase of the project. The interfaces must comply and be based on the following statements

- Interfaces to Moldovan state systems:
 - MCONNECT for access to the State Registry of Population or the Register of Accounts operated by CTIF
 - MPAY
 - MPASS
 - MSIGN
 - As per technical specification of the relevant eGovernment systems
 - MNOTIFY
 - MLOG

3.3.3 BUSINESS AND TECHNICAL ASSUMPTIONS FOR ARCHITECTURE

- Retail Platform IT systems must be able to operate independently of which Moldovan institution will own or operate the platform
- CSD retains the same CSD participant account management, securities management and order/trade and securities settlement functions as it has today. CSD Participants can access the platform for Sale to Primary Dealer operations only through the same physical access channel as CSD i.e. secure bank network or VPN connection. NOTE: A web application must be provided by the Retail Platform for CSD Participant interaction with the Retail Platform for providing and managing quotes or other required operations;
- ASSUMPTION: Face-to-face retail investor identification will not be required at account opening.

3.4 RETAIL PLATFORM FUNCTIONAL REQUIREMENTS FOR THE SOFTWARE SOLUTION AND ITS OPERATIONS FUNCTIONS

The software solution must be designed and built, in line with the architecture and requirements detailed in [Retail Platform architecture Description](#).

Software solution must be built using an industry standard RDBMS, compliant with non-functional requirements listed in this document and with Moldovan standards for government IT systems. The data model, containing both securities master data, retail investor account master data as well as all relevant order, transactions and historical movement data, must be implemented on the RDBMS. Documentation requirements for the data model are listed below.

3.4.1 RETAIL PLATFORM ACCOUNT MANAGEMENT

3.4.1.1 RETAIL PLATFORM ACCOUNT OPENING PROCESS DESCRIPTION

The software solution must support the process detailed here:

1. The User, potential Retail Investor, accesses the Retail Platform portal and starts the account opening process. MPASS sign-in is required, users without a Moldovan digital signature will not be allowed to advance in the process of account opening or Sign-in
2. If MPASS sign-in successful, system checks whether a retail platform account exists for the User using the Personal ID number (IDNP) associated with the User after MPASS sign-in
3. MPASS service will provide the personal data to the Retail Platform. Only IDNP will be retained in the Retail Platform DB.
4. After MPASS login, and as a first step in the account opening process the software solution must enable the Retail Investor to consent to the usage of personal data and to the Terms and Conditions of the Retail Platform
5. Personal document data must be checked using relevant interfaces to the State Registry
6. Additional legally required data such as residential address e-mail address is input
7. The User will be required to complete a questionnaire as practiced in account compliance procedures in Moldovan bank. The submission of data will be confirmed using the Moldovan advanced qualified signature. Data from the questionnaire must be stored in the database and as an XML file

8. The Retail Platform software solution user management must be integrated with MPASS and associate an IDNP to a Role of the Retail Investor. Software solution must support multiple roles with different functionality access rights.
9. If all data is checked to be valid, the User is prompted to input the Bank Account data (all data required to define a bank account incl. the bank account number)
10. Retail Platform account must support account status changes during the lifecycle, such as Pending/Active/Non-Compliant/Closed.
11. If data is checked to be valid, the account opening process can be completed by the Compliance Office explicitly activating the account or the activation can occur automatically. Software solution must support both options
12. Error and exception handling must be in place and supported by the software solution. Details of the error and exception handling must be clarified and specified in the Analysis phase.
13. After the completion of the account opening process, the User will be able to change account information such as bank account number or other data from the questionnaire above

NOTE: Availability of securities market operations to Non-Compliant Account should be assessed by the Owner of the Platform. Software solution must support restrictions to market operations for different account status.

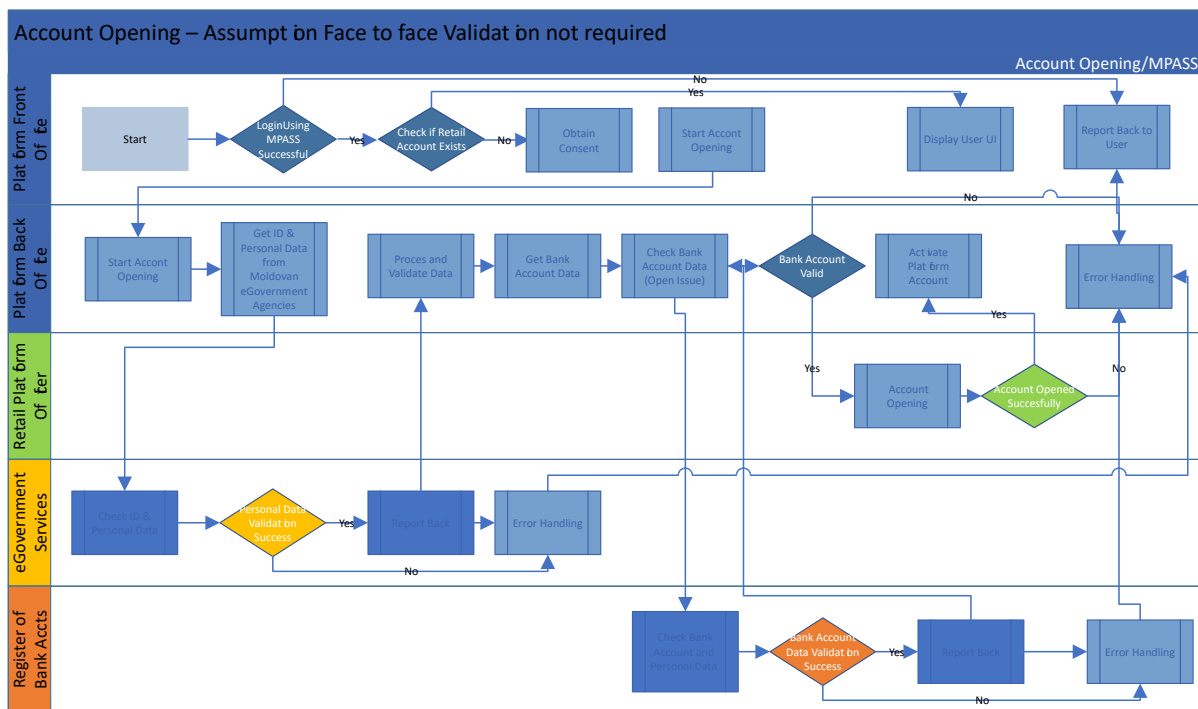


Figure 9 - Process Flow, Retail Account Opening Process

3.4.1.2 RETAIL PLATFORM ACCOUNT MASTER DATA MANAGEMENT AND CHANGE PROCESS DESCRIPTION

Authorized users of the Retail Platform will have access to self-service triggering changes of account master data. This process must be supported through the Retail Platform software solution.

3.4.1.3 RETAIL PLATFORM ACCOUNT MANAGEMENT

Software solution for the Retail Platform must retain and manage all aspects of retail investor security account balances, historical balances and transactions, and other movements such as coupon payments.

The information kept and the historical period for which the information must be kept must meet the relevant Moldovan legal requirements. Software solution also must support the management of the Retail Platform account on the retail platform itself, for the purposes of securities settlement on the retail platform and reconciliation of securities and cash settlement.

3.4.1.4 RETAIL INVESTOR ACCOUNT PORTFOLIO VIEW

Software solution must support view and access all the business events related to their interaction with Retail Platform and to service tasks (Portfolio, System notifications and documents in a system user Mailbox, Events, Transactions, Historical Data) for authorized users of the Retail Platform. The main page of the user interface of the Retail Platform authorized user, where all items and notifications related to user's details could be located and accessed (i.e. traceability of orders of financial instruments, orders under processing, account statements) must be available in form of a "Dashboard". The authorized users must also have direct access to market operations, for example direct access to the online financial instrument order forms, from the main page.

3.4.2 RETAIL PLATFORM MARKET OPERATIONS SUPPORT

The software solution must support the processes detailed below.

3.4.2.1 MANAGEMENT OF SECURITIES ON THE RETAIL PLATFORM

- I. GS issue will be registered by the CSD in line with current ISIN registration process
 - a. In addition to the attributes required by the CSD for registration of the security the following attributes must be in the GS to Retail Investors record:
 - i. ISIN
 - ii. Term
 - iii. Date of Issue
 - iv. Date of maturity
 - v. Coupon
 - vi. Interest
 - vii. Flag to mark "Retail Platform Issue"

Attributes to be managed by the Platform

- i. Current Price
 - ii. Minimum order for Retail Investor
 - iii. Maximum order for Retail Investor
 - iv. Maximum allowed ownership for Retail Investor
 - v. Table of Primary Dealers allowed to buy from Retail Investors
 - vi. Flag for automated early redemption
 - vii. Flag for automated sale to Issuer
 - viii. Information on the purpose of the GS issue (PDF format).
2. The security issue administrator (Role that can be assigned to multiple organizations) will make the issue available to the retail investors who have a registered account on the Retail Platform

3.4.2.2 SALE OF GOVERNMENT SECURITIES TO RETAIL INVESTORS

The process of initial sales of GS to Retail Investors, that the software solution must support will be approximately as follows:

- I. Retail Investors must be able to view the available securities for direct purchase, all pertinent attributes including the quantity of the issue available
 - a. Security Issues should be grouped by Maturity in the View

2. Retail Investors must be able to start the purchase process by choosing the issue and the quantity desired; the system should automatically display the going price, and the expected yield (in % and currency of the security terms)
3. The quantity desired must be validated against minimum and maximum Order value
4. Before confirmation and sending to execution, the Order will be checked as follows:
 - a. The system will check for maximum allowed ownership for the particular issue being purchased. If the answer is negative i.e. maximum allowed ownership will be surpassed, the appropriate message should be displayed to the Investor and the Order process restarted
 - b. If the query result is positive, i.e. Ownership after Order execution will be under the maximum allowed ownership, the system will check if the quantity of securities is available for purchase.
 - c. If query for available securities is negative, the appropriate message should be displayed to the Investor and the Order process restarted
 - d. If query positive, the Quantity will be reserved on the Platform, i.e. be transferred to the “Restricted” subaccount of the Owner, the and the Order process moved to the payment confirmation process
5. The system will then demand the Retail Investor to confirm the intention to Order by digitally signing the order
6. Once the order is digitally signed (the System will be interfaced with the Moldovan MSIGN), the System will then start the payment process by contacting MPAY or an alternative system through a process described in Section 3.4.5.8
7. If MPAY provides a positive response to the payment query, the Order will be confirmed and processed
8. If the answer is negative, the reservation of the securities will be cancelled, i.e. Securities transferred to the adequate subaccount, and the appropriate message should be displayed to the Investor, and the Order process restarted with RETRY PAYMENT possibility
9. The outcome of the process (“positive outcome”) will be an Order for the initial purchase of the Government Securities directly from the Issuer, confirmed by the Retail Investor

3.4.2.3 SALE OF GOVERNMENT SECURITIES TO RETAIL INVESTORS – PROCESSING OF CONFIRMED ORDERS

Software solution must support the following processing of confirmed Orders, following Step 117 of the process as detailed in Section 3.4.2.2.

The confirmed Orders must be processed as follows:

- All confirmed Orders must be retained by the Software Solution until the end of the sales period until they Orders are either settled into the Retail Accounts or cancelled
- Historical information on Orders must be kept regardless of the outcome. Retention period must be aligned with the relevant regulation
- Orders are grouped by ISIN into one cumulative order per ISIN at the end of the sales period
- This cumulative Order is sent to CSD for settlement using the CSD File Adapter. The settlement in CSD takes place between MOF Issuer and Retail Platform Omnibus account, using a method that is most efficient for CSD and MOF as the Issuer (Free of Payment). Orders must be sent in SWIFT MT54X file format. A sample of such file will be provided as an Annex to the ToR

- Once the settlement confirmation is sent by the CSD and receive and processed by the Retail Platform, the securities are settled into the individual Retail Platform securities accounts and open confirmed Orders are reconciled i.e. closed

3.4.2.4 EARLY REDEMPTION OF GOVERNMENT SECURITIES FROM RETAIL INVESTORS TRIGGERED BY ISSUER

The process of early redemption of GS from retail investors triggered by Issuer, that the software must support will be approximately as follows:

1. MOF as Issuer initiates the early redemption process for a security issue that allows it
2. On the defined redemption date, Retail Platform will send the instructions to the CSD to settle all securities from a particular securities Issue from the Retail Platform Account and PDs accounts. In the CSD system, at redemption, GS are being annulled from the Participants and investors' securities accounts managed by the CSD
3. On the Retail Platform the securities will be annulled from the individual Retail Account and payment (for early redemption) will be disbursed to the Retail Investor cash accounts
4. Price of the security at "Early Redemption" time will be formed according to the standard valuation rules for Moldovan GS; Retail Platform solution must compute this price and allow override by administrator
5. All Retail Investor accounts are scanned for ownership of the Issue and Orders are formed and automatically digitally signed by the Issuer
6. Quantity is not validated against minimum and maximum order value since the potential Buyer is the Issuer
7. The securities in the Retail Investor account are blocked i.e. transferred to a "restricted" subaccount or status
8. Retail Investors must be informed about the "Early Redemption" in due time, so they can plan what actions to take with the liquidity; A notification is sent to the Retail Investor prior to Execution
9. Retail Investor does not confirm the agreement to sell – it is automatic and mandatory
10. All transactions that are not confirmed and settled before next business day cut-off time are automatically cancelled and Retail Investors notified
11. Standard CSD settlement will be used for cash settlement to PDs
12. Software solution must generate the relevant payment orders for individual Retail Investor cash settlement

3.4.2.5 REDEMPTION OF GOVERNMENT SECURITIES AT MATURITY

NOTE: Redemption at maturity of the security must be supported by the same process as in Section 3.4.2.4

Early Redemption Sale Architecture

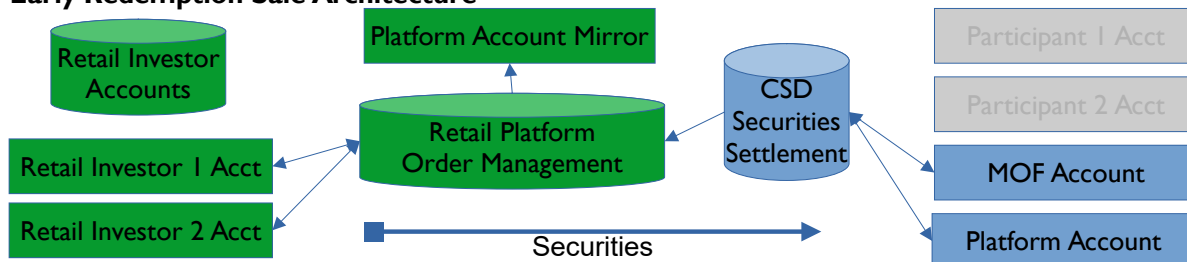


Figure 10 – Architecture of the Early Redemption Process

3.4.2.6 COUPON/INTEREST PAYMENTS

1. CSD will calculate coupon payments per PD per ISIN and will ensure the coupon payment to PDs accounts in AIPS, by debiting the consecrated Treasury account
2. Coupon payment to retail investors' bank accounts will be executed by the Treasury
3. Software solution will calculate coupon payments per ISIN, based on ISIN data and balance of Retail Investor account for the relevant ISIN
4. Software solution must support deduction of taxes due from the amount of coupon before generating payment orders
5. Software solution will generate payment orders for coupon payments per ISIN per Retail Investor; All payment orders will be designated for the bank account registered in the account master data
6. Payment orders must be sent as a file with a list of payment orders to the Treasury payment module or as sent to the Treasury using a web service interface provided by the Treasury
7. The Retail Platform will receive the information about the realized payments to investors' bank accounts

3.4.2.7 “BUY BACK” OF GOVERNMENT SECURITIES FROM RETAIL INVESTORS TRIGGERED BY RETAIL INVESTOR

The process of “Buy back” of GS from retail investors triggered by Retail Investor, that the software must support will be approximately as follows:

1. The Issuer must have the ability to offer certain Issues for “buy back”.
2. Retail Investors will be able to sell their Securities for such issues in a process similar to the purchase. Retail Investors can sell some or all of the holdings of that particular Issue
3. Cumulative Orders, representing the sum of all such Sell orders, will be issued to settle all securities from a particular securities Issue from the Retail Platform Omnibus Account. Such cumulative orders will be formed and sent once every business day. Cash will be disbursed to the Retail Platform cash account
4. On the Retail Platform the securities will be annulled from the individual Retail Account and payment will be disbursed to the Retail Investor cash accounts
5. Price of the security for “buy back by the Issuer” will be formed according to the standard valuation rules for Moldovan GS
6. Quantity is not validated against minimum and maximum order value since the potential Buyer is the Issuer
7. Issuer does not confirm the agreement to sell – it is automatic for all Orders confirmed by the Retail Investor
8. Software solution must generate the relevant payment orders for individual Retail Investor cash settlement

Issuer “buy back” Architecture

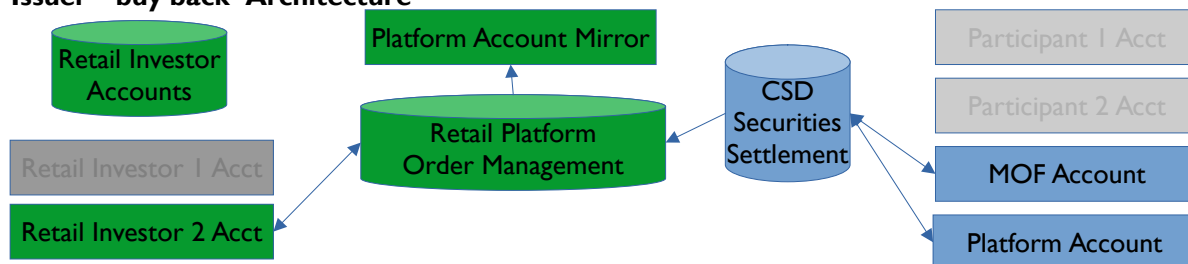


Figure 11 – Architecture of the Issuer “buy-back” Process

3.4.2.8 SALE OF GOVERNMENT SECURITIES FROM RETAIL INVESTORS TO PRIMARY DEALER(S)

The process of sale of GS from retail investors to a primary dealer, that the software solution must support the process that will be approximately as follows:

1. Retail Investor initiates the sales process by choosing the security and the quantity to be sold to the PD before the maturity of the security.
2. Quantity is not validated against minimum and maximum order value since the potential Buyer is a Primary Dealer
3. The platform will transmit the request for quotation to all the PD(s) associated with the ISIN in the Request for Quote;
4. Software solution must have a cut-off time for this operation that must be respected
5. Software solution must support a UI for PDS to administer such requests and respond with a Binding Offer and view historic quotes and operations; There will be a Cut-off time for this operation that must be respected
6. Please also see Section 3.4.3
7. If the Offer provided by a primary dealer is accepted by the client, then the client confirms the sale form, and the transaction is considered matched and confirmation message is sent to the PD whose Quote was accepted Retail the securities in the Retail Investor account are blocked until Settlement
8. PD receives the Order as a Binding Proposal that is considered matched; The Order is automatically confirmed by the PD and sent to CSD for execution; CSD settles the Order between the Retail Platform Account and cash settlement takes place to Treasury account
9. Retail Platform will receive a confirmation once the Order is settled. Retail Platform will then issue a Payment Order for MOF Treasury to execute the payment to Retail Investor for the Security sale. Treasury then execute Payment Order and pays the Retail Investor
10. All Request for Quotations not confirmed and sent to CSD for execution before cut-off time must be automatically cancelled by the software solution, Retail Investors must be notified, and securities must be transferred back to the unrestricted usage for Retail Platform investor

NOTE:

- Sale to PD Orders take place in a 2-step process using a Request for Quote system
- Retail Investors Requests a Quote from the Platform to PD registered on ISIN level
- Platform reserves the securities in the Retail Investor Account
- Platform sends the Request for Quote to PDs registered in the ISIN
- PDs receive a Notification and have to login to the Platform to respond
- PDs quote a price valid for working day only
- Platform send a response to Retail Investors stating the quotes or optionally only the Best Quote
- If Retail Investor accepts the Quote the Platform sends the Order to CSD using a SWIFT message
- CSD securities settlement take place between Platform Account, and Participant Account
- Individual ownership records for Retail Investors are kept only on the Platform

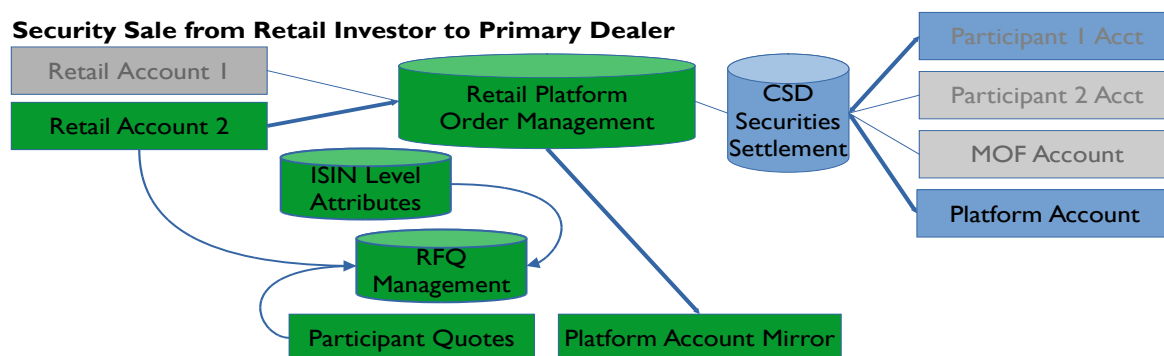


Figure 1 – Architecture of the Sales to Primary Dealers Process

3.4.3 RETAIL PLATFORM INTERFACE FOR PRIMARY DEALERS

Software solution must provide a UI application interface to primary dealers. This application interface must use the same application architecture as the software solution for Retail Platform investors for the processes where PDs interact with the Retail Platform.

Software Solution must keep track of historical information on quotes provided by PDs, also for Orders that were not confirmed and enable authorized users from PD to view this information.

PDs will see the settlement transactions carried out through the CSD systems.

User credentials management must be provided by the Retail Platform administrative and management interface.

3.4.4 RETAIL PLATFORM ADMINISTRATION, CONFIGURATION, OPERATIONS AND MONITORING

The software solution must provide a UI for the administration and configuration of the Retail Platform. The UI must be accessed only by authorized administrative roles available to Platform Administrators.

The software solution must provide a UI for the Operations and monitoring of operations of the Retail Platform. The UI must be accessed only by authorized administrative roles available to Platform Administrators.

3.4.5 HORIZONTAL FUNCTIONALITY AVAILABLE TO MULTIPLE PROCESSES

3.4.5.1 SECURITIES MANAGEMENT AND SECURITIES SETTLEMENT

The software solution must support the settlement of securities for the accounts managed by the software solution on the Retail Platform as described in Section 3.4.1.3. Software solution must also ensure securities are “reserved” or “blocked” and not accessible for other orders for the period between Order confirmation and the securities settlement on the Retail Platform. Software solution must support the alignment in time of the securities settlement process and the cash settlement process pertaining to the same securities transaction.

3.4.5.2 SECURITIES PRICE MANAGEMENT, CALCULATION AND VALIDITY

There always must be a valid price associated with a security based on ISIN i.e. issue. The software solution must support importing ISIN price information, The software solution also must support the import or manual entry of price information per ISIN. All changes must be logged, and the log view must be accessible and easily readable through the administrative interface.

The platform will display the daily prices for all ISINs eligible and available via the platform. The platform will also allow for manual override of the imported price. Price will be updated every working day and valid until next working day cut-off time. Manual override will update the price and all outstanding Orders i.e. all Orders that have not been settled by the CSD must be cancelled. The details of the operations must be agreed in the Analysis phase.

3.4.5.3 CUT-OFF TIME PROCESING

The Retail Platform must implement several cut-off times for different types of operations. Such cut-off times must be administrable i.e. set by parameters.

Cut-off times must be set:

- For the purchase order payment by the retail investor
- For confirmation of orders to be sent to CSD for execution
- For Request for Quotation in the sale to PD process

3.4.5.4 MAILBOX

All account on the Retail Platform will have a mailbox for access to and storage of electronic documents, such as transaction reports, account statements or other required documents. Mailbox must be accessible from the Retail Platform Account Data and Portfolio View.

3.4.5.5 NOTIFICATIONS

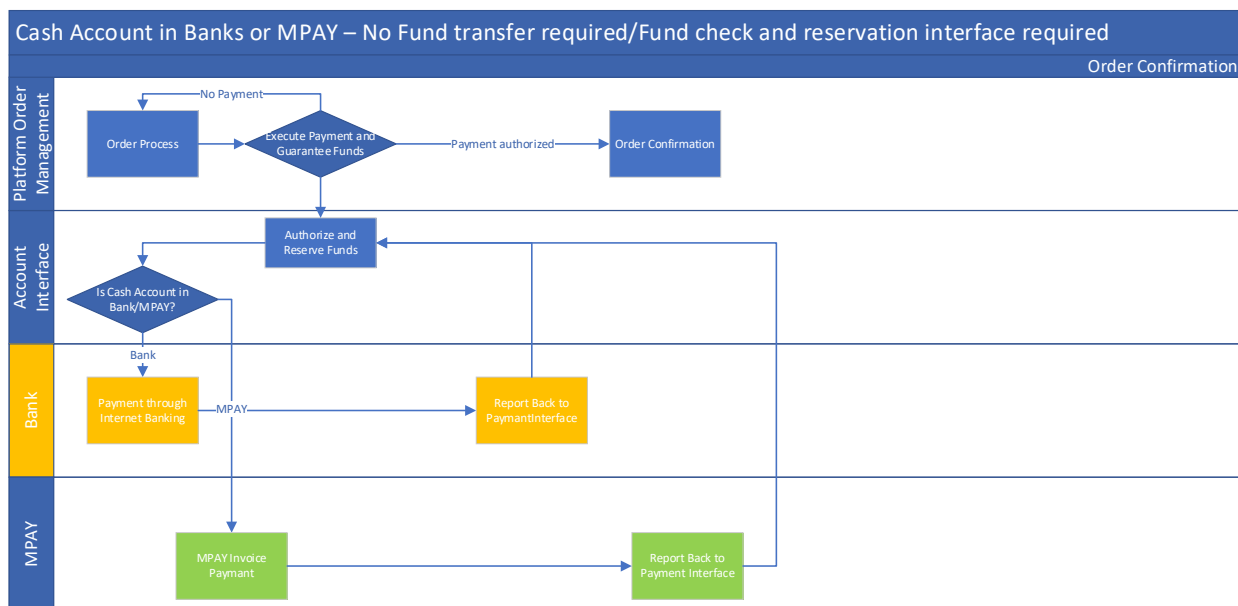
The system must be able to send Notifications in form of e-mails to Retail Investor e-mail accounts using MNotify governmental service. The Notifications should be associated through a configuration functionality to multiple transactions or mailbox change events. Notification content must be configurable for Subject and Text.

3.4.5.6 AUDIT LOGS AND ACCESS TO AUDIT LOGS

The system must support the central recording and management and view of audit logs and integration with MLOG. System must support configuration of the specific characteristics of audit log of events that must be registered (e.g. Order related events such as confirmed orders, request for quotes to primary dealers, quotes by primary dealers, transaction confirmation events, View Access, etc.). Application must support auditing of any event within the application. Each audit record shall contain at least:

- Timestamp of the event
- UserID or SystemUserID
- Event type
- IP address or other information of the source that initiated the event, or any other information permitting to identify the source;
- Audit records will not include confidential business information

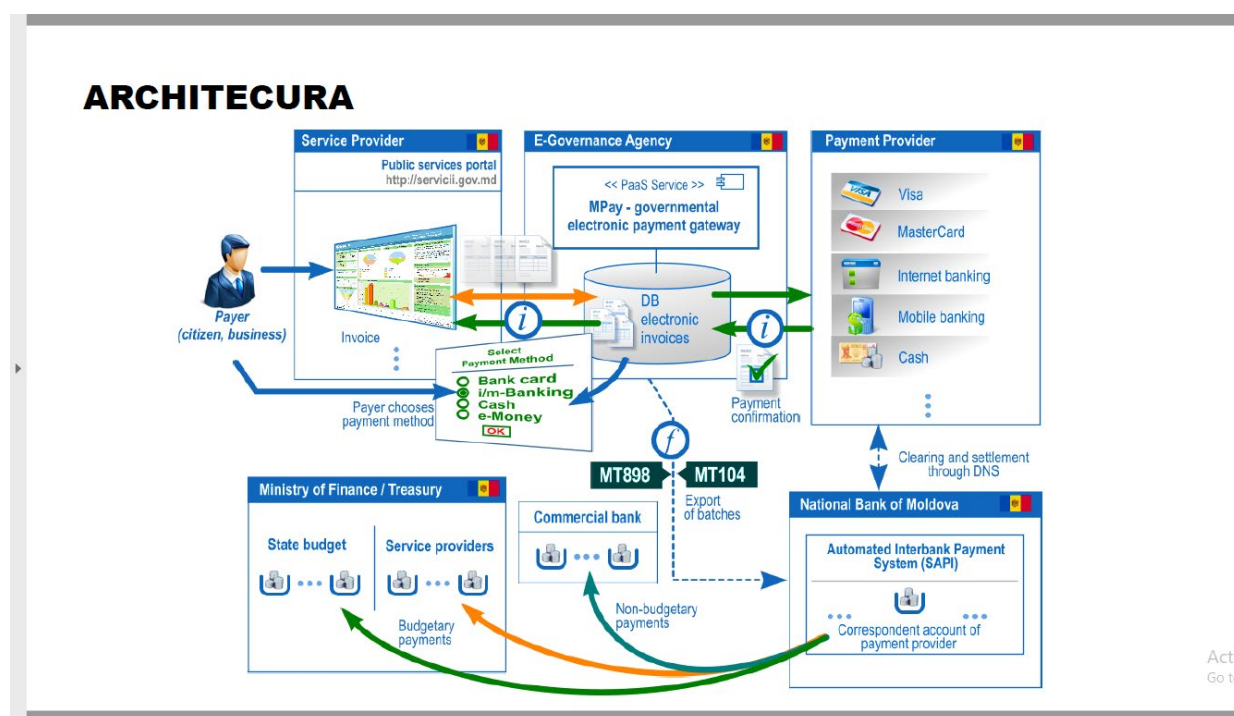
3.4.5.7 PAYMENT PROCESS BY RETAIL INVESTORS



3.4.5.8 PROCESS OF PAYMENT BY RETAIL INVESTORS USING MPAY

The retail investor will have the option pay for the securities during the Order process using the Government E-PAYMENT Gateway MPAY service provided by the Moldovan eGovernment Agency.

The payment process itself will be the standard MPAY payment process using the Order reference number as input to the MPAY payment process.



Duration of Order validity will be limited to resemble a “quasi real time payment” e.g. 15 Minutes and will be synchronized with Cut-Off time, in order to allow the interfaces and the user to complete the process. This means that after a certain time a cancellation message would have to be sent to MPAY to cancel the MPAY invoice generated with the Order number.

MPAY Invoice Validity Duration - Service provider can set a time during an Invoice is valid when sending information to valid when sending the payment request for MPAY

To this end a bi-directional interface between the Retail Platform to the MPAY service must be established using the already available standard MPAY interfaces and process:

- Digitally signed XML message is sent from Retail Platform to MPAY with the:
 - Order reference number
 - Amount to be paid by the Retail Investor i.e. Payer using the MPAY service
- Digitally signed XML message is sent from MPAY to the Retail Platform with the:
 - MPAY reference number
 - Order reference number
 - Amount paid
 - IBAN Number of the source account
 - IDNP of the Account Owner

The payment process will be executed as follows:

- Retail Platform must contact the MPAY service as per MPAY specifications with following parameters: serviceId, orderKey, and obtains the MPAY reference number
- Service providers can then provide the MPAY reference number to the User
- User can login into their Internet/mBanking application and choose the MPAY payment option and input the MPAY reference number
- Bank then takes this MPAY reference number and retrieves the Invoice details and displays to the User in Internet Banking. Amount is one of the fields retrieved
- User then executes the payment, triggering the Bank sending a message to confirm the payment. Amount is a field in the message or interface. MPAY check the amount with the amount in the MPAY Invoice and either accepts payment and confirms the payment back to the Bank or denies the Bank confirmation. For confirmed payments, Bank is debited at the end of AIPS clearing sessions.
- MPay the pushes the payment confirmation to the Service Provider by calling an API method which must be implemented by the Software Solution. Fields which are part of the confirmation are for example: Status (Paid), Date of transaction, Transaction Amount, Currency, Document ID (Bank ID of transaction).

3.4.5.9 GENERATION, MANAGEMENT, RECONCILIATION OF OUTGOING PAYMENTS TO THE RETAIL INVESTORS

Software solution must support generation of payment orders. Payment orders must be generated on individual Retail Investor account level. Payment Orders can be sent to the Treasury as a file (a list of payment orders) or as individual payment orders using web services provided by the Treasury.

3.4.5.10 RECONCILIATION

The software solution must provide reconciliation functionality for reconciliation of securities settlement and cash reconciliation.

3.4.5.11 EXCEPTION HANDLING

- The system must be able to handle exceptions in the account management or account opening process. The details of the exception handling process must be resolved in the Analysis phase

- The system must be able to handle exceptions in the Order process or exceptions due to exception in CSD order settlement process such as:
- The system must be able to handle exceptions stemming from exceptions in interface operations

3.4.6 FUNCTIONAL REQUIREMENTS STEMMING FROM THE INTERFACES TO CSD

The CSD systems will be the authoritative data source for securities master data. The CSD systems will also retain the fully Order settlement responsibility for the Retail Platform “Omnibus” account. Therefore, the Retail Platform and the CSD must be integrated through interfaces. File, online interfaces and message interfaces are required:

- CSD standard File Adapter interfaces will be used to obtain government securities master data on new issues. Such a file should contain all required master data for new issues of GS
- CSD File Adapters get and set files from folders on the file system
- File interfaces will be used to obtain government securities prices for all active issues. Such a file should contain all required price information for all active issues of GS.
- For getting real-time information “read access” provision in case of account or securities positions or securities master data incl. pricing “read” or “get” interfaces are required, while for changes to the account master data “write” interface will be required.
- Message type interfaces will be used for all communication with CSD regarding Orders, from the reservation of securities to CSD subaccounts to submission of Order for CSD for execution, to processing Order confirmations or cancellations.

3.4.7 INTERFACE TO BANK ACCOUNT REGISTER

Online interface to the bank account register operated by CTIF as per specifications that will be provided by CTIF.

3.4.8 FUNCTIONAL REQUIREMENTS STEMMING FROM THE INTERFACES TO OTHER MOLDOVAN PUBLIC ADMINISTRATION IT SYSTEMS

The system must support integration with the Moldovan state systems for the validation of investor identity, validation of personal documents, MPASS for purposes of secure authentication or MSIGN for the purpose of digitally signing documents. Finally, the system must support integration with MPAY for purposes of paying for securities orders.

3.5 FUNCTIONAL REQUIREMENTS TABLE

ID	Requirement	Description	Requirement Area	Class.
F-1	Retail Investor Account Opening Process			
F-2	Account Opening	The software solution must support the self-service triggered account opening process, including the user interface for account review and management by the Retail Platform operator, as per the Description in Ch. 3.4.1.1 of this document:	Account Management	Mandatory
F-3	National Registry Interfaces	The software solution must be integrated with the State Registry of Population using the available APIs, like the Moldovan MCABINET system	Interfaces	Mandatory
F-4	National Registry Interfaces	The software solution must be able to access and validate personal data in the Account Opening process against the Registry of Natural Persons of Moldova through an online interface	Account Management	Mandatory
F-5	National Registry Interfaces	The software solution must be able to validate document data in the Account Opening process against the Moldova State Registry of Population through an online interface	Account Management	Mandatory
F-6	Authentication	The software solution must possess a user i.e. Identity management subsystem, that fully integrates with MPASS and must meet the requirements detailed in the Security section of the requirements	Account Management	Mandatory
F-7	Retail Investor Account Management			
F-8	Access to Retail Platform Investor Account Data	All Retail Platform Investor accounts must be managed the Retail Platform operational systems. Software solution	Account Management	Mandatory

ID	Requirement	Description	Requirement Area	Class.
		must possess the account management functionality listed in Section 3.4.1.3. Retail Platform will have a relevant set of CSD accounts according to the “omnibus account concept”, as per current CSD operations. Software solution must be able to manage and reconcile such account.		
F-9	Visualization of Account Data	Software solution must support visualization of all account data on the Retail Platform	Account Management	Mandatory
F-10	Access Account Master Data	System must support the view of account master data	Account Management	Mandatory
F-11	Edit Account Master Data	System must support triggering the changes to the account master data such as Name, Address and payments Account	Account Management	Mandatory
F-12	Edit Account Master Data	Retail Investor Account Data will be updated using self-service interface; In case of errors relevant system messages will be displayed to the Retail Investor i.e. User	Account Management	Mandatory
F-13	Self-service account management	The system must possess user management subsystem and must meet the requirements detailed in the Security section of the requirements	Account Management	Mandatory
F-14	Account Closure	The system must provide functionality for the Retail Investor to trigger the account closure process including the interface for the Retail Platform compliance officer	Account Management	Mandatory
F-15	Retail Investor Portfolio Visualization, Securities Search			
F-16	Portfolio View	All Retail Platform Investor Account Data will reside in the Retail Platform operational systems in line with the architecture diagrams presented in this document narrative.	Account Management	Mandatory

ID	Requirement	Description	Requirement Area	Class.
F-17	Portfolio View	Software solution must provide a well-designed and intuitive view of the Retail Investor Portfolio. The software solution must retrieve the Retail Investor portfolio data from account through and display all Securities owned by Retail Investor i.e. Retail Investor portfolio through a clear user interface incl. graphical representation of the Portfolio incl the current valuation	Account Management	Mandatory
F-18	Portfolio View	The system must display all Securities owned by Retail Investor i.e. Retail Investor historical portfolio view through a clear user interface incl. graphical representation of the Portfolio including the valuations	Account Management	Mandatory
F-19	Search Securities	System must provide a mechanism for searching data and documents related to Securities by ISIN, Maturity Period and Maturity Date	Administration and Rules – Securities Management	Mandatory
F-20	Search Securities	System must provide a visual display of search result	Administration and Rules – Securities Management	Mandatory
F-21	Import Securities	Software solution support import of securities and communication with CSD through a CSD standard file adapter-based interface based on SWIFT MT messages	Administration and Rules – Securities Management	Mandatory
F-22	Definition of Government Security for the Retail Platform	Software solution must support import or of securities master data received from CSD with all the defined attributes in CSD, such as: <ul style="list-style-type: none"> i. ISIN ii. Term iii. date of maturity iv. coupon v. Interest 	Securities Management	Mandatory

ID	Requirement	Description	Requirement Area	Class.
F-23	Definition of Government Security for the Retail Platform	<p>Software solution must support the securities management for the Retail Platform with at least the following attributes managed:</p> <ul style="list-style-type: none"> i. Current Price ii. Flag to mark “Retail Platform Issue” iii. Minimum order for Retail Investor iv. Maximum order for Retail Investor v. Maximum allowed ownership for Retail Investor vi. Table of Primary Dealers allowed to buy from Retail Investors vii. Flag for automated early redemption viii. Flag for automated sale to Issuer ix. Information on the purpose of the government issue (PDF format). 	Securities Management	Mandatory
F-24	Detailed View of a Security	<p>The software solution must support the display of government securities issues in detail containing at least the following fields in line with Ch. 3.4.2.1:</p> <ul style="list-style-type: none"> i. ISIN ii. Term iii. date of maturity iv. coupon v. Interest vi. Current Price vii. Flag to mark “Retail Platform Issue” viii. Minimum order for Retail Investor ix. Maximum order for Retail Investor x. Maximum allowed ownership for Retail Investor 	Primary Market	Mandatory

ID	Requirement	Description	Requirement Area	Class.
		<ul style="list-style-type: none"> xi. Table of PDs allowed to buy from Retail Investors xii. Flag for automated early redemption xiii. Flag for automated sale to Issuer xiv. Information on the purpose of the GS issue (PDF format). 		
F-25	Initial Sales of Government Securities to Retail Investor Order Process			
F-26	View Government Securities for Retail Platform	The system must support the display of GS issues available for purchase on the retail platform identified by an ISIN, grouped by maturity. Available quantity per ISIN must be displayed	Primary Market	Mandatory
F-27	View Data on Government Securities	The GS data and description listing shall contain all necessary information to satisfy the regulatory requirements.	Primary Market	Mandatory
F-28	Order entry	System must support the start of the Order Entry process from the View of Available GS screen	Primary Market	Mandatory
F-29	Order entry	System must support the start of the Order Entry from a Search Result screen, after a search of GS by ISIN or Maturity	Primary Market	Mandatory
F-30	Order entry	System must provide the Order Entry form with all required data to completed by Retail Investor in order to start the Order Process as described in Ch. 3.4.2.3 of this document	Primary Market	Mandatory
F-31	Order entry	Order entry screen must contain relevant field-based constraints and field content entry restrictions and display relevant errors to the Retail Investor at entry time	Primary Market	Mandatory
F-32	Order entry	System will validate the correctness of the Order form of financial instrument order (mandatory content, data type integrity, data integrity entered, etc.)	Primary Market	Mandatory

ID	Requirement	Description	Requirement Area	Class.
		before sending the Order for further processing.		
F-33	Order entry	Only the electronic financial instrument order form that has successfully passed the verification procedure for completion accuracy shall be paid and sent for processing.	Primary Market	Mandatory
F-34	Order process by Retail Investor	The system must support the Order process as detailed in Ch. 3.4.2.3 of this document"	Primary Market	Mandatory
F-35	Order process by Retail Investor	Quantity in the Order must be validated against minimum and maximum Order value; If either value is outside the defined quantities the system must display the relevant error message to the User	Primary Market	Mandatory
F-36	Order process by Retail Investor	The system will check for maximum allowed ownership for the particular issue that is being purchased. If the answer is negative, i.e. maximum allowed ownership will be surpassed, the appropriate message should be displayed to the Investor and the Order process restarted	Administration and Rules	Mandatory
F-37	Fees and commissions	The software solution must compute and apply the relevant fees and commissions for the Transaction type and Display to the Retail Investor at Order Entry time	Administration and Rules	Mandatory
F-38	Sale Of Government Securities From Retail Investors To Primary Dealers			
F-39	Sale to PD	The software solution must support the process as detailed in Ch. 3.4.2.8 of this document	Sale to Primary Dealer	Mandatory
F-40	Early Redemption			

ID	Requirement	Description	Requirement Area	Class.
	Of Government Securities From Retail Investors Triggered By Issuer/DPD			
F-41	Automated Early redemption	The software solution must support the process as detailed in Ch. 3.4.2.7 of this document	Sale to Primary Dealer	Mandatory
F-42	COUPON Payment			
F-43	Process of coupon payments	The software solution must support the process as detailed in Ch. 3.4.2.6 / coupon/Interest Payments of this document	Administration and Rules	Mandatory
F-44	Calculation of coupon payments	The software solution must support the calculation of coupon payments due on a Retail Investor level	Administration and Rules	Mandatory
F-45	Calculation and deduction of tax	The software solution must support the calculation of tax deductions to coupon payments due on a Retail Investor level. Tax deduction must be configurable	Administration and Rules	Mandatory
F-46	Generation of payment orders for coupon payments	The software solution must support the generation of payment orders for the coupon payment on the Retail Investor level	Administration and Rules	Mandatory
F-47	Price, Pricing formation rules for Retail Platform Issues in CSD			
F-48	Price	All GS available on the Retail Platform must have an associated and valid price at all times	Administration and Rules	Mandatory
F-49	Price Rules	Software solution must support price information for each security, All prices, except sale to primary dealers, should rely on relevant regulations	Administration and Rules	Mandatory
F-50	Price Rules	There must be a mechanism to manually set or override the Price rules and set the price manually. The mechanism	Administration and Rules	Mandatory

ID	Requirement	Description	Requirement Area	Class.
		must be available only to certain Roles and should support import per ISIN		
F-51	Price Rules	Price rules update the price of the GS available on Retail Platform after business day Cut-Off time	Administration and Rules	Mandatory
F-52	Prices and Pricing Data	The pricing information shall include all relevant data points	Administration and Rules	Mandatory
F-53	Risk Management Rules for Retail Platform Issues in CSD			
F-54	Risk Management Rules	The system must support rules limiting transactions available to Retail Investors based on configuration parameters such as Minimum/Maximum Order Limit, Maximum Ownership	Administration and Rules	Mandatory
F-55	Minimum Order Size	Minimum order size shall be required and configurable on ISIN level	Administration and Rules	Mandatory
F-56	Maximum Order Size	Maximum order size shall be required and configurable on ISIN level	Administration and Rules	Mandatory
F-57	Securities reservation and reconciliation	Software solution must support that once an Order or a Sales proposal is confirmed the Securities must be reserved/blocked for further sales on the Retail Platform until either Order is settled or cancelled	Administration and Rules	Mandatory
F-58	Restrictions to market operations based on account status	Software solution must support restrictions to market operations based on account status	Administration and Rules	Mandatory
F-59	CSD Processing, Cut-off, End of Day Processing			
F-60	Securities reservation	Once and Order or a Sales proposal is confirmed the Securities must be	Administration and Rules	Mandatory

ID	Requirement	Description	Requirement Area	Class.
		reserved and blocked for further sales until either Order is settled or cancelled		
F-61	Cut-Off Time Execution	Software solution must support a configurable cut-off time for Order execution must be synchronized with the price updates of the securities	Administration and Rules	Mandatory
F-62	Cut-Off Time - Orders	All Orders that are not confirmed and sent to CSD before Retail Platform cut-off time, will be cancelled and a new Order process must be started	Administration and Rules	Mandatory
F-63	Cut-Off Time Price Updates	The cut-off time for Order confirmation must be synchronized with cut-off time for Order execution	Administration and Rules	Mandatory
F-64	Cut-Off Time Outgoing payment order	Software solution must support a configurable cut-off time for payment order generation that must be synchronized with processes in Treasury	Administration and Rules	Mandatory
F-65	Order Payment by Retail Investors			
F-66	MPAY Interface	The system must support integration with MPAY payment services through the MPAY standard interface	Interfaces	Mandatory
F-67	MPAY Interface	The system must support order payment through MPAY service as detailed in Ch. 3.4.5.8	Interfaces	Mandatory
F-68	Reports, Confirmations , Notifications			
F-69	Order Confirmation	The system must generate an Order Confirmation to Retail Investor and delivery to Mailbox after Order Confirmation and an e-mail Notification to the Retail Investor registered mailbox	Administration and Rules	Mandatory
F-70	Transaction Report	The system must generate and send a Transaction Report to Retail Investor and delivery to Mailbox after the Settlement of the Order i.e. transaction execution in CSD and an e-mail	Administration and Rules	Mandatory

ID	Requirement	Description	Requirement Area	Class.
		Notification to the Retail Investor registered mailbox		
F-71	Account Statement	The system must be able to generate an Account Statement providing the Account Balance and transaction history for a period and delivery to Mailbox	Administration and Rules	Mandatory
F-72	Document delivery to Mailbox	The system must support the functionality of delivering documents to Retail Investor Mailbox on the platform and sending Notifications whenever a Message or a Document is delivered to the Mailbox	Administration and Rules	Mandatory
F-73	Issuer and CSD reports	Software solution must provide up to 5 relevant reports for Securities Issuers and CSD in order to monitor and evaluate investor behavior	Reporting	Mandatory
F-74	Access daily trading reports	Users shall access daily reports on the prices and volumes traded on retail GS	Reporting	Mandatory
F-75	INTERFACES			
F-76	Retail Platform Interface to CSD Systems			
F-77	Reading of security master data	Software solution must be able to import from a File interface from CSD DBO systems securities master data and import the securities master data. Specification of the interface on field level will be largely guided by the international standard for securities definition. Frequency and format of the file, which is based on SWIFT MT messages, must be specified in the Analysis phase	Interfaces	Mandatory
F-78	Reading of security master data	Software solution must be able to receive files using a CSD standard File Adapter and support automation of further processing of such received files for example import in the software solution database	Interfaces	Mandatory

ID	Requirement	Description	Requirement Area	Class.
F-79	Sending confirmed Orders	The system must support the sending of confirmed Orders through SWIFT MT type message and a standard CSD File Adapter	Interfaces	Mandatory
F-80	Processing of Order confirmations	The system must support the processing of Order confirmations for reconciliation and notification purposes	Interfaces	Mandatory
F-81	Processing of cancelled Orders	The system must support the processing of Order cancellations for reconciliation and notification purposes	Interfaces	Mandatory
F-82	Interfaces to eGovernment Systems, MPAY, Banks			
F-83	National Registry Interfaces	The system must support integration with Moldovan State registry of population as per the standard interface of the National Registries	Interfaces	Mandatory
F-84	MPASS Interface	The system must support MPASS for authentication purposes as per the standard MPASS interface	Interfaces	Mandatory
F-85	MSIGN Interface	The system must support the government service of electronic signature MSign for purposes of electronic signature of documents according to the standard MSign interface	Interfaces	Mandatory
F-86	Bank Account Validation Interface	The system must support an interface to banks for the purpose of bank account compliance validation through as detailed in Section 3.4.7 - Interface to Bank Account register	Interfaces	Mandatory
F-87	Exception Handling			
F-88	Exception Handling	The system must be able to handle exceptions in the account management or account opening process	Security	Mandatory
F-89	Exception Handling	The system must be able to handle exceptions in the Order process or exceptions due to exception in CSD order settlement process such as:	Security	Mandatory

ID	Requirement	Description	Requirement Area	Class.
F-90	Exception Handling	The system must be able to handle exceptions stemming from exceptions in interface operations	Security	Mandatory
F-91	Generation, management, and reconciliation of payment orders			
F-92	Payment Orders	The software solution must support the generation of payment orders for outgoing cash payments to Retail Investors. All payment order history must be retained on account level	Administration and Rules	Mandatory
F-93	Payment Orders	Software solution must be able to generate Payment orders on individual Retail Account level. Destination account must be extracted from the Retail Investor account master data i.e. the “cash account” of the Retail Investor	Administration and Rules	Mandatory
F-94	Payment Orders	Software solution must be able to generate and send a list of payment orders as a file or send individual payment order to the Treasury payment module using a web service	Administration and Rules	Mandatory
F-95	Payment Orders	Software solution must support reconciliation of payment orders with actual payments executed	Administration and Rules	Mandatory
F-96	SECURITY REQUIREMENTS			
F-97	Data security	The system must guarantee complete maintenance and integrity of the Retail Platform database content.	Security	Mandatory
F-98	Authentication	The Retail Platform must have an identity and authentication subsystem	Security	Mandatory
F-99	Authentication	The access to the Retail Platform user interface shall be controlled by an identity and authentication subsystem	Security	Mandatory

ID	Requirement	Description	Requirement Area	Class.
F-I00	Authentication	The authentication subsystem must support strong 2 factor authentication without a need for a physical token or specific software to be installed; One-time-password, or OTP provided by SMS to the mobile phones registered with the Retail Investor account are allowed	Security	Mandatory
F-I01	Authentication	The authentication subsystem must support strong 2 factor authentication by integration with MPASS	Security	Mandatory
F-I02	Authentication	The identity and authentication subsystem must support self service functions for password changes and this service must be integrated with Retail Investor e-mail account registered in email master data	Security	Mandatory
F-I03	Authentication	The access to the functions provided to users shall be provided by authentication visa UserID/Password, MPASS or electronic or mobile signature from an authorized issuer in the Republic of Moldova.	Security	Mandatory
F-I04	Authentication	All transactions initiated by the Retail Investor i.e. User must be signed thru either the strong authentication subsystem or electronic or signature from an authorized issuer in the Republic of Moldova.	Security	Mandatory
F-I05	Data security	All the form fields filled in by users shall be subject to mandatory validation by type and eventually the range of admissible values on both the client and the server.	Security	Mandatory
F-I06	Infrastructure	Retail Platform will be secured for OWASP Top 10 vulnerabilities.	Security	Mandatory
F-I07	Data security	Retail Platform will ensure the confidentiality of the data sent / received via communication channels.	Security	Mandatory
F-I08	Audit log	User actions shall be recorded in electronic journals.	Security	Mandatory

ID	Requirement	Description	Requirement Area	Class.
F-109	ADMINISTRATION			
F-110	Administration	The system must provide an administrative front end to all configurable elements	Administration and Rules	Mandatory
F-111	Administration	The system must provide an administrative front end for system operations	Administration and Rules	Mandatory
F-112	Administration	The system must provide an administrative reporting on operations	Administration and Rules	Mandatory

3.6 NON-FUNCTIONAL REQUIREMENTS TABLE

ID	Requirement	Description	Requirement Area	Class.
NF-1	NONFUNCTIONAL REQUIREMENTS	<p>The system must have the capacity to be installed on MCLOUD and both dedicated virtual servers and virtualized platforms.</p> <p>Software solution shall run on Docker container engine and shall not depend on specific host OS instance. Building container images shall be automated. (refer to the following link for details: https://docs.docker.com/develop)</p> <p>Running in a container-based environment, the application must be elastic, including when adding/removing application container instances (above minimum required instances for HA), changing of configurations and system parameters has no impact on any work in progress, such as any active sessions, requests, etc.</p>	Non-functional	Mandatory
NF-2	NONFUNCTIONAL REQUIREMENTS	Demonstration of virtualization capability shall be made to the Beneficiary by providing a loadable image of the system that becomes operational with minimum configurations on one of the virtualization solutions available in the market.	Non-functional	Mandatory
NF-3	NONFUNCTIONAL REQUIREMENTS	The system must be available for access via communication channels of at least 128kbps.	Non-functional	Mandatory
NF-4	NONFUNCTIONAL REQUIREMENTS	The Bidder will explicitly indicate in the offer the software platform on which Retail Platform is to be developed and	Non-functional	Recommended

ID	Requirement	Description	Requirement Area	Class.
		<p>the software platform required for system operation;</p> <p>The solution should be developed using the latest versions of the following technology stack, in line with standards required by the Moldovan public administration IT policies:</p> <ul style="list-style-type: none"> • Programming language is C#. • ORM is Entity Framework Core. • Web framework is ASP.NET. • RDBMS is SQL Server. • Container engine is Docker. • Container orchestration is Kubernetes. • Cache server and session store is SQL Server or Redis. <p>The offer that will contain the recommended technology stack will be considered as an asset and scored accordingly in the evaluation process.</p> <p>The Consultant may propose a technology stack based on usage of JAVA based technology stack, upon the Client's approval. In this regard, it is necessary to prioritize open- source based technologies.</p>		
F-5	NONFUNCTIONAL REQUIREMENTS	<p>If the software platform dedicated for Retail Platform solution development and operation is based on commercial IT solutions that require license procurement, all the perpetual licenses required for the development and operation of Retail Platform must be delivered with the system. Open-source technologies will be prioritized.</p>	Non-functional	Mandatory

ID	Requirement	Description	Requirement Area	Class.
NF-6	NONFUNCTIONAL REQUIREMENTS	If the software platform for Retail Platform development and operation is based on commercial IT solutions that require licensing, the price the licensing costs if: the number of users has doubled; the number of processing units (CPU or CPU cores) has doubled; the number of application / database server nodes has doubled must be provided.	Non-functional	Mandatory
NF-7	NONFUNCTIONAL REQUIREMENTS	The system must be able to be virtualized at software-hardware level.	Non-functional	Mandatory
NF-8	NONFUNCTIONAL REQUIREMENTS	The system must be tolerant to errors by providing support for clustering and fail over for the entire platform and components thereof.	Non-functional	Mandatory
NF-10	NONFUNCTIONAL REQUIREMENTS	<p>Verification will be made by using a set of (modern) platforms and expecting the performance parameters to be similar or better to those on the reference configuration, such as under NF-10.</p> <p>The IS performance shall be ensured at standard load, that includes:</p> <ul style="list-style-type: none"> - 200 concurrent human users using the web browsers to access the system; - 200 intersystem information requests per minute. <p>The following interface performance criteria shall be met:</p> <ul style="list-style-type: none"> - 95% of all information requests shall be complete within 3 seconds; 	Non-functional	Mandatory

ID	Requirement	Description	Requirement Area	Class.
		<ul style="list-style-type: none"> - 95% of all data manipulation requests shall be complete within 5 seconds; - 95% of all document (output form) preparation requests shall be complete within 5 seconds; - 95% of all workplace pages shall load in 1 second if accessed using the internal local area network. 		
NF-11	NONFUNCTIONAL REQUIREMENTS	WEB explorer will be the generic program product recommended for Retail Platform Front End operation and interaction.	Non-functional	Mandatory
NF-12	NONFUNCTIONAL REQUIREMENTS	The system must be compatible with at least 2 latest versions of the following Web browsers: MS Edge, Mozilla Firefox, Google Chrome, Safari and Opera.	Non-functional	Mandatory
NF-13	NONFUNCTIONAL REQUIREMENTS	The system must incorporate a function that will periodically communicate the system normal operating status.	Non-functional	Mandatory
NF-14	NONFUNCTIONAL REQUIREMENTS	The system must include configurable means of logging. Logs must be readable through a simple interface	Non-functional	Mandatory
NF-15	NONFUNCTIONAL REQUIREMENTS	The system must be able to produce at least the following logging levels: info; warning; critical; error.	Non-functional	Mandatory
NF-16	NONFUNCTIONAL REQUIREMENTS	The successful Bidder will prepare the artifacts to facilitate system administration and operation functions: starting system components; stopping system components; restarting system components, backing up the database, restoring data from the indicated backup, refreshing the operating system memory.	Non-functional	Mandatory

ID	Requirement	Description	Requirement Area	Class.
NF-17	NONFUNCTIONAL REQUIREMENTS	The software solution must operate on TCP/IP networks and specifically HTTPS.	Non-functional	Mandatory
NF-18	NONFUNCTIONAL REQUIREMENTS	Software solution must be built using an industry standard RDBMS, compliant with non-functional requirements listed in this document and with Moldovan standards for government IT systems. The data model, containing both securities master data, retail investor account master data as well as all relevant order, transactions and historical movement data, must be implemented on the RDBMS.	Non-functional	Mandatory
NF-19	NONFUNCTIONAL REQUIREMENTS	The successful Bidder will suggest other network services and utilities required for system operation.	Non-functional	Mandatory
NF-20	NONFUNCTIONAL REQUIREMENTS	<p>The system must integrate the following Moldovan governmental services:</p> <p>MLog shall be used to journal business critical events. The events that are business critical will be defined at analysis and design stages and must be configurable.</p> <p>MPass shall be used to retrieve contact data and notification preferences of the the platform users.</p> <p>MNotify shall be used for notification services.</p> <p>MPay shall be used for payments processing.</p> <p>MConnect shall be used for data exchange with state registries and information systems.</p>	Non-functional	Mandatory

ID	Requirement	Description	Requirement Area	Class.
		MSign shall be used for electronic signature of digital documents.		
NF-21	NONFUNCTIONAL REQUIREMENTS	<p>The database management systems required by the software solution must be the latest-generation commercial versions agreed by the operating system manufacturer.</p> <p>The solution shall not include any hardware components and upon finalization will be deployed on governmental cloud environment (MCloud).</p>	Non-functional	Mandatory

ID	Requirement	Description	Requirement Area	Class.
NF-22	RIGHTS REQUIREMENTS	PLEASE NOTE THAT IDG RETAINS THE DISCRETIONARY RIGHT TO MAKE REQUIREMENTS NF23-NF25 MANDATORY AT THE REQUEST OF THE BENEFICIARY AND POTENTIALLY DISQUALIFY A NON-COMPLIANT BID		
NF-23	RIGHTS REQUIREMENTS	The Developer grants to the Beneficiary the rights to run and use entire solution with all included software components with no constraints on time, location and offered functionality.	Non-functional	Optional

NF-24	RIGHTS REQUIREMENTS	The Beneficiary keeps full rights on data created by the means of this solution.	Non-functional	Optional
NF-25	RIGHTS REQUIREMENTS	The Developer shall grant to the Beneficiary the right to re-distribute the solution. While the Beneficiary does not intend to re-distribute at a massive scale it still envisions the need to transfer the software solution to another state agency due, for example, to potential reorganization. Also, the Beneficiary might get the opportunity to re-deploy the entire solution elsewhere.	Non-functional	Optional

3.7 SERVICES REQUIRED

3.7.1 IMPLEMENTATION REQUIREMENTS

D	Requirements
	I. Analysis and Design
IS I.01	<p>Phase objectives:</p> <ol style="list-style-type: none"> 1. The purpose of this phase is to define and agree the detailed software functional specification including the data model and the interface specification for all the Retail Platform interfaces, as well as the design of all user interface screens 2. This phase must build upon designed processes and requirement specifications detailed by this RFP and on the Proposal of the Bidders as the Answer to the RFP 3. The successful Bidder will translate the functional requirements documented in the RFP into a workable solution design and formal functional specification document. The successful Bidder will support for the analysis by delivering prototypes of designed features such as screen mock-ups or click through prototypes, and include them in the functional specification. 4. NOTE – Instruction: The Bidder should describe the methodology and instruments used for the analysis and design phase and should provide sample of deliverables in the RFP Answer.
IS I.02	<p>Main activities:</p> <ol style="list-style-type: none"> 1. Functional requirements analysis <ul style="list-style-type: none"> • Analyze the information about users and their roles. • Review the existing IT and network technical infrastructure and develop proposals / recommendations for architecture and related infrastructure of the Solution, considering keeping under control the complexity of IT infrastructure and reusability of existing resources. 2. Perform detailed solution design, functional specification <ul style="list-style-type: none"> • Define and produce a functional specification that would meet the requirements, given the functional and technical constraints imposed. • Document design specifications for solution functionalities based on the software requirements specification in the RFP (including the link of them to keep clear traceability matrix). • Document detailed specifications of the solution (e.g. interaction interfaces and diagrams, Use Cases, external interface specifications) 3. Document test strategy and test analysis in connection to the acceptance criteria and functional specification. 4. Define the specifications for software solution development, configuration, and integration with other sources of data/applications. <ul style="list-style-type: none"> • Establish the applicable configuration parameters.

IS 1.03	<p>Deliverables:</p> <p>At the end of this phase, the following will be delivered:</p> <ol style="list-style-type: none"> 1. Detailed Functional specification of the Retail Platform Software Solution, which must cover both technical and functional aspects, agreed and signed by both parties. The document should include the following information: <ol style="list-style-type: none"> a. Solution Design (diagrams that provide a detailed design of the solution architecture accompanied by a narrative description and a DB schema to support the software solution requirements); b. integration platform of solution components, interfaces (the name that will be integrated with the solution, the type of interface (e.g., supplier, consumer, symmetric), solution and the impact of the failure of the interfaces); c. solution architecture attributes (software technologies, services, components, portability, capacity, availability and reliability, scalability); d. data architecture (context diagrams, logical data model); e. security architecture (overview of security solution); f. User Interface design including all user screens g. Document on solution configuration/setting up, which will document in detail all the parameters set for all components of the solution. 2. High Level Test Plan and test analysis that will link to and cover all above-mentioned specifications and agree the acceptance criteria. 3. Other documents according to the best-practice and delivery methodology of the Bidder.
2. Build phase	
IS 2.01	<p>Phase objectives</p> <p>The purpose of this phase is to build the Retail Platform software solution to transpose the functional specification and therefore the requirements from the RFP, into software application functionalities compliant to the agreed formal Functional Specification signed off in analysis and design phase. The Build Phase must be realized in two parts as detailed below. Part I must cover the sale of government securities to retail investors, coupon payments as well as redemption at maturity process. Build Phase Part II must support the connectivity to CSD, sales to the Primary Dealers, as well as the early redemption and “buy-back window” process.</p>
IS 2.02	<p>Main activities</p> <ol style="list-style-type: none"> 1. Install the development, and test environments (OS/DB/apps). 2. Build the software solution and implement customization, integration, and configuration of the solution, according to specifications of the deliverables accepted in Phase I. 3. Document the logical and physical architecture of the application and database servers. 4. Test analysis and planning including complete set of test scripts is elaborated and finalized. The Bidder is also advised that for non-functional requirements testing, where applicable (e.g., performance testing, stress testing etc.), an automated test solution, or test scripts should be provided.

IS 2.03	<p>Deliverables</p> <ol style="list-style-type: none"> Detailed Test Plan incl. test scenarios, test scripts and updated requirements traceability matrix Software solution built, configured, and installed in: <ol style="list-style-type: none"> Development environment Test Environment Production Environment <p>NOTE: Software solution must be delivered in two parts. Software solution delivered in Build phase part I must include the following functionalities i.e. support the following requirements:</p> <p>Minimal Functional Scope of Build Phase I</p> <p>Relevant parts of the Sections:</p> <ul style="list-style-type: none"> 3.3.2.1 3.3.2.2 3.4.2.1 3.4.2.2 3.4.2.3 3.2.2.5 3.4.2.6 3.4.4 3.4.5 3.4.6 3.4.7 3.4.8 <p>Build phase part II must include and support all the Sections of the Requirements.</p> <p>NOTE: Solution must meet the requirements agreed in the above chapters and that should include:</p> <ol style="list-style-type: none"> Functional and non-functional requirements Interfaces specified in the analysis document; Security (user rights, other security configurations); Documentation proving successful Bidder tested the solution according to the Test Plan <ol style="list-style-type: none"> Solution architecture document updated as necessary.
3. Testing phase	
IS 3.01	<p>Phase objectives:</p> <ol style="list-style-type: none"> The purpose of this phase is to test the quality of all the functional and technical elements of the solution. During this phase, the Bidder should establish the testing method and should prepare testing scripts for all testing activities that will cover the entire software development and implementation lifecycle.
	<p>NOTE: The Bidder should include the proposed approach and methodology for testing in the technical proposal, which will cover at least the scope, approach, resources, tools, sample of deliverables and schedule of the testing activities. The proposed testing approach should be validated/ agreed with the MOF at project initiation phase. The Bidder should indicate in its technical proposal the software instruments that will be used in order to track</p>

	<p>and monitor the potential open tickets for defects repair. It is obvious must that MOF representatives need to have access to this application.</p> <p>In case test results are poor (high rate of “failed” tests, more than 3 failed tests per functionality/application module), the entire module should be considered “unaccepted” and sent back for testing purposes.</p>
IS 3.02	<p>Main activities:</p> <ol style="list-style-type: none"> 1. Testing should be performed according to industry standard practices and the test activities covered should include: test planning, test specifications, test execution, recording of results, checking for test completion. 2. All testing to be performed should be appropriately planned, prior to being executed. 3. The Bidder should be responsible for documenting and delivering system tests scenarios with logs and results, as a prerequisite for the Retail Platform acceptance process. During system testing, the Retail Platform testing team should participate as an observer (if applicable and/or possible). 4. User Acceptance Testing (UAT) should be the final stage of testing. Retail Platform testing team with the Bidder’s support, should perform this activity and the main objective is to ensure that the final system matches the original requirements defined by the business. Retail Platform testing team may choose to do any tests it needs, based on the future business process. Testing should be carried out based on users’ requirements. It should be performed under the responsibility of Retail Platform testing team to enable their determination as to whether accept the system software or not. 5. The Bidder should support MOF in Retail Platform testing team efforts to help identify problems and communicate them to the relevant team(s) for resolution. 6. The Bidder should ensure the necessary services for all testing activities that will cover at least: <ol style="list-style-type: none"> a. Prepare UAT documentation/ test scenarios, which should be revised by the Retail Platform testing team and business consultants. After the Retail Platform testing team validates the test scenarios, these documents can be used for testing purposes. b. Agree acceptance criteria and testing strategy. c. Conduct acceptance test. d. Documentation of the testing results. e. Agree the issue list by categories. <p>Agree the action plan for solving the issues.</p>
IS 3.03	<p>Deliverables:</p> <ol style="list-style-type: none"> 1. Acceptance test plan agreed and ‘signed-off’ by both parties. 2. UAT documentation/ test scripts and scenarios agreed and ‘signed-off’ by both parties. 3. Test results documented in a Test Report.
Training	
IS 4.01	<p>Phase objectives:</p> <p>The purpose of this phase is to deliver a comprehensive training plan incl the training of software developers.</p>

IS 4.02	<p>Main activities:</p> <ol style="list-style-type: none"> 1. The Bidder should conduct staff training to ensure an adequate level of knowledge and skills to efficiently use, manage and maintain the software solution and its source code. 2. The Bidder should conduct training sessions for the administration and software maintenance and also for development teams designated by the Beneficiary to ensure a proper level of knowledge and skills as to be able to efficiently use the development tools available within the solution and to design and develop individually new scenarios for data source integrations, validation rules, data model, reports, screen forms etc. <p>Activity should be planned as follows: (1) training for application administration, maintenance, and operation; (2) training for application development. There're distinct objectives for these training activities in terms of capacity building for the Beneficiary. The goal for the (2) is to develop the inhouse capacity to understand the source code and develop changes to system functionality.</p> <ol style="list-style-type: none"> 3. The Bidder should develop and agree with the Beneficiary the following elements of the training component: <ol style="list-style-type: none"> a. Bidder's strategy on training and tutoring; b. Structure and content of the training course and manual for each user category. 4. Methodology and tools for assessing and controlling the efficiency and sufficiency of training sessions
IS 4.03	<p>Deliverables:</p> <ol style="list-style-type: none"> 1. The training course should consist of different types of training, such as: <ol style="list-style-type: none"> a. training courses including hands-on workshops; b. self-learning materials or remote training; and, c. individual consultations. 2. The Deliverables of training sessions should comprise: <ol style="list-style-type: none"> a. the training plan; b. Administrator, User and Software Developer Manuals c. testing and assessing questioners; and,
5. Go-live and final acceptance	
IS 5.01	<p>System operation in the production environment and final acceptance should be made according to the following scheme:</p> <ol style="list-style-type: none"> 1. Go-live preparation phase; (this must be split into Part I covering the functionality detailed in Build Phase Part I and the functionality detailed in Build Phase Part II) 2. Initial operation period; 3. Final acceptance.
IS 5.02	<p>Phase objectives:</p> <p>The purpose of this phase is to facilitate the decision-making process in regard with launching the solution into production.</p>
	<p>Main activities:</p> <ol style="list-style-type: none"> 1. Review and assess readiness from multiple perspectives: <ol style="list-style-type: none"> a. IT readiness criteria: <ol style="list-style-type: none"> i. production system fully delivered and functional; ii. configuration document and design specification written and a handover made to the future Service Manager of the software; iii. User manual, Admin manual, Software Development Guide for the application

IS 5.03	<p>delivered;</p> <ul style="list-style-type: none"> iv. maintenance process agreed; v. technical and software maintenance training delivered; vi. no critical defects present after moving into productive environment, unless they are known and approved by the Beneficiary; <p>b. Business readiness criteria:</p> <ul style="list-style-type: none"> i. all functionalities required are present in the application; ii. no defects present that are deemed showstopper for the Operation; iii. reports are running and generating the correct output; the data loss possible if the application crashes is not exceeding the RPO; v. help mechanisms for users are available; vi. user rights implemented according to the specifications; vii. IT Administrator and software developer training performed. <p>2. Remediation Plan for defects is developed (defect list may contain defects with severity level 3 and 4).</p> <p>The Bidder should describe the methodology and instruments used for go-live preparation phase and should provide sample of deliverables.</p>
IS 5.04	<p>Deliverables:</p> <ul style="list-style-type: none"> 1. The solution is ready for launching into production (the solution was installed on production environment; testing was performed and no severity 1 and 2 defects were found). • Build Phase I • Build Phase II 2. Remediation plan for defects. 3. Bidder's self-assessment report of business and technical requirements (this document should cover at least the following information: requirement identifier, solutions associated with the requirement, % of requirement coverage in the application).
IS 5.05	<p>Phase objectives:</p> <ul style="list-style-type: none"> 1. The purpose of this phase is to extensively test solution behavior in daily operation to determine whether the solution meets the required qualities of capacity and stability. 2. This phase should be performed during a minimum period of 22 business days. 3. During this phase, the Retail Platform testing team should draft its own self-assessment report, which will be compared with that provided by the Bidder at the end of Go-live phase.
IS 5.06	<p>Main activities:</p> <ul style="list-style-type: none"> 1. Provide extensive offsite and if needed onsite support during the entire soak period for bug fixes and performance issues: log inspection and analysis/ problem prevention/ fine tuning. 2. For defects identified during soak period, a remediation plan should be agreed. 3. Solving of defects identified in remediation plan approved prior to go-live phase and also identified during soak period. 4. Providing assistance (help desk support). 5. Assistance for active monitoring of system's parameters. 6. If needed, the Bidder should provide any additional configuration or customization

	<p>required in the solution, in order to comply with the formal set of requirements.</p> <ol style="list-style-type: none"> If needed, the Bidder should provide improvement works for system performance with regard to its accessibility and efficiency. The Bidder should assist the Beneficiary in system administration/management. During the soak period, the Bidder should ensure full transfer of knowledge to the Beneficiary for proper system administration/management. <p>The Bidder should assist the Beneficiary in providing I and II-line support to the internal users of the Beneficiary and the reporting entities.</p>
IS 5.07	<p>Deliverables:</p> <ol style="list-style-type: none"> Remediation plan fully executed and all defects removed. <p>Status on remediation plan for defects occurred prior to and during soak period (weekly reports).</p>
IS 5.08	<p>Acceptance criteria:</p> <ol style="list-style-type: none"> All defects included in remediation plans are fully removed. No major bugs identified during soak period. No discrepancies found between Retail Platform testing team report and Bidder's operational acceptance readiness declaration. In case discrepancies found, these should be removed prior to final acceptance of soak period. An acceptance report should be signed by both parties within the agreed time period.
IS 5.09	<p>Phase objectives:</p> <ol style="list-style-type: none"> The purpose of this phase is to formalize the complete delivery of system functionalities, documentation and services. Such acceptance should be signed after formally closing the soak period for the solution. After this final acceptance, the Beneficiary should approve the final instalment payment and the contract of guarantee will become active.
IS 5.10	<p>Main activities:</p> <ol style="list-style-type: none"> Review and assess the criteria defined below for final acceptance of the solution. Criteria list for solution final acceptance is provided below. Beneficiary should align and detail together with the Bidder the acceptance criteria at project initiation stage. <ol style="list-style-type: none"> Documentation/ deliverables for analysis and design phase provided and accepted by the BENEFICIARY; Documentation/ deliverables for build phase provided and accepted by the BENEFICIARY; Documentation/ deliverables for test phase provided and accepted by the BENEFICIARY; Documentation/ deliverables for soak phase provided and accepted by the BENEFICIARY; Documentation/ deliverables for training phase provided and accepted by the BENEFICIARY; Criteria list for general acceptance is provided below. BENEFICIARY should align and detail together with the Bidder the acceptance criteria at project initiation stage: All above-mentioned documentation & deliverables are updated and fully provided by the Bidder. The Beneficiary should analyze the documents and deliverables submitted by the Bidder

	<p>in order to acknowledge the quality requirements.</p> <p>Services included in the tender were fully executed by the Bidder.</p>
IS 5.11	<p>Deliverables:</p> <p>Criteria list revised and agreed by both parties.</p>
<p>6. Minimal acceptance criteria and Solution Documentation</p>	
IS 6.01	<p>Phase objectives:</p> <p>The acceptance criteria should be revised and agreed with the Beneficiary at the beginning of the initiation stage. The below mentioned criteria are minimal and should not be subject of elimination.</p> <ol style="list-style-type: none"> 1. The deliverables of each phase should be provided to the Beneficiary in accordance with the Work Plan which that must take into account the time needed for the beneficiary and Bidder to review and coordinate the deliverables. 2. Deliverables meet the Beneficiary expectations and requirements in terms of clarity, level of detail, structure, content etc. 3. Deliverables are aligned with internal standards of the Bidder and good industry practices. <p>Acceptance documentations for each phase must be formally approved by the Parties.</p>
IS 6.02	<p>Main activities:</p> <p>For the testing phase, additional minimal acceptance criteria to be included are:</p> <ol style="list-style-type: none"> 1. All tests should be completed as per agreed test plan and acceptance criteria. The severity of the problems found should be defined according to the criteria below: <p>High (serious problem) Vital or critical functionality for the intended use is missing or failing continuously or repeatedly. Vital or critical functionality for the intended use cannot be activated or fails continuously.</p> <p>Medium (general problem) Important but non-critical or vital for the intended use system functionality is completely missing or failing continuously or repeatedly.</p> <p>Low (minor problem) Certain functions are missing or failing. System works correct but esthetical problems occur. Certain functions work but not completely correct.</p> 2. Issues with severity level 1 and 2 should require immediate bug fixing, and it should be mandatory for testing process to be continued.
	<p>Deliverables:</p> <p>As deliverables of the project, the Bidder should provide at a minimum the following documentation:</p> <ol style="list-style-type: none"> 1. User, Administration and Software Development manuals. The documents should provide sufficient details, understandable by IT administrators and software developers regarding functionalities, source code, operations. The document should describe the steps and actions to be performed in application and also print screens should be included. The purpose of the document is to represent a basis for learning process and also a reference point for users in case information about operating applications is needed. The user guide should be provided in Romanian. 2. System operating instructions – work instructions: <ol style="list-style-type: none"> a. Maintenance instructions/service management troubleshooting guide: this

IS 6.03	<p>document should include all known errors and solutions associated and should provide sufficient technical details in order to correct potential errors.</p> <ul style="list-style-type: none"> b. Installation manuals, including system modifications at the level of application and database. The document should cover installation requirements, installation steps and parameters setup for the Beneficiary, post installation tasks, tips & trick, FAQ. c. Documentation relating to application administrators should cover roles, tasks (e.g., back-up, tuning, patching), utilities, logging, tools for developers, troubleshooting guide etc. d. Documentation relating to Solution technical architecture document. Depicting all the software components, interfaces, interactions and any relevant technical information related to changing / adding / removing such components in the solution architecture and also application customization/development (conditions and methodology for solution customization by the Beneficiary). e. Archive & retrieval processes and related documentation. f. Documentation relating to security, covering access control, user management, auditing and monitoring, security reports. g. Documentation relating to system configuration – customized installation guide (if this information is not covered by item 2.b above). <p>Commented source code for all developments and customizations carried out during the project period (e.g., for scripts) as well as the configured and setup development environment project that can be compiled and built.</p> <p>The Consultant shall supply all the source code for system components that are not available as COTS from third parties. The source code shall use package managers for dependencies to 3rd party libraries. MoF/CTIF should be able to compile source code files into a fully executable system.</p> <p>4. Documentation relating to end users and technical trainings - support materials for end user and technical trainings.</p> <p>Training material and documentation language must be in English or Romanian and agreed with the Beneficiary upfront depending on the purpose of the training.</p>
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3.7.2 PROJECT MANAGEMENT REQUIREMENTS

A detailed list of project management requirements is in Table below.

ID	Requirements
I. General project management requirements	
PM 1.01	The goal of project management is to provide the necessary skills for project organizing and management to successfully achieve the set objectives. During the project life cycle there should be assured efficient resource planning and allocation, progress control during each stage, quality monitoring and evaluation of the deliverables etc.
PM 1.02	The Bidder is responsible for implementation project management, as well as for execution of activities and Work Plan mutually agreed with the Beneficiary. The jointly agreed Work Plan will include the necessary activities and deliverables review and coordination process within an agreed timeframe.
PM 1.03	The Bidder is responsible for identifying and mobilizing the adequate resources to execute the Work Plan activities in its responsibility, at the agreed quality level.
PM 1.04	The Beneficiary is responsible for all procedural and administrative matters relating to the launching, contracting and financial management of the project (including payments) related to project implementation activities and for technical implementation.
PM 1.05	A well-known project management methodology or standards (e.g., PRINCE2, PMBOK etc.), or an internal developed methodology, based on these standards or methodologies, should be used for the implementation project and should be appointed specifically.
PM 1.07	A detailed project organizational chart, covering the key roles and the potential additional roles identified by Bidder should be provided as part of the Initial Project Management Plan included in the Technical Proposal.
PM 1.08	The Project Manager of the Bidder has the authority and responsibility to coordinate and implement the project so that the objectives are met. Its primary responsibility is to ensure that all required deliverables are timely presented and meet the established quality standards.
PM 1.09	The Project Manager of the Bidder should ensure a proper management of project risks, quality and progress control of deliverables at every stage of the project. It will also be provided a control of interdependencies between the project components to minimize any risk of project stagnation.
PM 1.10	The Project Manager of the Bidder should ensure an effective communication within the project, through progress reports with a weekly frequency as well as, end phase report toward Project Manager of the Beneficiary and with a monthly frequency/or if necessary, more often, toward Steering Committee of the Beneficiary. Simultaneously, the Bidder

	should provide an adequate level of transparency in project management through adequate documentation of all project management aspects.
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3.7.3 CONDITIONS FOR WARRANTY, MAINTENANCE AND POST-IMPLEMENTATION SUPPORT

The scope of post-implementation early-life support maintenance and support services is to ensure the following objectives:

- The incidents and the problems occurred during the use of solution should be addressed and resolved in a timely manner with minimal impact on operations;
- The difficulties in using the solution should be properly and timely solved, as agreed between parties.

To achieve these objectives, the post-implementation maintenance and support services during the early-life support and warranty periods are going to be provided by the Bidder in compliance with the requirements from the table below. After the end of the warranty period, the Beneficiary should be able to maintain the software.

ID	Requirements																				
MnS 1	As part of the initial contract for the delivery and implementation of the solution, the Bidder should provide a one-month early life support and maintenance period, which involves the provision of support services and maintenance services, and a warranty period of 12 months from the date of final acceptance of the solution i.e. after the end of the “one-month early life support and maintenance period”.																				
MnS 2	<p>Maintenance and support services should be provided on basis of a Service Level Agreement, which should be attached to the contract signed between the Parties. The agreement should establish the post-implementation maintenance and support services level, based on the following minimal requirements:</p> <ul style="list-style-type: none">a. Support days: 5 business days per weekb. Support hours: 09:30-15:00, UTC+2 (Chisinau local time)c. Response Time (RT) and Solving time: <table><tr><th>Classification</th><th>Response Time</th><th>Solving Time (ST)</th><th>the MOF request* (RT)</th></tr><tr><td>Critical</td><td>3h</td><td>6 h</td><td></td></tr><tr><td>High</td><td>5 h</td><td>1.5 days</td><td></td></tr><tr><td>Ordinary</td><td>1 day</td><td>4 days</td><td></td></tr><tr><td>Low</td><td>3 days</td><td>The best effort</td><td></td></tr></table>	Classification	Response Time	Solving Time (ST)	the MOF request* (RT)	Critical	3h	6 h		High	5 h	1.5 days		Ordinary	1 day	4 days		Low	3 days	The best effort	
Classification	Response Time	Solving Time (ST)	the MOF request* (RT)																		
Critical	3h	6 h																			
High	5 h	1.5 days																			
Ordinary	1 day	4 days																			
Low	3 days	The best effort																			

	* Requests for post-implementation maintenance and support services are classified in terms of their importance. The importance is estimated by the impact (inflicted or potential) of the event that has created the need for the request on the quality parameters of the solution operation.
MnS 3	The Bidder should have a customer support center where all requests will be directed to. The work program and organization of the Support Center should ensure post- implementation maintenance and support services at the level established in this RFP.
MnS 4	The Support Center should be contacted at least by the following means: e-mail, phone, web etc.
MnS 5	Maintenance and support services should be provided remotely.
MnS 6	For the provision of post-implementation maintenance and support services for the two-month early life support period, the Bidder should provide access to a ticketing solution, available through the Internet. The ticketing system should be properly secured.

4 MILESTONES AND PAYMENT SCHEDULE

The following table provides the major milestones for the Retail Platform Software Solution, which correspond to the phases described in Project Implementation Requirements.

Output	Estimated Due Date*
Base Contract	
1. Completion of analysis and design phases	October 31, 2022
2. Completion of Build and of training and testing phase part I	January 31, 2022
Option Period	
3. Completion of Build and of training and testing phase part II	Bidder must provide estimate
4. Final acceptance including a one-month early-life support to the software solution	Bidder must provide estimate

*dates are contingent upon signing of the contract

4.1 PAYMENT SCHEDULE

The selected firm will be paid based on submission of deliverables as below. The Build Phase must be realized in two parts. Part I must cover the sale of government securities to retail investors, coupon payments as well as redemption at maturity process. Build Phase Part II must support the connectivity to CSD, sales to the Primary Dealers, as well as the early redemption and “buy-back window” process. Please note that IDG has the right to not exercise the Option Period that includes the Build Phase Part II if Build Phase Part I is delayed.

Output	Base Contract Amount (%)
Base Contract	
1. Acceptance of the revised work plan and mobilization	20%
2. Acceptance of deliverables of analysis and design phases	30%
3. Acceptance of deliverables of build/construction and of training/testing phase part I	50%
Option Period Contract Amount (%)	
Option Period	
4. Acceptance of deliverables of build/construction and of training/testing phase part II	40%
5. Final acceptance including a one-month early-life support to the software solution	60%

5 CONTRACTUAL REQUIREMENTS

PERIOD OF PERFORMANCE

The period of performance is July 2022 through app. May, 2023.

PLACE OF PERFORMANCE

The place of performance is Republic of Moldova and the successful bidder's headquarters location.

INSURANCE AND SERVICES

Pursuant to AIDAR 752.228-3 Worker's Compensation Insurance (Defense Base Act), to obtain DBA insurance, contractors, and subcontractors must apply for coverage directly from AON Risk Insurance Services (AON), the agent for Allied World Assurance Company (AWAC).

Contractors must apply for coverage directly to AON Risk Insurance Services Inc., the agent for AWAC DBA Insurance. For instructions on the required application form and submission requirements, contact the following office:

AON Risk Insurance Services West, Inc.
2033 N. Main St., Suite
760 Walnut Creek, CA
94596-3722
Hours: 8:30 A.M. to 5:00 PM, Pacific
Time Primary Contact: Fred Robinson
Phone: (925) 951-1856 Fax: (925) 951-1890
Email: Fred.Robinson@aon.com

In compliance with new Agency guidelines, Contractors will be required to submit a copy of DBA coverage for which contract performance is to occur outside of the U.S. This document must be provided prior to start of performance overseas.

New Rates: There are three different rates depending on the nature of the services to be provided. If a contract contains more than one of the services listed, the premium will be distributed proportionally.

Contract Year	Period of Performance	Services	Construction	Security
Base Period	12/1/15 – 11/30/17	\$2.00	\$4.50	\$7.50
Option Period 1	12/1/17 – 11/30/18	\$2.00	\$4.50	\$7.50
Option Period 2	12/1/18 – 11/30/19	\$2.00	\$4.50	\$7.50
Option Period 3	12/1/19 – 11/30/20	\$2.00	\$4.50	\$7.50
Extension	12/1/20 – 5/31/21	\$2.00	\$4.50	\$7.50
Extension	6/1/21 – 11/30/21	\$2.00	\$4.50	\$7.50
Extension	12/1/21 – 04/30/22	\$2.00	\$4.50	\$7.50 unless further revised

The selected Bidder shall purchase and maintain throughout the course of the work and period of performance of this project, such insurance as will protect the selected Bidder, USAID, MOF, and IDG from the following claims which may arise out of or result from its operations hereunder (whether by itself, any subcontractors, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable): claims under workmen's compensation, disability benefit and other similar employee benefit acts; claims for damages because of bodily injury, occupational sickness or disease, or death, of its employees or any other person; claims which are sustained by any person as a result of the actions of the selected Bidder or by any other person; and claims for damages because of injury to or destruction of tangible property, including loss of use resulting there from. The selected Bidder will provide IDG with satisfactory evidence of compliance with this requirement.

The following are the required types of coverage and minimum amounts for each:

- Commercial General Liability. Throughout the period when work is performed and until final acceptance by IDG and MOF, the selected Bidder shall carry and maintain and ensure that all subcontracts carry and maintain, Commercial General Liability insurance with available limits of not less than the total value of the project. Such insurance shall contain coverage for all premises and operations, broad form property damage, and contractual liability. Such insurance shall not be maintained on a per project basis unless the respective selective Bidder does not maintain blanket coverage.
- Workers' Compensation. The selected Bidder shall, throughout the period when work is performed and until final acceptance by IDG, carry and maintain, and ensure that all subcontractors carry and maintain, insurance in accordance with the applicable laws relating to Workers' Compensation covering all of their respective employees.

LOGISTICS SUPPORT

The selected Bidder will be responsible for furnishing all logistics support

EXECUTIVE ORDER ON TERRORISM FINANCING

The Contractor is reminded that U.S. Executive Orders and U.S. law prohibits transactions with, and the provision of resources and support to, individuals and organizations associated with terrorism. A list of these names can be found at the web site of the Office of Foreign Assets Control (OFAC) with the Department of Treasury. That web site is <http://treasury.gov/ofac>. It is the responsibility of the contractor to ensure compliance with these Executive Orders and laws.

This provision must be included in all subcontracts/subawards issued under this contract.

ENVIRONMENTAL COMPLIANCE

I.a. The Foreign Assistance Act of 1961, as amended, Section 117 requires that the impact of USAID's activities on the environment be considered and that USAID include environmental sustainability as a central consideration in designing and carrying out its development programs. This mandate is codified in Federal Regulations (22 CFR 216) and in USAID's Automated Directives System (ADS) Parts 201.5.10g

and 204 (<http://www.usaid.gov/policy/ADS/200/>), which, in part, require that the potential environmental impacts of USAID-financed activities are identified prior to a final decision to proceed and that appropriate environmental safeguards are adopted for all activities. Bidder environmental compliance obligations under these regulations and procedures are specified in the following paragraphs of this RFP.

In addition, the contractor/recipient must comply with host country environmental regulations unless otherwise directed in writing by USAID. In case of conflict between host country and USAID regulations, the latter shall govern.

No activity funded under this contract will be implemented unless an environmental threshold determination, as defined by 22 CFR 216, has been reached for that activity, as documented in a Request for Categorical Exclusion (RCE), Initial Environmental Examination (IEE), or Environmental Assessment (EA) duly signed by the Bureau Environmental Officer (BEO). (Hereinafter, such documents are described as “approved Regulation 216 environmental documentation.”)

An Initial Environmental Examination (IEE) DCN: 2015-MOL-001 (See Attachment J.1) has been approved for Moldova Financial Sector Transparency Activity (FSTA) funding this RFP. The IEE covers activities expected to be implemented under this contract. USAID has determined that a Categorical Exclusion applies to activity. This indicates that if these activities are implemented subject to the specified conditions, they are expected to have no significant adverse effect on the environment. The Bidder shall be responsible for implementing all IEE conditions pertaining to activities to be funded under this solicitation.

As part of its initial Work Plan, and all Annual Work Plans thereafter, the contractor, in collaboration with the USAID Cognizant Technical Officer and Mission Environmental Officer or Bureau Environmental Officer, as appropriate, shall review all ongoing and planned activities under this contract to determine if they are within the scope of the approved Regulation 216 environmental documentation.

If the contractor plans any new activities outside the scope of the approved Regulation 216 environmental documentation, it shall prepare an amendment to the documentation for USAID review and approval. No such new activities shall be undertaken prior to receiving written USAID approval of environmental documentation amendments.

Any ongoing activities found to be outside the scope of the approved Regulation 216 environmental documentation shall be halted until an amendment to the documentation is submitted and written approval is received from USAID.

When the approved Regulation 216 documentation is (1) an IEE that contains one or more Negative Determinations with conditions and/or (2) an EA, the contractor shall:

Unless the approved Regulation 216 documentation contains a complete environmental mitigation and monitoring plan (EMMP) or a project mitigation and monitoring (M&M) plan, the contractor shall prepare an EMMP or M&M Plan describing how the contractor will, in specific terms, implement all IEE and/or EA conditions that apply to proposed project activities within the scope of the award. The EMMP or M&M Plan shall include monitoring the implementation of the conditions and their effectiveness.

Integrate a completed EMMP or M&M Plan into the initial work plan.

Integrate an EMMP or M&M Plan into subsequent Annual Work Plans, making any necessary adjustments to activity implementation in order to minimize adverse impacts to the environment. USAID anticipates that environmental compliance and achieving optimal development outcomes for the proposed activities will require environmental management expertise.

USAID-FINANCED THIRD-PARTY WEB SITES

- a) Definitions: "Third-party web sites"
Sites hosted on environments external to USAID boundaries and not directly controlled by USAID policies and staff, except through the terms and conditions of a contract. Third- party Web sites include project sites.
- b) The contractor must adhere to the following requirements when developing, launching, and maintaining a third-party Web site funded by USAID for the purpose of meeting the project implementation goals:
 - (1) Working through the COR, the contractor must notify the USAID Bureau for Legislative and Public Affairs/Public Information, Production and Online Services (LPA/PIPOS) of the Web site URL as far in advance of the site's launch as possible.
 - (2) The contractor must comply with Agency branding and marking requirements comprised of the USAID logo and brandmark with the tagline "from the American people," located on the USAID Web site at www.usaid.gov/branding, and USAID Graphics Standards manual at <http://www.usaid.gov>.
 - (3) The Web site must be marked on the index page of the site and every major entry point to the Web site with a disclaimer that states: "The information provided on this Web site is not official U.S. Government information and does not represent the views or positions of the U.S. Agency for International Development or the U.S. Government."
 - (4) The Web site must provide persons with disabilities access to information that is comparable to the access available to others. As such, all site content must be compliant with the requirements of the Section 508 amendments to the Rehabilitation Act.
 - (5) The contractor must identify and provide to the COR, in writing, the contact information for the information security point of contact. The contractor is responsible for updating the contact information whenever there is a change in personnel assigned to this role.
 - (6) The contractor must provide adequate protection from unauthorized access, alteration, disclosure, or misuse of information processed, stored, or transmitted on the Web sites. To minimize security risks and ensure the integrity and availability of information, the contractor must use sound: system/software management; engineering and development; and secure coding practices consistent with USAID standards and information security best practices. Rigorous security safeguards, including but not limited to, virus protection; network intrusion detection and prevention programs; and vulnerability management systems must be implemented and critical security issues must be resolved as quickly as possible or within 30 days. Contact the USAID Chief Information Security Officer (CISO) at ISSO@usaid.gov for specific standards and guidance.

- (7) The contractor must conduct periodic vulnerability scans, mitigate all security risks identified during such scans, and report subsequent remediation actions to CISO at ISSO@usaid.gov and COR within 30 workdays from the date vulnerabilities are identified. The report must include disclosure of the tools used to conduct the scans. Alternatively, the contractor may authorize USAID CISO at ISSO@usaid.gov to conduct periodic vulnerability scans via its Web-scanning program. The sole purpose of USAID scanning will be to minimize security risks. The contractor will be responsible for taking the necessary remediation action and reporting to USAID as specified above.

For general information, agency graphics, metadata, privacy policy, and 508 compliance requirements, refer to <http://www.usaid.gov>

GOVERNMENT FURNISHED FACILITIES OR PROPERTY

The Contractor and any employee or consultant of the Contractor is prohibited from using U.S. Government facilities (such as office space or equipment) or U.S. Government clerical or technical personnel in the performance of the services specified in the Contract unless the use of Government facilities or personnel is specifically authorized in the Contract or is authorized in advance, in writing, by the CO.

If at any time it is determined that the Contractor, or any of its employees or consultants, have used U.S. Government facilities or personnel either in performance of the Contract itself, or in advance, without authorization in writing, by the Contracting Officer, then the amount payable under the Contract will be reduced by an amount equal to the value of the U.S. Government facilities or personnel used by the Contractor, as determined by the Contracting officer.

If the parties fail to agree on an adjustment made pursuant to this clause it will be considered a "dispute" and will be dealt with under the terms of the "Disputes" clauses of the Contract.

LIMITATION ON ACQUISITION OF INFORMATION TECHNOLOGY (DEVIATION NOS. M/OAA-DEV-FAR- 18-2C AND M/OAA-DEV-AIDAR-18-2C) (APRIL 2018)

Definitions. As used in this contract -- "Information Technology" means:

- (1) Any services or equipment, or interconnected system(s) or subsystem(s) of equipment, that are used in the automatic acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the agency; where such services or equipment are ' used by an agency' if used by the agency directly or if used by a contractor under a contract with the agency that requires either use of the services or equipment or requires use of the services or equipment to a significant extent in the performance of a service or the furnishing of a product.
- (2) The term "information technology" includes computers, ancillary equipment (including imaging peripherals, input, output, and storage devices necessary for security and surveillance), peripheral equipment designed to be controlled by the central processing unit of a computer, software, firmware and similar procedures, services (including provisioned

services such as cloud computing and support services that support any point of the lifecycle of the equipment or service), and related resources.

(3) The term "information technology" does not include any equipment that is acquired by a contractor incidental to a contract that does not require use of the equipment.

The Federal Information Technology Acquisition Reform Act (FITARA) requires Agency Chief Information Officer (CIO) review and approval of contracts that include information technology or information technology services.

The Contractor must not acquire information technology as defined in this clause without the prior written approval by the contracting officer as specified in this clause. Request for Approval Requirements:

- (1) If the Contractor determines that any information technology will be necessary to meet the Government's requirements or to facilitate activities in the Government's statement of work, the Contractor must request prior written approval from the Contracting Officer.
- (2) As part of the request, the Contractor must provide the Contracting Officer a description and an estimate of the total cost of the information technology equipment, software, or services to be procured under this contract. The Contractor must simultaneously notify the Contracting Officer's Representative (COR) and the Office of the Chief Information Office at ITAuthorization@usaid.gov.

The Contracting Officer will provide written approval to the Contractor through modification to the contract expressly specifying the information technology equipment, software, or services approved for purchase by the COR and the Agency CIO. The Contracting Officer will include the applicable clauses and special contract requirements in the modification.

Except as specified in the contracting officer's written approval, the Government is not obligated to reimburse the Contractor for any costs incurred for information technology as defined in this clause.

The Contractor must insert the substance of this clause, including this paragraph (g), in all subcontracts.

KEY PERSONNEL OR KEY EXPERTS' REQUIREMENTS

(A) Certain skilled experienced professional and/or technical personnel are essential for successful contractor accomplishment of the work to be performed under this contract. These are defined as "Key Experts" or "Key Personnel" and are those persons whose CVs were submitted for evaluation of the proposal as part of the Staffing Plan. The Bidder agrees that such personnel shall not be removed from the contract work or replaced without compliance with paragraphs (b) and (c) hereof. The personnel deemed key under this contract are:

- Business Analyst
- Technical Expert/Solution Architect
- Securities Management Specialist

(B) If one or more of the key personnel for whatever reason becomes, or is expected to become, unavailable for work under this contract for a continuous period exceeding thirty (30) work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the Bidder shall immediately notify IDG and shall, subject to the concurrence of IDG or his

authorized representative, promptly replace such personnel with personnel of at least substantially equal ability and qualifications.

(C) All requests for approval of substitutions hereunder must be in writing and provide a detailed explanation of the circumstances necessitating the proposed substitutions. They must contain a complete CV for the proposed substitute, and any other information requested by IDG or needed by IDG to approve or disapprove the proposed substitution. IDG will evaluate such requests and promptly notify the contractor of his approval or disapproval thereof in writing.

(D) If IDG determines that suitable and timely replacement of key personnel who have been reassigned, terminated or have otherwise become unavailable for the contract work is not reasonably forthcoming or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the services ordered, the contract may be terminated by the IDG for default or for the convenience of the Government, as appropriate, or, at the discretion of IDG if they find the Bidder at fault for the condition, the contract price may be equitably adjusted downward to compensate the Government for any resultant delay, loss, or damage.

PROHIBITION ON CONTRACTING FOR CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT (AUG 2019)

Definitions. As used in this clause—

“Covered foreign country” means The People’s Republic of China. “Covered telecommunications equipment or services” means—

- a. Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);
- b. For the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);
- c. Telecommunications or video surveillance services provided by such entities or using such equipment; or
- d. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

“Critical technology” means—

- (1) Defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations;
- (2) Items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter

VII of title 15, Code of Federal Regulations, and controlled-

- i. Pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or
 - ii. For reasons relating to regional stability or surreptitious listening;
- (3) Specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10, Code of Federal Regulations (relating to assistance to foreign atomic energy activities);
 - (4) Nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material);
 - (5) Select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or
 - (6) Emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. 4817).

“Substantial or essential component” means any component necessary for the proper function or performance of a piece of equipment, system, or service.

Prohibition. Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. The Contractor is prohibited from providing to the Government any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in Federal Acquisition Regulation 4.2104.

Exceptions. This clause does not prohibit contractors from providing—

- (1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
- (2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

Reporting requirement.

In the event the Contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the Contractor is notified of such by a subcontractor at any tier or by any other source, the Contractor shall report the information in paragraph (d)(2) of this clause to the Contracting Officer, unless elsewhere in this contract are established procedures for reporting the information; in the

case of the Department of Defense, the Contractor shall report to the website at <https://dibnet.dod.mil>. For indefinite delivery contracts, the Contractor shall report to the Contracting Officer for the indefinite delivery contract and the Contracting Officer(s) for any affected order or, in the case of the Department of Defense, identify both the indefinite delivery contract and any affected orders in the report provided at <https://dibnet.dod.mil>.

The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause

(i) Within one business day from the date of such identification or notification: the contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: any further available information about mitigation actions undertaken or recommended. In addition, the Contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

Subcontracts. The Contractor shall insert the substance of this clause, including this paragraph (e), in all subcontracts and other contractual instruments, including subcontracts for the acquisition of commercial items.

6 PROPOSAL INSTRUCTIONS

IDG will select an organization through a full and open competition. The Bidders are invited to submit a Technical Proposal and a Financial Proposal, as outlined in Technical Proposal – Outline and Templates and Attachment 10. Financial Proposal – Outline and Templates. The Proposal will be the basis for contract negotiations and ultimately for a signed Contract with the selected Bidder.

Bidders bear all costs associated with the preparation and submission of their Proposals and contract negotiation. IDG is not bound to accept any Proposal and reserves the right to annul the selection process at any time prior to Contract award, without thereby incurring any liability to the Bidders.

Proposal Preparation Costs: IDG will not pay for any proposal preparation costs.

QUESTIONS AND CLARIFICATIONS

For further information, please contact procurement@internationaldevelopmentgroup.com. All questions must be submitted in writing no later than the deadline included in Section I of this RFP. IDG will provide responses to the questions or comments received. These submissions must be made by email only to procurement@internationaldevelopmentgroup.com. In the subject line reference: **Questions – GS Retail Platform**.

IDG will send written responses by email to all questions and comments received (without identifying the source of inquiry) to all Bidders. Should IDG deem it necessary to amend the RFP as a result of a clarification, it will do so. At any time before the submission of Proposals, IDG may amend the RFP by issuing an addendum that will be published on the IDG website or shared by standard electronic means. All Bidders should check the IDG website periodically for any amendments. If the addendum is received by electronic means, Bidders should acknowledge receipt of all amendments. To give Bidders reasonable time in which to take an amendment into account in their proposals IDG may, if the amendment is substantial, extend the deadline for the submission of proposals.

PROPOSAL DUE DATE

Proposals should be submitted in electronic format to procurement@internationaldevelopmentgroup.com no later than the deadline included in Section I of this RFP. The subject line of the email should reference: **RFP – GS Retail Platform**.

The Proposals must be submitted only to the email address indicated and received by IDG no later than the time and the date indicated above, or any formal extension notified in writing to this date. Any proposal received by IDG after the deadline for submission will be disqualified and an email will be sent to the Bidder with a clarification indicating the reason for disqualification.

PROPOSAL VALIDITY

Bidders' proposals must remain valid for 120 days after the submission date. During this period, Bidders should maintain the availability of professional staff nominated in the proposal. IDG will make its best effort to complete negotiations within this period. Should the need arise, however, IDG may request Bidders to extend the validity period of their proposals. Bidders who agree to such extension should certify that they maintain the availability of the professional staff nominated in the proposal, or in their confirmation of extension of validity of the proposal, Bidders could submit new staff in replacement, who would be considered in the final evaluation for contract award. Bidders who do not agree have the right to refuse to extend the validity of their Proposals.

AUTHORIZED GEOGRAPHIC CODE

The authorized geographic codes for procurement of goods and services is 935. The geographic code follows the USAID established geographic codes used by USAID in procurements. Code 935 is defined as any country but excluding prohibited sources.

PROPOSAL SUBMISSION INSTRUCTIONS

In preparing their Proposal, Bidders are expected to examine in detail the documents comprising the RFP. Material deficiencies in providing the information requested may result in rejection of a Proposal.

Both Technical and Financial Proposals must be signed by an authorized representative of the Bidder.

Each Bidder's Proposal should be prepared in two separate electronic volumes. The following list should be used as a checklist for the Technical and Financial Proposals.

Volume 1 – Technical Proposal

1. Technical Proposal Submission Letter
2. Organization Description
3. Past Performance Information
4. Executive Summary
5. Description of Solution's Technical Approach and Methodology
6. Comments on the RFP
7. Work Plan for the Base Contract and the Option Period
8. Response(s) to Functional Requirements
9. Response(s) to Non-Functional Requirements
10. Response(s) to Implementation Services Requirements
11. Initial Management Plan (5 pages) and the Response(s) to Project Management Requirements
12. Response(s) to Post-Implementation Requirements
13. Staffing Plan and Level of Effort
14. Professional Staff CVs
15. Professional Staff Letters of Commitment
16. Risk Management Plan

Volume 2 – Financial Proposal

1. Financial Proposal Submission Letter
2. Budget Narrative
3. Detailed Budget for the Base Period and the Option Period
4. Total Cost of Ownership Narrative
5. Total Cost of Ownership Calculations
6. Evidence of Responsibility
7. Section 889 Representation

FORMAT AND LANGUAGE

Technical Proposals must be submitted in either PDF or Microsoft Word. Where the templates provided for the Financial Proposal are in Excel, this must also be submitted in Excel, with clear quantities and unit costs. The other required documents that are part of the Financial Proposal must be submitted in either PDF or Microsoft Word. A page is considered to be a one sided, 8.5" x 11" size with 1-inch margins. All text should be Times New Roman font, in no smaller than 12-point for text and 10-point for spreadsheets and tables, and any font size for graphics as long as they are legible. Each page should be numbered consecutively.

Technical and Financial Proposals shall be submitted in English only.

TECHNICAL PROPOSAL INSTRUCTIONS

Bidders are required to submit a full Technical Proposal. The Technical Proposal should provide the information indicated in [Technical Proposal – Outline and Templates](#), using the appropriate attachments where templates are provided.

A detailed description on selected items from the full Technical Proposal is included below:

Organization Description. A brief description of the Bidders' organization and an outline of recent experience of the Bidders. Provide here a brief description of your company background and organization. In the case of a Teaming Agreement, please provide a synopsis of the Prime Contractor and Subcontractors that are participating in your Bid.

Past Performance Information. Bidders should provide relevant information on past performance examples from a maximum of three (3) relevant assignments implemented in the past five (5) years. The prime Bidder should also include one (1) relevant assignment for each proposed subcontractor (if any subcontractors are proposed). For each assignment, the outline should indicate the names of subcontractors/professional staff who participated, duration of the assignment, contract amount, and Bidder's involvement. Information should be provided only for those assignments for which the Bidder was legally contracted as a corporation or as one of the major Bidders within a joint venture. Assignments completed by individual professional staff working privately or through other consulting Bidders cannot be claimed as the experience of the Bidder, or that of the Bidder's associates, but can be claimed by the professional staff themselves in their CVs. Bidders should be prepared to substantiate the claimed experience if so requested by IDG.

Description of Solution's Technical Approach and Methodology. It is required that the Bidder explains the way in which it understands and will consider the objectives of the assignment as outlined in the Scope of Work, the technical approach, the design of the services, methodology to carry out the activities and to obtain the outputs and its details. The Bidder has to highlight the problems to be solved and their importance and explain the technical design which it will adopt with this intention. Moreover, the Bidder has to explain the methodology intended to adopt and its compatibility with the suggested design.

Comments on the RFP. Comments and suggestions on the RFP including workable suggestions that could improve the quality effectiveness of the assignment; and on requirements for counterpart staff and facilities including administrative support, office space, local transportation, equipment, data etc. to be provided by the Bidder. Present and justify here any modifications or improvement to the RFP the Bidder is proposing to improve performance in carrying out the assignment (such as deleting some activity/activities the Bidder considers unnecessary, or adding another, or proposing a different phasing of the activities).

Work plan. In this section, the Bidder will propose the principal activities which includes the mission, their nature and duration, spreading out and interrelationships, the benchmarks (including intermediate approvals required from IDG/MOF) and the dates of presentation of the reports work plan suggested must be compatible with the technical design and methodology. The work plan should include at least the following components:

- a. The initial Work Plan should cover major phases and work packages for both the Base

Contract and the Option Period, major activities, start and end date, duration, milestones, including responsibilities, interdependences, external dependencies; and the critical path.

- b. In case the Bidder will subcontract the activities to obtain some deliverables, it should present the Work Packages associated with these activities. The structure of a Work Package should comprise: date, responsible person, description of the work package, quality control methods to be used, level of resources that will be allocated, start and end date, constraints, method of reporting. The work packages should be signed by both the subcontractor and the Bidder.
- c. The Work Plan will clearly reflect the total planned time for software deployment.
- d. The working hypotheses, which are the basis of the initial plan, should be presented.
- e. The Bidder should present the risk tolerances for the overall Work Plan and for each of the major phases. The Bidder should present the method by which the Project Manager will ensure the risk control at each stage and the procedure that will be applied when these risk tolerances are exceeded. For this project, the cost tolerances are not permitted, the project budget being fixed.
- f. A Gantt diagram is required for the Work Plan. During the project, the Project Manager should use a dedicated project management software/ instrument, which should be indicated in the proposal.
- g. During the contract execution, detailed Work Plans should all be developed for each of the phases/stages.
- h. The Work Plan will also include revision and coordination of deliverables by the parties (Bidder and Beneficiary) with the allocation of the necessary time. The Beneficiary review / coordination of deliverables will be granted 3-5 business days per iteration. The review / coordination of the deliverable can take place through several iterations. The Bidder will consider this term in the execution of the Work Plan.

Initial Management Plan. This section must be included as part of the “Response to Project Management Requirements”, meet the listed requirements described in Attachment 6, and must describe the management structure for the implementation of proposed activities and explain how it will implement activities proposed. In this chapter, you must define your approach to project management.

Staffing Plan. The staffing plan should provide a list of the proposed key and non-key Professional staff team by area of expertise, the position that would be assigned to each staff team member, and their tasks. Section 10 provides a template as well as the minimum requirements relating to the minimum key experts that need to be included in the proposal for implementing the Software Solution. The Bidder should demonstrate it can provide to the Beneficiary a minimum number of key and non-key experts as follows:

- 1. Key Personnel no. 1 – Business analyst
- 2. Key Personnel no. 2 –Technical expert/ Solution architect
- 3. Key Personnel no. 3 – Security Management Specialist
- 4. Non-Key Personnel no. 4 – Project manager
- 5. Non-Key Personnel no. 5 – Test/quality assurance

If the Bidder considers necessary, it can decide to add additional resources, according to its own professional judgment, methods, implementation standards, etc. For each of these roles mentioned above one or more persons can be allocated. A person can also cumulate roles, if he/ she meets the criteria for all the envisaged roles and if the workload on the project allows. The quality assurance role has to be

specifically allocated to a team member.

As part of the Staffing Plan please provide estimates of the staff input, level of effort (LOE) in days needed to carry out the assignment. The staff LOE should be indicated separately for home office and field activities, and for foreign and Moldovan Professional staff.

Curriculum Vitae. All proposed professional staff must be presented in the CV format provided. CVs are limited to 3 pages each and must follow the format requirements included in [Technical Proposal – Outline and Templates](#).

Letters of Commitment. The Bidder must present signed letters of commitment for all key Professional personnel, specifying their name, role, and confirming availability to serve in the specified role should the Bidder be successful.

Risk Management Plan. This project imposes potential exposure to a range of risks that need to be addressed appropriately by developing a sound strategy and an effective risk mitigation plan. This should include at least the following sections:

- a. The risk management plan should describe the risk management processes, risk management strategies, risk management responsibilities and specific procedures for risk identification, reporting, escalation etc.
- b. The Bidder should submit the initial Risk Register as part of the Technical Proposal. The Risk Register should be filled in with project specific risks and should contain for each identified risk, at least the following information: risk identification code, type of risk, identification date, date of last revision, risk description, probability, impact, severity, counter-measures, the risk management responsible person, risk status (e.g., open, closed). The Risk Register should structure the identified risks by categories, for example, Project management/ Resources/ etc. and by project phases, for example, Analysis/ Design/ etc.

The Technical Proposal should not include any financial information. A Technical Proposal containing financial information will be declared nonresponsive.

FINANCIAL PROPOSALS

Bidders are required to submit a full Financial Proposal. The Financial Proposal should provide the information indicated in

[Attachment 10. Financial Proposal – Outline and Templates](#), using the appropriate attachments where templates are provided.

Financial Proposals must be submitted with a detailed budget in Excel with clear quantities and unit costs using the budget template provided and a detailed budget narrative describing the basis of the costs proposed.

A detailed description on selected items from the full Financial Proposal is included below:

- **Budget Narrative.** The detailed budget narratives should be submitted in Microsoft Word or Adobe PDF outlining the justification for each specific line item. The narrative should also

- include the payment schedule and proposed timing.
- **Detailed Budget – Base Period and Option Period.** Detailed Excel budget using the template provided with clear quantities and unit costs in USD should be submitted to enable IDG to determine price reasonableness. This budget should include all costs associated with the development, testing, training, and the implementation of the Software Solution. The Budget and the Budget Narrative should be separated by the deliverables included in the Base Contract and Option Period. Please note that IDG has the right to not exercise the Option Period that includes the Build Phase Part II if Build Phase Part I is delayed. The final total costs should be presented in USD.
- **Total Cost of Ownership (TCO) Narrative.** The detailed TCO narrative should be submitted in Microsoft Word or Adobe PDF outlining details explaining the TCO.
- **Total Cost of Ownership Calculations.** In a separate brief spreadsheet, please also list and describe any other costs associated with the total cost of ownership, beyond the costs proposed to IDG in the budget, after the Software Solution is fully functional. This should include support services (including a daily rate per resource type for change requests that could occur during the project), ongoing maintenance services (the cost of yearly maintenance and support of the software solution for the Years 1 to 5 after Final Acceptance) etc. that the MOF can potentially contract in the future, after the contract with IDG is completed.
- **Evidence of Responsibility.** Contract representative will make an affirmative determination of responsibility. The Bidder must address each element of responsibility in the template provided.
- **Section 889 Certification.** Contract representative will confirm compliance with NDAA Section 889.

PROPOSAL EVALUATION

From the time the proposals are submitted to the time the Contract is awarded, the Bidders should not contact IDG or MOF on any matter related to its Technical and Financial Proposal. Any effort by Bidders to influence IDG or MOF in the examination, evaluation, ranking of Proposals, and recommendation for award of contract may result in the rejection of the Bidders' Proposal.

EVALUATION OF TECHNICAL PROPOSALS

The Evaluation Committee will evaluate the Technical Proposals on the basis of their responsiveness to the RFP applying the evaluation criteria, sub-criteria, and point system specified in [Evaluation Criteria](#). Each responsive proposal will be given a technical score. A Proposal will be rejected at this stage if it does not respond to important aspects of the RFP.

EVALUATION OF FINANCIAL PROPOSALS

After the technical evaluation is completed, IDG in consultation with the Evaluation Committee will review the Financial Proposals. The Evaluation Committee will correct any computational errors. When correcting computational errors, in case of discrepancy between a partial amount and the total amount, or between word and figures the former will prevail. In addition to the above corrections, activities and items described in the Technical Proposal but not specifically priced will be assumed to be included in the total

price included in the bid. IDG in consultation with the Evaluation Committee may also consider additional items in the TCO in addition to the costs proposed under this contract.

NEGOTIATIONS

Negotiations will be held virtually by email and/or conference calls. The invited Bidder will, as a pre-requisite for entering negotiations, certify availability of all key and non-key experts proposed as part of the Staffing Plan. Failure in satisfying such requirements may result in IDG proceeding to negotiate with the next-ranked Bidder.

Technical Negotiations. Negotiations will include a discussion of the Technical Proposal, the proposed technical approach and methodology, work plan, organization, management, and staffing plan. IDG in consultation with the Evaluation Committee, and the Bidder will agree on the work plan, logistics, and reporting. These documents as well as the technical proposal will then be incorporated in the Contract. Special attention will be paid to clearly defining the inputs and facilities required from IDG to ensure satisfactory implementation of the assignment. IDG may prepare minutes of negotiations which will be signed by IDG and the Bidder.

Having selected the Bidder on the basis of, among other things, an evaluation of proposed key personnel, defined as those persons whose CVs were submitted for the evaluation of the proposal as part of the Staffing Plan, replacement of these key personnel will be done only per the rules included in Section 5 of this RFP.

Financial Negotiations. IDG in consultation with the Evaluation Committee, and the Bidder will review the detailed cost proposal together and discuss any areas in which IDG has questions or suggested revisions.

Contract Negotiations. Negotiations will conclude with a review of the draft Contract. To complete negotiations IDG and the Bidder will initial the agreed Contract.

AWARD OF CONTRACT

After completing negotiations, IDG will submit a consent to subcontract request to USAID to obtain approval to award the contract to the selected Bidder. Once approved, IDG will promptly notify all Bidders who have submitted proposals of the award. The Bidder is expected to commence the assignment on the date and at the location specified in the final subcontract.

CONFLICT OF INTEREST

Per ADS 302, organizational conflicts of interest generally fall under one of the following:

- i. **Biased Ground Rules:** Where a contractor sets the “ground rules” for a procurement (e.g., writing a procurement’s statement of work, specifications, or performing systems engineering and technical direction for the procurement), which appears to skew the competition in favor of the contractor. This comes into play when a procuring agency contracts for services to develop the terms of a procurement and the contractor or one of its affiliates subsequently competes for implementation of that contract work (see FAR 9.505-2). For example, an organization who was contracted by USAID to design an USAID activity wants to be eligible for the competition to implement the activity.

- ii. **Impaired Objectivity:** Where a contractor's work under a federal contract requires the contractor to evaluate proposals/past performance of itself or a competitor, which calls into question the contractor's ability to render impartial advice to the government (See FAR 9.505-3). For example, an organization contracted by USAID to evaluate an activity or contractor wants to provide services that are requested as a result of the evaluation.
- iii. **Unequal Access to Information:** Where a contractor has access to nonpublic information as part of its performance of a federal contract, which may provide the contractor (or an affiliate) with an unfair competitive advantage in current or future procurements (FAR 9.505-4). For example, an organization contracted by USAID to conduct audits seeks to do consulting work under contract with USAID (sometimes in competition with the firms audited)

The Bidder certifies that will comply FAR Part 9.5 and ADS 302, Organizational Conflict of Interest. The Bidder certifies that is not aware of any information bearing on the existence of any potential organizational conflict of interest. The Bidder further certifies that if the Bidder becomes aware of information bearing on whether a potential conflict may exist, that Bidder shall immediately provide IDG with a disclosure statement describing this information.

FRAUD AND CORRUPTION

IDG does not tolerate fraud, collusion among Bidders, falsified proposals/bids, bribery, or kickbacks. Any firm or individual violating these standards will be disqualified from this procurement, barred from future procurement opportunities, and may be reported to both USAID and the Office of the Inspector General.

7 EVALUATION CRITERIA

IDG may award a contract without discussions with Bidders in accordance with FAR 52.215-1. Therefore, the Bidder's initial proposal should contain the Bidder's best terms from a price and technical standpoint.

IDG and the Evaluation Committee intend to evaluate proposals in accordance with this RFP and award to the responsible Bidder, whose proposal offers the best value, considering both cost and non-cost factors, to IDG, USAID, and the MOF.

The submitted technical information will be scored by a technical Evaluation Committee using the technical criteria shown below. The Evaluation Committee may include industry experts who are not IDG staff, although only as non-voting members.

PROPOSALS' EVALUATION CRITERIA

Proposals will be evaluated according to the criteria presented below, which reflect the requirements of the activity. IDG will score each technical proposal based on the scoring criteria below.

Item	Category	Points
I.	Adequacy and quality of the proposed methodology and time plan in responding to the Terms of Reference	15
II.	Functional, Technology & Security evaluation A. Functional Requirements = 70% B. Non-functional requirements = 30%* * The offer that will contain the recommended technology stack will be considered as an asset and likely to receive a better score in the evaluation process.	45
III.	Specific experience of the Offeror relevant to the assignment A. Overall experience = 70% B. Regional experience = 30%	20
IV.	Key Experts' qualifications and competence for the Assignment <i>Position K-1: Business Analyst = 5points</i> <i>Position K-2: Technical expert/ Solution architect = 5points</i> <i>Position K-3: Securities Management Specialist = 5points</i> <i>Position NK-4: Project Manager = 3points</i> <i>Position NK-5: Test/quality assurance= 2points</i> A. General qualifications (general education, training, and experience) = 10%	20

Item	Category	Points
	<p>B. Adequacy for the Assignment (relevant education, training, experience in the sector/similar assignments) = 80%</p> <p>C. Relevant experience in the region (working level fluency in local language(s)/knowledge of local culture or administrative system, government organization, etc.) = 10%</p>	
Total Score		100

DETERMINATION OF COMPETITIVE RANGE

The competitive range of Bidders with whom discussions may be conducted will be determined by the IDG contract representative pursuant to FAR 15.306 (c). Bidders are advised that, in accordance with FAR 52.215-1, if the contracting representative determines that the number of proposals that would otherwise be in the competitive range exceeds the number at which an efficient competition can be conducted, the contracting representative may limit the number of proposals in the competitive range to the greatest number that will permit an efficient competition among the most highly rated proposals.

SELECTION

In accordance with FAR 52.215-1(f), IDG in consultation with the Evaluation Committee intend to award a contract resulting from this solicitation to the responsible Bidder whose proposal represents the best value after evaluation in accordance with the factors as set forth in this RFP. This procurement utilizes the tradeoff process set forth in FAR 15.101-1. The contract representative shall award the contract to the Bidder whose proposal represents the best value to the IDG, USAID, and the MOF. The contract representative may award to a higher priced Bidder if a determination is made that the higher technical evaluation of that Bidder merits the additional cost/price, and therefore represents the best value. The contract representative may also award to a lower priced Bidder if a determination is made that the technical evaluation score reflects the ability of that Bidder to successfully perform the work at a lower cost/price, and therefore represents the best value.

8 TECHNICAL PROPOSAL – OUTLINE AND TEMPLATES

The full Technical Proposal must include all elements listed below. Templates are provided for selected items in the list. A more detailed description of these items is included in [Proposal Instructions](#).

1. Technical Proposal Submission Letter ([Attachment 1](#))
2. Organization and Methodology Description – 3 pages
3. Past Performance Information ([Attachment 2](#))
4. Executive Summary – 5 pages
5. Description of the Solution’s Technical Approach and Methodology – 5 pages
6. Comments on the RFP – 2 pages
7. Work Plan incl. time plan
8. Response(s) to Functional Requirements ([Attachment 3](#))
9. Response(s) to Non-Functional Requirements ([Attachment 4](#))
10. Response(s) to Implementation Services Requirements ([Attachment 5](#))
11. Initial Management Plan (5 pages) and the Response(s) to Project Management Requirements ([Attachment 6](#))
12. Response(s) to Post-Implementation Requirements ([Attachment 7](#))
13. Staffing Plan and Level of Effort ([Attachment 8](#))
14. Professional Staff CVs ([Attachment 9](#)) – 3 pages per CV
15. Professional Staff Letters of Commitment
16. Risk Management Plan – 5 pages

Attachment I. Technical Proposal Submission Letter

[Location, Date]

To: *[Name and address of Client]*

Dear International Development Group LLC:

We, the undersigned, offer to provide the consulting services for *[Insert title of assignment]* in accordance with your Request for Proposal dated *[Insert Date]* and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal, and a Financial Proposal submitted in separate email submissions.

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

If negotiations are held during the period of validity of the Proposal, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from Contract negotiations.

We undertake, if our Proposal is accepted, to initiate the consulting services related to the assignment not later than the date indicated in Section I.

We understand you are not bound to accept any Proposal you receive. We remain,
Yours sincerely,

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Bidder: _____

Address: _____

Attachment 2: Past Performance Information

Bidders should provide relevant information on past performance examples from a maximum of three (3) relevant assignments implemented in the past five (5) years. The prime Bidder should also include one (1) relevant assignment for each proposed subcontractor (if any subcontractors are proposed). Information should be provided only for those assignments for which the Bidder was legally contracted as a corporation or as one of the major Bidders within a joint venture. Each past performance example should be provided using the template below.

PAST PERFORMANCE REPORT - SHORT FORM	
Contract Information (to be completed by Bidder)	
1. Name of Contracting Entity:	2. Contract No.:
	3. Contract Type:
Dates:	4. Contract value (TEC):
Project Title: Place(s) of Performance: Scope of Work: Skills/Expertise Required:	
6. Problems: (If problems encountered on this contract, explain corrective action taken.)	
7. Contact Reference: (Name, Telephone Number, E-mail address, and Mailing Address)	
8. Bidder:	

Attachment 3. Response(s) to Functional Requirements

Use the following template to explain how the proposed Software Solution will address functional requirements. Detailed description of how the software provider achieves implementation of the particular functionality or what the customization process is and effort associated with it should be included in the column *Detailed Explanation* (this column cannot be left blank; blank replies will receive no credit).

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-1	Retail Investor Account Opening Process			
F-2	Account Opening	The software solution must support the self-service triggered account opening process, including the user interface for account review and management by the Retail Platform operator, as per the Description in Ch. 3.4.13.4.1.1 of this document		
F-3	National Registry Interfaces	The software solution must be integrated with the State Registry of Population using the available APIs, like the Moldovan MCABINET system		
F-4	National Registry Interfaces	The software solution must be able to access and validate personal data in the Account Opening process against the Registry of Natural Persons of Moldova through an online interface		
F-5	National Registry Interfaces	The software solution must be able to validate document data in the Account Opening process against the Moldova State Registry of Population through an online interface		
F-6	Authentication	The software solution must possess a user i.e. Identity management subsystem, that fully integrates with MPASS and must meet the		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
		requirements detailed in the Security section of the requirements		
F-7	Retail Investor Account Management			
F-8	Access to Retail Platform Investor Account Data	All Retail Platform Investor accounts must be managed the Retail Platform operational systems. Software solution must possess the account management functionality listed in Section 3.4.1.3. Retail Platform will have a relevant set of CSD accounts according to the “omnibus account concept”, as per current CSD operations. Software solution must be able to manage and reconcile such account.		
F-9	Visualization of Account Data	Software solution must support visualization of all account data on the Retail Platform		
F-10	Access Account Master Data	System must support the view of account master data		
F-11	Edit Account Master Data	System must support triggering the changes to the account master data such as Name, Address and payments Account		
F-12	Edit Account Master Data	Retail Investor Account Data will be updated using self-service interface; In case of errors relevant system messages will be displayed to the Retail Investor i.e. User		
F-13	Self-service account management	The system must possess user management subsystem and must meet the requirements detailed in the Security section of the requirements		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-14	Account Closure	The system must provide functionality for the Retail Investor to trigger the account closure process including the interface for the Retail Platform compliance officer		
F-15	Retail Investor Portfolio Visualization, Securities Search			
F-16	Portfolio View	All Retail Platform Investor Account Data will reside in the Retail Platform operational systems in line with the architecture diagrams presented in this document narrative.		
F-17	Portfolio View	Software solution must provide a well-designed and intuitive view of the Retail Investor Portfolio. The software solution must retrieve the Retail Investor portfolio data from account through and display all Securities owned by Retail Investor i.e. Retail Investor portfolio through a clear user interface incl. graphical representation of the Portfolio incl the current valuation		
F-18	Portfolio View	The system must display all Securities owned by Retail Investor i.e. Retail Investor historical portfolio view through a clear user interface incl. graphical representation of the Portfolio including the valuations		
F-19	Search Securities	System must provide a mechanism for searching data and documents related to Securities by ISIN, Maturity Period and Maturity Date		
F-20	Search Securities	System must provide a visual display of search result		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-21	Import Securities	Software solution support import of securities and communication with CSD through a CSD standard file adapter-based interface based on SWIFT MT messages		
F-22	Definition of Government Security for the Retail Platform	Software solution must support import or of securities master data received from CSD with all the defined attributes in CSD, such as: <ul style="list-style-type: none"> i. ISIN ii. Term iii. date of maturity iv. coupon v. Interest 		
F-23	Definition of Government Security for the Retail Platform	Software solution must support the securities management for the Retail Platform with at least the following attributes managed: <ul style="list-style-type: none"> i. Current Price ii. Flag to mark “Retail Platform Issue” iii. Minimum order for Retail Investor iv. Maximum order for Retail Investor v. Maximum allowed ownership for Retail Investor vi. Table of Primary Dealers allowed to buy from Retail Investors vii. Flag for automated early redemption viii. Flag for automated sale to Issuer ix. Information on the purpose of the government issue (PDF format). 		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-24	Detailed View of a Security	<p>The software solution must support the display of government securities issues in detail containing at least the following fields in line with Ch. 3.4.2.1:</p> <ul style="list-style-type: none"> i. ISIN ii. Term iii. date of maturity iv. coupon v. Interest vi. Current Price vii. Flag to mark “Retail Platform Issue” viii. Minimum order for Retail Investor ix. Maximum order for Retail Investor x. Maximum allowed ownership for Retail Investor xi. Table of PDs allowed to buy from Retail Investors xii. Flag for automated early redemption xiii. Flag for automated sale to Issuer xiv. Information on the purpose of the GS issue (PDF format). 		
F-25	Initial Sales of Government Securities to Retail Investor Order Process			
F-26	View Government Securities for Retail Platform	The system must support the display of GS issues available for purchase on the retail platform identified by an ISIN, grouped by maturity. Available quantity per ISIN must be displayed		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-27	View Data on Government Securities	The GS data and description listing shall contain all necessary information to satisfy the regulatory requirements.		
F-28	Order entry	System must support the start of the Order Entry process from the View of Available GS screen		
F-29	Order entry	System must support the start of the Order Entry from a Search Result screen, after a search of GS by ISIN or Maturity		
F-30	Order entry	System must provide the Order Entry form with all required data to completed by Retail Investor in order to start the Order Process as described in Ch. 3.4.2.3 of this document		
F-31	Order entry	Order entry screen must contain relevant field-based constraints and field content entry restrictions and display relevant errors to the Retail Investor at entry time		
F-32	Order entry	System will validate the correctness of the Order form of financial instrument order (mandatory content, data type integrity, data integrity entered, etc.) before sending the Order for further processing.		
F-33	Order entry	Only the electronic financial instrument order form that has successfully passed the verification procedure for completion accuracy shall be paid and sent for processing.		
F-34	Order process by Retail Investor	The system must support the Order process as detailed in Ch. 3.4.2.3 of this document"		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-35	Order process by Retail Investor	Quantity in the Order must be validated against minimum and maximum Order value; If either value is outside the defined quantities the system must display the relevant error message to the User		
F-36	Order process by Retail Investor	The system will check for maximum allowed ownership for the particular issue that is being purchased. If the answer is negative, i.e. maximum allowed ownership will be surpassed, the appropriate message should be displayed to the Investor and the Order process restarted		
F-37	Fees and commissions	The software solution must compute and apply the relevant fees and commissions for the Transaction type and Display to the Retail Investor at Order Entry time		
F-38	SALE OF GOVERNMENT SECURITIES FROM RETAIL INVESTORS TO PRIMARY DEALERS			
F-39	Sale to PD	The software solution must support the process as detailed in Ch. 3.4.2.8 of this document		
F-40	EARLY REDEMPTION OF GOVERNMENT SECURITIES FROM RETAIL INVESTORS			

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
	TRIGGERED BY ISSUER/DPD			
F-41	Automated Early redemption	The software solution must support the process as detailed in Ch. 3.4.2.7 of this document		
F-42	COUPON Payment			
F-43	Process of coupon payments	The software solution must support the process as detailed in Ch. 3.4.2.6 / coupon/Interest Payments of this document		
F-44	Calculation of coupon payments	The software solution must support the calculation of coupon payments due on a Retail Investor level		
F-45	Calculation and deduction of tax	The software solution must support the calculation of tax deductions to coupon payments due on a Retail Investor level. Tax deduction must be configurable		
F-46	Generation of payment orders for coupon payments	The software solution must support the generation of payment orders for the coupon payment on the Retail Investor level		
F-47	Price, Pricing formation rules for Retail Platform Issues in CSD			
F-48	Price	All GS available on the Retail Platform must have an associated and valid price at all times		
F-49	Price Rules	Software solution must support price information for each security, All prices, except sale to primary dealers, should rely on relevant regulations		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-50	Price Rules	There must be a mechanism to manually set or override the Price rules and set the price manually. The mechanism must be available only to certain Roles and should support import per ISIN		
F-51	Price Rules	Price rules update the price of the GS available on Retail Platform after business day Cut-Off time		
F-52	Prices and Pricing Data	The pricing information shall include all relevant data points		
F-53	Risk Management Rules for Retail Platform Issues in CSD			
F-54	Risk Management Rules	The system must support rules limiting transactions available to Retail Investors based on configuration parameters such as Minimum/Maximum Order Limit, Maximum Ownership		
F-55	Minimum Order Size	Minimum order size shall be required and configurable on ISIN level		
F-56	Maximum Order Size	Maximum order size shall be required and configurable on ISIN level		
F-57	Securities reservation and reconciliation	Software solution must support that once an Order or a Sales proposal is confirmed the Securities must be reserved/blocked for further sales on the Retail Platform until either Order is settled or cancelled		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-58	Restrictions to market operations based on account status	Software solution must support restrictions to market operations based on account status		
F-59	CSD Processing, Cut-off, End of Day Processing			
F-60	Securities reservation	Once an Order or a Sales proposal is confirmed the Securities must be reserved and blocked for further sales until either Order is settled or cancelled		
F-61	Cut-Off Time Execution	Software solution must support a configurable cut-off time for Order execution must be synchronized with the price updates of the securities		
F-62	Cut-Off Time - Orders	All Orders that are not confirmed and sent to CSD before Retail Platform cut-off time, will be cancelled and a new Order process must be started		
F-63	Cut-Off Time Price Updates	The cut-off time for Order confirmation must be synchronized with cut-off time for Order execution		
F-64	Cut-Off Time Outgoing payment order	Software solution must support a configurable cut-off time for payment order generation that must be synchronized with processes in Treasury		
F-65	Order Payment by Retail Investors			
F-66	MPAY Interface	The system must support integration with MPAY payment services through the MPAY standard interface		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-67	MPAY Interface	The system must support order payment through MPAY service as detailed in Ch. 3.4.5.8		
F-68	Reports, Confirmations, Notifications			
F-69	Order Confirmation	The system must generate an Order Confirmation to Retail Investor and delivery to Mailbox after Order Confirmation and an e-mail Notification to the Retail Investor registered mailbox		
F-70	Transaction Report	The system must generate and send a Transaction Report to Retail Investor and delivery to Mailbox after the Settlement of the Order i.e. transaction execution in CSD and an e-mail Notification to the Retail Investor registered mailbox		
F-71	Account Statement	The system must be able to generate an Account Statement providing the Account Balance and transaction history for a period and delivery to Mailbox		
F-72	Document delivery to Mailbox	The system must support the functionality of delivering documents to Retail Investor Mailbox on the platform and sending Notifications whenever a Message or a Document is delivered to the Mailbox		
F-73	Issuer and CSD reports	Software solution must provide up to 5 relevant reports for Securities Issuers and CSD in order to monitor and evaluate investor behavior		
F-74	Access daily trading reports	Users shall access daily reports on the prices and volumes traded on retail GS		
F-75	INTERFACES			

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-76	Retail Platform Interface to CSD Systems			
F-77	Reading of security master data	Software solution must be able to import from a File interface from CSD DBO systems securities master data and import the securities master data. Specification of the interface on field level will be largely guided by the international standard for securities definition. Frequency and format of the file, which is based on SWIFT MT messages, must be specified in the Analysis phase		
F-78	Reading of security master data	Software solution must be able to receive files using a CSD standard File Adapter and support automation of further processing of such received files for example import in the software solution database		
F-79	Sending confirmed Orders	The system must support the sending of confirmed Orders through SWIFT MT type message and a standard CSD File Adapter		
F-80	Processing of Order confirmations	The system must support the processing of Order confirmations for reconciliation and notification purposes		
F-81	Processing of cancelled Orders	The system must support the processing of Order cancellations for reconciliation and notification purposes		
F-82	Interfaces to eGovernment Systems, MPAY, Banks			

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-83	National Registry Interfaces	The system must support integration with Moldovan State registry of population as per the standard interface of the National Registries		
F-84	MPASS Interface	The system must support MPASS for authentication purposes as per the standard MPASS interface		
F-85	MSIGN Interface	The system must support the government service of electronic signature MSign for purposes of electronic signature of documents according to the standard MSign interface		
F-86	Bank Account Validation Interface	The system must support an interface to banks for the purpose of bank account compliance validation through as detailed in Section 3.4.7 - Interface to Bank Account register		
F-87	Exception Handling			
F-88	Exception Handling	The system must be able to handle exceptions in the account management or account opening process		
F-89	Exception Handling	The system must be able to handle exceptions in the Order process or exceptions due to exception in CSD order settlement process such as:		
F-90	Exception Handling	The system must be able to handle exceptions stemming from exceptions in interface operations		
F-91	Generation, management, and reconciliation of payment orders			

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-92	Payment Orders	The software solution must support the generation of payment orders for outgoing cash payments to Retail Investors. All payment order history must be retained on account level		
F-93	Payment Orders	Software solution must be able to generate Payment orders on individual Retail Account level. Destination account must be extracted from the Retail Investor account master data i.e. the “cash account” of the Retail Investor		
F-94	Payment Orders	Software solution must be able to generate and send a list of payment orders as a file or send individual payment order to the Treasury payment module using a web service		
F-95	Payment Orders	Software solution must support reconciliation of payment orders with actual payments executed		
F-96	SECURITY REQUIREMENTS			
F-97	Data security	The system must guarantee complete maintenance and integrity of the Retail Platform database content.		
F-98	Authentication	The Retail Platform must have an identity and authentication subsystem		
F-99	Authentication	The access to the Retail Platform user interface shall be controlled by an identity and authentication subsystem		
F-100	Authentication	The authentication subsystem must support strong 2 factor authentication without a need for a physical token or specific software to be installed; One-time-password, or OTP provided		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
		by SMS to the mobile phones registered with the Retail Investor account are allowed		
F-I01	Authentication	The authentication subsystem must support strong 2 factor authentication by integration with MPASS		
F-I02	Authentication	The identity and authentication subsystem must support self service functions for password changes and this service must be integrated with Retail Investor e-mail account registered in email master data		
F-I03	Authentication	The access to the functions provided to users shall be provided by authentication visa UserID/Password, MPASS or electronic or mobile signature from an authorized issuer in the Republic of Moldova.		
F-I04	Authentication	All transactions initiated by the Retail Investor i.e. User must be signed thru either the strong authentication subsystem or electronic or signature from an authorized issuer in the Republic of Moldova.		
F-I05	Data security	All the form fields filled in by users shall be subject to mandatory validation by type and eventually the range of admissible values on both the client and the server.		
F-I06	Infrastructure	Retail Platform will be secured for OWASP Top 10 vulnerabilities.		
F-I07	Data security	Retail Platform will ensure the confidentiality of the data sent / received via communication channels.		
F-I08	Audit log	User actions shall be recorded in electronic journals.		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-109	ADMINISTRATION			
F-110	Administration	The system must provide an administrative front end to all configurable elements		
F-111	Administration	The system must provide an administrative front end for system operations		
F-112	Administration	The system must provide an administrative reporting on operations		

Attachment 4. Response(s) to Non-Functional Requirements

Use the following template to explain how the proposed Software Solution will address non-functional requirements. Detailed description of how the software provider achieves implementation of the particular functionality or what the customization process is and effort associated with it should be included in the column *Detailed Explanation* (this column cannot be left blank; blank replies will receive no credit).

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
NF-1	NONFUNCTIONAL REQUIREMENTS	The system must have the capacity to be installed on MCLLOUD and both dedicated virtual servers and virtualized platforms. Software solution shall run on Docker container engine and shall not depend on specific host OS instance. Building container images shall be automated. (refer to the following link for details: https://docs.docker.com/develop) Running in a container-based environment, the application must be elastic, including when adding/removing application container instances (above minimum required instances for HA), changing of configurations and system parameters has no impact on any work in progress, such as any active sessions, requests, etc.		
NF-2	NONFUNCTIONAL REQUIREMENTS	Demonstration of virtualization capability shall be made to the Beneficiary by providing a loadable image of the system that becomes operational with minimum configurations on one of the virtualization solutions available in the market.		
NF-3	NONFUNCTIONAL REQUIREMENTS	The system must be available for access via communication channels of at least 128kbps.		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
NF-4	NONFUNCTIONAL REQUIREMENTS	<p>The Bidder will explicitly indicate in the offer the software platform on which Retail Platform is to be developed and the software platform required for system operation;</p> <p>The solution should be developed using the latest versions of the following technology stack, in line with standards required by the Moldovan public administration IT policies:</p> <ul style="list-style-type: none"> • Programming language is C#. • ORM is Entity Framework Core. • Web framework is ASP.NET. • RDBMS is SQL Server. • Container engine is Docker. • Container orchestration is Kubernetes. • Cache server and session store is SQL Server or Redis. <p>The offer that will contain the recommended technology stack will be considered as an asset and scored accordingly in the evaluation process.</p> <p>The Consultant may propose a technology stack based on usage of JAVA based technology stack, upon the Client's approval. In this regard, it is necessary to prioritize open- source based technologies.</p>		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
F-5	NONFUNCTIONAL REQUIREMENTS	If the software platform dedicated for Retail Platform solution development and operation is based on commercial IT solutions that require license procurement. All the perpetual licenses required for the development and operation of Retail Platform must be delivered with the system. Open-source technologies will be prioritized.		
NF-6	NONFUNCTIONAL REQUIREMENTS	If the software platform for Retail Platform development and operation is based on commercial IT solutions that require licensing, the price the licensing costs if: the number of users has doubled; the number of processing units (CPU or CPU cores) has doubled; the number of application / database server nodes has doubled must be provided.		
NF-7	NONFUNCTIONAL REQUIREMENTS	The system must be able to be virtualized at software-hardware level.		
NF-8	NONFUNCTIONAL REQUIREMENTS	The system must be tolerant to errors by providing support for clustering and fail over for the entire platform and components thereof.		
NF-10	NONFUNCTIONAL REQUIREMENTS	Verification will be made by using a set of (modern) platforms and expecting the performance parameters to be similar or better to those on the reference configuration such as under NF-10.		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
		<p>The IS performance shall be ensured at standard load, that includes:</p> <ul style="list-style-type: none"> - 200 concurrent human users using the web browsers to access the system; - 200 intersystem information requests per minute. <p>The following interface performance criteria shall be met:</p> <ul style="list-style-type: none"> - 95% of all information requests shall be complete within 3 seconds; - 95% of all data manipulation requests shall be complete within 5 seconds; - 95% of all document (output form) preparation requests shall be complete within 5 seconds; - 95% of all workplace pages shall load in 1 second if accessed using the internal local area network. 		
NF-11	NONFUNCTIONAL REQUIREMENTS	WEB explorer will be the generic program product recommended for Retail Platform Front End operation and interaction.		
NF-12	NONFUNCTIONAL REQUIREMENTS	The system must be compatible with at least 2 latest versions of the following Web browsers: MS Edge, Mozilla Firefox, Google Chrome, Safari and Opera.		
NF-13	NONFUNCTIONAL REQUIREMENTS	The system must incorporate a function that will periodically communicate the system normal operating status.		
NF-14	NONFUNCTIONAL REQUIREMENTS	The system must include configurable means of logging. Logs must be readable through a simple interface		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
NF-15	NONFUNCTIONAL REQUIREMENTS	The system must be able to produce at least the following logging levels: info; warning; critical; error.		
NF-16	NONFUNCTIONAL REQUIREMENTS	The successful Bidder will prepare the artifacts to facilitate system administration and operation functions: starting system components; stopping system components; restarting system components, backing up the database, restoring data from the indicated backup, refreshing the operating system memory.		
NF-17	NONFUNCTIONAL REQUIREMENTS	The software solution must operate on TCP/IP networks and specifically HTTPS.		
NF-18	NONFUNCTIONAL REQUIREMENTS	Software solution must be built using an industry standard RDBMS, compliant with non-functional requirements listed in this document and with Moldovan standards for government IT systems. The data model, containing both securities master data, retail investor account master data as well as all relevant order, transactions and historical movement data, must be implemented on the RDBMS.		
NF-19	NONFUNCTIONAL REQUIREMENTS	The successful Bidder will suggest other network services and utilities required for system operation.		
NF-20	NONFUNCTIONAL REQUIREMENTS	The system must integrate the following Moldovan governmental services: MLog shall be used to journal business critical events. The events that are business		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
		<p>critical will be defined at analysis and design stages and must be configurable.</p> <p>MPass shall be used to retrieve contact data and notification preferences of the the platform users.</p> <p>MNotify shall be used for notification services.</p> <p>MPay shall be used for payments processing.</p> <p>MConnect shall be used for data exchange with state registries and information systems.</p> <p>MSign shall be used for electronic signature of digital documents.</p>		
NF-21	NONFUNCTIONAL REQUIREMENTS	<p>The database management systems required by the software solution must be the latest-generation commercial versions agreed by the operating system manufacturer.</p> <p>The solution shall not include any hardware components and upon finalization will be deployed on governmental cloud environment (MCloud).</p>		

ID	Requirement	Description	YES / NO / NA (Not applicable)	Detailed explanation
NF-22	RIGHTS REQUIREMENTS	PLEASE NOTE THAT IDG RETAINS THE DISCRETIONARY RIGHT TO MAKE REQUIREMENTS NF23-NF25 MANDATORY AT THE REQUEST OF THE BENEFICIARY AND POTENTIALLY DISQUALIFY A NON-COMPLIANT BID		
NF-23	RIGHTS REQUIREMENTS	The Developer grants to the Beneficiary the rights to run and use entire solution with all included software components with no constraints on time, location and offered functionality.		
NF-24	RIGHTS REQUIREMENTS	The Beneficiary keeps full rights on data created by the means of this solution.		
NF-25	RIGHTS REQUIREMENTS	The Developer shall grant to the Beneficiary the right to re-distribute the solution. While the Beneficiary does not intend to re-distribute at a massive scale it still envisions the need to transfer the software solution to another state agency due, for example, to potential reorganization. Also, the Beneficiary might get the opportunity to re-deploy the entire solution elsewhere.		

Attachment 5. Response(s) to Implementation Services Requirements

Your response to Implementation Requirements should refer to the following table, explaining how the proposed solution will address each requirement.

D	Requirements	Detailed explanation
I. Analysis and Design		
IS 1.01	<p>Phase objectives:</p> <ol style="list-style-type: none">5. The purpose of this phase is to define and agree the detailed software functional specification including the data model and the interface specification for all the Retail Platform interfaces, as well as the design of all user interface screens6. This phase must build upon designed processes and requirement specifications detailed by this RFP and on the Proposal of the Bidders as the Answer to the RFP7. The successful Bidder will translate the functional requirements documented in the RFP into a workable solution design and formal functional specification document. The successful Bidder will support for the analysis by delivering prototypes of designed features such as screen mock-ups or click through prototypes, and include them in the functional specification.8. NOTE – Instruction: The Bidder should describe the methodology and instruments used for the analysis and design phase and should provide sample of deliverables in the RFP Answer.	

IS 1.02	<p>Main activities:</p> <ol style="list-style-type: none"> 5. Functional requirements analysis <ul style="list-style-type: none"> • Analyze the information about users and their roles. • Review the existing IT and network technical infrastructure and develop proposals / recommendations for architecture and related infrastructure of the Solution, considering keeping under control the complexity of IT infrastructure and reusability of existing resources. 6. Perform detailed solution design, functional specification <ul style="list-style-type: none"> • Define and produce a functional specification that would meet the requirements, given the functional and technical constraints imposed. • Document design specifications for solution functionalities based on the software requirements specification in the RFP (including the link of them to keep clear traceability matrix). • Document detailed specifications of the solution (e.g. interaction interfaces and diagrams, Use Cases, external interface specifications) 7. Document test strategy and test analysis in connection to the acceptance criteria and functional specification. 8. Define the specifications for software solution development, configuration, and integration with other sources of data/applications. <ul style="list-style-type: none"> • Establish the applicable configuration parameters. 	
IS 1.03	<p>Deliverables:</p> <p>At the end of this phase, the following will be delivered:</p> <ol style="list-style-type: none"> 2. Detailed Functional specification of the Retail Platform Software Solution, which must cover both technical and functional aspects, agreed and signed by both parties. The document should include the following information: <ol style="list-style-type: none"> h. Solution Design (diagrams that provide a detailed design of the solution architecture accompanied by a narrative description and a DB schema to support the software solution requirements); i. integration platform of solution components, interfaces (the name that will be integrated with the solution, the type of interface (e.g., supplier, consumer, symmetric), solution and the impact of the failure of the interfaces); j. solution architecture attributes (software technologies, services, components, 	

	<p>portability, capacity, availability and reliability, scalability);</p> <p>k. data architecture (context diagrams, logical data model);</p> <p>l. security architecture (overview of security solution);</p> <p>m. User Interface design including all user screens</p> <p>n. Document on solution configuration/setting up, which will document in detail all the parameters set for all components of the solution.</p> <p>4. High Level Test Plan and test analysis that will link to and cover all above-mentioned specifications and agree the acceptance criteria.</p> <p>5. Other documents according to the best-practice and delivery methodology of the Bidder.</p>	
2. Build phase		
IS 2.01	<p>Phase objectives</p> <p>The purpose of this phase is to build the Retail Platform software solution to transpose the functional specification and therefore the requirements from the RFP, into software application functionalities compliant to the agreed formal Functional Specification signed off in analysis and design phase. The Build Phase must be realized in two parts as detailed below. Part I must cover the sale of government securities to retail investors, coupon payments as well as redemption at maturity process. Build Phase Part II must support the connectivity to CSD, sales to the Primary Dealers, as well as the early redemption and “buy-back window” process.</p>	
IS 2.02	<p>Main activities</p> <p>5. Install the development, and test environments (OS/DB/apps).</p> <p>6. Build the software solution and implement customization, integration, and configuration of the solution, according to specifications of the deliverables accepted in Phase I.</p> <p>7. Document the logical and physical architecture of the application and database servers.</p> <p>8. Test analysis and planning including complete set of test scripts is elaborated and finalized. The Bidder is also advised that for non-functional requirements testing, where applicable (e.g., performance testing, stress testing etc.), an automated test solution, or test scripts should be provided.</p>	
	<p>Deliverables</p> <p>4. Detailed Test Plan incl. test scenarios, test scripts and updated requirements traceability</p>	

IS 2.03	<p>matrix</p> <p>5. Software solution built, configured, and installed in:</p> <ol style="list-style-type: none"> Development environment Test Environment Production Environment <p>NOTE: Software solution must be delivered in two parts. Software solution delivered in Build phase part I must include the following functionalities, i.e. support the following requirements:</p> <p>Minimal Functional Scope of Build Phase I</p> <p>Relevant parts of the Sections:</p> <ul style="list-style-type: none"> 3.3.2.1 3.3.2.2 3.4.2.1 3.4.2.2 3.4.2.3 3.2.2.5 3.4.2.6 3.4.4 3.4.5 3.4.6 3.4.7 3.4.8 <p>Build phase part II must include and support all the Sections of the Requirements.</p> <p>NOTE: Solution must meet the requirements agreed in the above chapters and that should include:</p> <ol style="list-style-type: none"> Functional and non-functional requirements Interfaces specified in the analysis document; Security (user rights, other security configurations); Documentation proving successful Bidder tested the solution according to the Test Plan <p>6. Solution architecture document updated as necessary.</p>	
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3. Testing phase

IS 3.01	<p>Phase objectives:</p> <p>1. The purpose of this phase is to test the quality of all the functional and technical elements of the solution. During this phase, the Bidder should establish the testing method and should prepare testing scripts for all testing activities that will cover the entire software development and implementation lifecycle.</p>	
	<p>NOTE: The Bidder should include the proposed approach and methodology for testing in the technical proposal, which will cover at least the scope, approach, resources, tools, sample of deliverables and schedule of the testing activities. The proposed testing approach should be validated/ agreed with the MOF at project initiation phase. The Bidder should indicate in its technical proposal the software instruments that will be used in order to track and monitor the potential open tickets for defects repair. It is obvious must that MOF representatives need to have access to this application.</p> <p>In case test results are poor (high rate of “failed” tests, more than 3 failed tests per functionality/application module), the entire module should be considered “unaccepted” and sent back for testing purposes.</p>	
IS 3.02	<p>Main activities:</p> <p>7. Testing should be performed according to industry standard practices and the test activities covered should include: test planning, test specifications, test execution, recording of results, checking for test completion.</p> <p>8. All testing to be performed should be appropriately planned, prior to being executed.</p> <p>9. The Bidder should be responsible for documenting and delivering system tests scenarios with logs and results, as a prerequisite for the Retail Platform acceptance process. During system testing, the Retail Platform testing team should participate as an observer (if applicable and/or possible).</p> <p>10. User Acceptance Testing (UAT) should be the final stage of testing. Retail Platform testing team with the Bidder’s support, should perform this activity and the main objective is to ensure that the final system matches the original requirements defined by the business. Retail Platform testing team may choose to do any tests it needs, based on the future business process. Testing should be carried out based on users’ requirements. It should be performed under the responsibility of Retail Platform testing team to enable their determination as to whether accept the</p>	

	<p>system software or not.</p> <p>11. The Bidder should support MOF in Retail Platform testing team efforts to help identify problems and communicate them to the relevant team(s) for resolution.</p> <p>12. The Bidder should ensure the necessary services for all testing activities that will cover at least:</p> <ul style="list-style-type: none"> a. Prepare UAT documentation/ test scenarios, which should be revised by the Retail Platform testing team and business consultants. After the Retail Platform testing team validates the test scenarios, these documents can be used for testing purposes. b. Agree acceptance criteria and testing strategy. c. Conduct acceptance test. d. Documentation of the testing results. e. Agree the issue list by categories. <p>Agree the action plan for solving the issues.</p>	
IS 3.03	<p>Deliverables:</p> <p>4. Acceptance test plan agreed and 'signed-off' by both parties.</p> <p>5. UAT documentation/ test scripts and scenarios agreed and 'signed-off' by both parties.</p> <p>6. Test results documented in a Test Report.</p>	
4. Training		
IS 4.01	<p>Phase objectives:</p> <p>The purpose of this phase is to deliver a comprehensive training plan incl the training of software developers.</p>	
IS 4.02	<p>Main activities:</p> <p>5. The Bidder should conduct staff training to ensure an adequate level of knowledge and skills to efficiently use, manage and maintain the software solution and its source code.</p> <p>6. The Bidder should conduct training sessions for the administration and software maintenance and also for development teams designated by the Beneficiary to ensure a proper level of knowledge and skills as to be able to efficiently use the development tools available within the solution and to design and develop individually new scenarios for data source integrations, validation rules, data model, reports, screen forms etc.</p> <p>Activity should be planned as follows: (1) training for application administration, maintenance,</p>	

	<p>and operation; (2) training for application development. There're distinct objectives for these training activities in terms of capacity building for the Beneficiary.</p> <p>The goal for the (2) is to develop the inhouse capacity to understand the source code and develop changes to system functionality.</p> <p>7. The Bidder should develop and agree with the Beneficiary the following elements of the training component:</p> <ul style="list-style-type: none"> a. Bidder's strategy on training and tutoring; b. Structure and content of the training course and manual for each user category. <p>8. Methodology and tools for assessing and controlling the efficiency and sufficiency of training sessions</p>	
IS 4.03	<p>Deliverables:</p> <p>3. The training course should consist of different types of training, such as:</p> <ul style="list-style-type: none"> a. training courses including hands-on workshops; b. self-learning materials or remote training; and, c. individual consultations. <p>4. The Deliverables of training sessions should comprise:</p> <ul style="list-style-type: none"> a. the training plan; b. Administrator, User and Software Developer Manuals c. testing and assessing questioners; and, 	
5. Go-live and final acceptance		
IS 5.01	<p>System operation in the production environment and final acceptance should be made according to the following scheme:</p> <p>4. Go-live preparation phase; (this must be split into Part I covering the functionality detailed in Build Phase Part I and the functionality detailed in Build Phase Part II)</p> <p>5. Initial operation period;</p> <p>6. Final acceptance.</p>	
IS 5.02	<p>Phase objectives:</p> <p>The purpose of this phase is to facilitate the decision-making process in regard with launching the solution into production.</p>	
	<p>Main activities:</p> <p>2. Review and assess readiness from multiple perspectives:</p> <ul style="list-style-type: none"> a. IT readiness criteria: 	

IS 5.03	<ul style="list-style-type: none"> i. production system fully delivered and functional; ii. configuration document and design specification written and a handover made to the future Service Manager of the software; iii. User manual, Admin manual, Software Development Guide for the application delivered; iv. maintenance process agreed; v. technical and software maintenance training delivered; vi. no critical defects present after moving into productive environment, unless they are known and approved by the Beneficiary; <p>b. Business readiness criteria:</p> <ul style="list-style-type: none"> i. all functionalities required are present in the application; ii. no defects present that are deemed showstopper for the Operation; iii. reports are running and generating the correct output; the data loss possible if the application crashes is not exceeding the RPO; viii. help mechanisms for users are available; ix. user rights implemented according to the specifications; x. IT Administrator and software developer training performed. <p>3. Remediation Plan for defects is developed (defect list may contain defects with severity level 3 and 4).</p> <p>The Bidder should describe the methodology and instruments used for go-live preparation phase and should provide sample of deliverables.</p>	
IS 5.04	<p>Deliverables:</p> <p>4. The solution is ready for launching into production (the solution was installed on production environment; testing was performed and no severity 1 and 2 defects were found).</p> <ul style="list-style-type: none"> • Build Phase I • Build Phase II <p>5. Remediation plan for defects.</p> <p>6. Bidder's self-assessment report of business and technical requirements (this document should cover at least the following information: requirement identifier, solutions associated with the requirement, % of requirement coverage in the application).</p>	

IS 5.05	<p>Phase objectives:</p> <p>4. The purpose of this phase is to extensively test solution behavior in daily operation to determine whether the solution meets the required qualities of capacity and stability.</p> <p>5. This phase should be performed during a minimum period of 22 business days.</p> <p>During this phase, the Retail Platform testing team should draft its own self-assessment report, which will be compared with that provided by the Bidder at the end of Go-live phase.</p>	
IS 5.06	<p>Main activities:</p> <p>9. Provide extensive offsite and if needed onsite support during the entire soak period for bug fixes and performance issues: log inspection and analysis/ problem prevention/ fine tuning.</p> <p>10. For defects identified during soak period, a remediation plan should be agreed.</p> <p>11. Solving of defects identified in remediation plan approved prior to go-live phase and also identified during soak period.</p> <p>12. Providing assistance (help desk support).</p> <p>13. Assistance for active monitoring of system's parameters.</p> <p>14. If needed, the Bidder should provide any additional configuration or customization required in the solution, in order to comply with the formal set of requirements.</p> <p>15. If needed, the Bidder should provide improvement works for system performance with regard to its accessibility and efficiency.</p> <p>16. The Bidder should assist the Beneficiary in system administration/management. During the soak period, the Bidder should ensure full transfer of knowledge to the Beneficiary for proper system administration/management.</p> <p>The Bidder should assist the Beneficiary in providing I and II-line support to the internal users of the Beneficiary and the reporting entities.</p>	
IS 5.07	<p>Deliverables:</p> <p>2. Remediation plan fully executed and all defects removed.</p> <p>Status on remediation plan for defects occurred prior to and during soak period (weekly reports).</p>	
IS 5.08	<p>Acceptance criteria:</p> <p>5. All defects included in remediation plans are fully removed.</p> <p>6. No major bugs identified during soak period.</p> <p>7. No discrepancies found between Retail Platform testing team report and Bidder's</p>	

	<p>operational acceptance readiness declaration. In case discrepancies found, these should be removed prior to final acceptance of soak period.</p> <p>8. An acceptance report should be signed by both parties within the agreed time period.</p>	
IS 5.09	<p>Phase objectives:</p> <p>3. The purpose of this phase is to formalize the complete delivery of system functionalities, documentation and services.</p> <p>4. Such acceptance should be signed after formally closing the soak period for the solution. After this final acceptance, the Beneficiary should approve the final instalment payment and the contract of guarantee will become active.</p>	
IS 5.10	<p>Main activities:</p> <p>5. Review and assess the criteria defined below for final acceptance of the solution.</p> <p>6. Criteria list for solution final acceptance is provided below. Beneficiary should align and detail together with the Bidder the acceptance criteria at project initiation stage.</p> <ol style="list-style-type: none"> Documentation/ deliverables for analysis and design phase provided and accepted by the BENEFICIARY; Documentation/ deliverables for build phase provided and accepted by the BENEFICIARY; Documentation/ deliverables for test phase provided and accepted by the BENEFICIARY; Documentation/ deliverables for soak phase provided and accepted by the BENEFICIARY; Documentation/ deliverables for training phase provided and accepted by the BENEFICIARY; Criteria list for general acceptance is provided below. BENEFICIARY should align and detail together with the Bidder the acceptance criteria at project initiation stage: <p>7. All above-mentioned documentation & deliverables are updated and fully provided by the Bidder.</p> <p>8. The Beneficiary should analyze the documents and deliverables submitted by the Bidder in order to acknowledge the quality requirements.</p> <p>Services included in the tender were fully executed by the Bidder.</p>	

IS 5.11	Deliverables: Criteria list revised and agreed by both parties.	
6. Minimal acceptance criteria and Solution Documentation		
IS 6.01	Phase objectives: The acceptance criteria should be revised and agreed with the Beneficiary at the beginning of the initiation stage. The below mentioned criteria are minimal and should not be subject of elimination. 4. The deliverables of each phase should be provided to the Beneficiary in accordance with the Work Plan which that must take into account the time needed for the beneficiary and Bidder to review and coordinate the deliverables. 5. Deliverables meet the Beneficiary expectations and requirements in terms of clarity, level of detail, structure, content etc. 6. Deliverables are aligned with internal standards of the Bidder and good industry practices. Acceptance documentations for each phase must be formally approved by the Parties.	
IS 6.02	Main activities: For the testing phase, additional minimal acceptance criteria to be included are: 2. All tests should be completed as per agreed test plan and acceptance criteria. The severity of the problems found should be defined according to the criteria below: High (serious problem) Vital or critical functionality for the intended use is missing or failing continuously or repeatedly. Vital or critical functionality for the intended use cannot be activated or fails continuously. Medium (general problem) Important but non-critical or vital for the intended use system functionality is completely missing or failing continuously or repeatedly. Low (minor problem) Certain functions are missing or failing. System works correct but esthetical problems occur. Certain functions work but not completely correct. Issues with severity level 1 and 2 should require immediate bug fixing, and it should be mandatory for testing process to be continued.	
	Deliverables: As deliverables of the project, the Bidder should provide at a minimum the following documentation:	

IS 6.03	<p>3. User, Administration and Software Development manuals. The documents should provide sufficient details, understandable by IT administrators and software developers regarding functionalities, source code, operations. The document should describe the steps and actions to be performed in application and also print screens should be included. The purpose of the document is to represent a basis for learning process and also a reference point for users in case information about operating applications is needed. The user guide should be provided in Romanian.</p> <p>4. System operating instructions – work instructions:</p> <ul style="list-style-type: none"> a. Maintenance instructions/service management troubleshooting guide: this document should include all known errors and solutions associated and should provide sufficient technical details in order to correct potential errors. b. Installation manuals, including system modifications at the level of application and database. The document should cover installation requirements, installation steps and parameters setup for the Beneficiary, post installation tasks, tips & trick, FAQ. c. Documentation relating to application administrators should cover roles, tasks (e.g., back-up, tuning, patching), utilities, logging, tools for developers, troubleshooting guide etc. d. Documentation relating to Solution technical architecture document. Depicting all the software components, interfaces, interactions and any relevant technical information related to changing / adding / removing such components in the solution architecture and also application customization/development (conditions and methodology for solution customization by the Beneficiary). e. Archive & retrieval processes and related documentation. f. Documentation relating to security, covering access control, user management, auditing and monitoring, security reports. g. Documentation relating to system configuration – customized installation guide (if this information is not covered by item 2.b above). <p>Commented source code for all developments and customizations carried out during the project period (e.g., for scripts) as well as the configured and setup development environment project that can be compiled and built.</p> <p>The Consultant shall supply all the source code for system components that are not available as COTS from third parties. The source code shall use package managers for dependencies to 3rd</p>	
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	<p>party libraries. MoF/CTIF should be able to compile source code files into a fully executable system.</p> <p>4. Documentation relating to end users and technical trainings - support materials for end user and technical trainings.</p> <p>Training material and documentation language must be in English or Romanian and agreed with the Beneficiary upfront depending on the purpose of the training.</p>	
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Attachment 6. Response(s) to Project Management Requirements

Your response to Project Management Requirements should refer to the following table, explaining how the proposed solution will address each requirement. Response(s) to this table should be consistent with the rest of the Technical Proposal.

ID	Requirements	Detailed explanation
I. General project management requirements		
PM 1.01	The goal of project management is to provide the necessary skills for project organizing and management to successfully achieve the set objectives. During the project life cycle there should be assured efficient resource planning and allocation, progress control during each stage, quality monitoring and evaluation of the deliverables etc.	
PM 1.02	The Bidder is responsible for implementation project management, as well as for execution of activities and Work Plan mutually agreed with the Beneficiary. The jointly agreed Work Plan will include the necessary activities and deliverables review and coordination process within an agreed timeframe.	
PM 1.03	The Bidder is responsible for identifying and mobilizing the adequate resources to execute the Work Plan activities in its responsibility, at the agreed quality level.	
PM 1.04	The Beneficiary is responsible for all procedural and administrative matters relating to the launching, contracting and financial management of the project (including payments) related to project implementation activities and for technical implementation.	
PM 1.05	A well-known project management methodology or standards (e.g., PRINCE2, PMBOK etc.), or an internal developed methodology, based on these standards or methodologies, should be used for the implementation project and should be appointed specifically.	
PM 1.07	A detailed project organizational chart, covering the key roles and the potential additional roles identified by Bidder should be provided as part of the Initial Project Management Plan included in the Technical Proposal.	

PM 1.08	The Project Manager of the Bidder has the authority and responsibility to coordinate and implement the project so that the objectives are met. Its primary responsibility is to ensure that all required deliverables are timely presented and meet the established quality standards.	
PM 1.09	The Project Manager of the Bidder should ensure a proper management of project risks, quality and progress control of deliverables at every stage of the project. It will also be provided a control of interdependencies between the project components to minimize any risk of project stagnation.	
PM 1.10	The Project Manager of the Bidder should ensure an effective communication within the project, through progress reports with a weekly frequency as well as, end phase report toward Project Manager of the Beneficiary and with a monthly frequency/or if necessary, more often, toward Steering Committee of the Beneficiary. Simultaneously, the Bidder should provide an adequate level of transparency in project management through adequate documentation of all project management aspects.	

Attachment 7. Response(s) to Post-Implementation Requirements

Your response to Post Implementation Requirements should refer to the following table, explaining how the proposed solution will address each requirement. Please comment on how you will deliver MnS 1 through MnS 6.

ID	Requirements	Detailed explanation
MnS 1	As part of the initial contract for the delivery and implementation of the solution, the Bidder should provide a one-month early life support period, which involves the provision of support services and maintenance services, and a 12- month warranty period from the date of final acceptance of the solution, i.e. after the end of the one-month early life support period.	
MnS 2	<p>Maintenance and support services should be provided on basis of a Service Level Agreement, which should be attached to the contract signed between the Parties. The agreement should establish the post-implementation maintenance and support services level, based on the following minimal requirements:</p> <ul style="list-style-type: none"> a. Support days: 5 business days per week b. Support hours: 09:30-15:00, UTC+2 (Chisinau local time) c. Response Time (RT) and Solving time: <p>Classification Response Time Solving Time (ST) the MOF request* (RT)</p> <p><i>Critical</i> 3h 6 h</p> <p><i>High</i> 5 h 1.5 days</p> <p><i>Ordinary</i> 1 day 4 days</p> <p><i>Low</i> 3 days The best effort</p> <p>* Requests for post-implementation maintenance and support services are classified in terms of their importance. The importance is estimated by the impact (inflicted or potential) of the event that has created the need for the request on the quality parameters of the solution operation.</p>	

MnS 3	The Bidder should have a customer support center where all requests will be directed to. The work program and organization of the Support Center should ensure post- implementation maintenance and support services at the level established in this RFP.	
MnS 4	The Support Center should be contacted at least by the following means: e-mail, phone, web etc.	
MnS 5	Maintenance and support services should be provided remotely.	
MnS 6	For the provision of post-implementation maintenance and support services for the one-month early life support period, the Bidder should provide access to a ticketing solution, available through the Internet. The ticketing system should be properly secured.	

Attachment 8. Staffing Plan

Use the template below (Team Composition, Assignments and Qualifications) to describe the role and the responsibility of the staff included in the proposal, also highlighting the relevant experience each member has for the proposed position. For implementing the Software Solution, you should demonstrate you can provide to the Beneficiary a minimum number of key and non-key experts as follows:

- 1 Key Personnel no. 1 – Senior Business analyst
- 2 Key Personnel no. 2 – Solution architect/ Software Development Lead
- 3 Key Personnel no. 3 – Securities Management Specialist
- 4 Non-Key Personnel no. 4 – Project manager
- 5 Non-Key Personnel no. 5 – Test/quality assurance Lead

If you feel the need to add additional resources, you may do so according to your own professional judgment, methods, implementation standards etc. For each of these roles (key experts) one or more persons can be allocated. A person can also cumulate roles, if he/ she meets the criteria for all the envisaged roles and if the workload on the project allows. The quality assurance role has to be specifically allocated to a team member.

DESCRIPTION OF KEY AND NON-KEY EXPERTS:

- 1. Key Personnel no. 1 – Senior Business analyst:** responsible for analysis and design of the processes and functional specifications of the software solution:
 - a. Work experience of at least 10 years as business analyst or software solution consultant in banking software solutions covering areas such as securities management and settlement, payment processing, Know Your Customer, risk management. Any formal business analyst certifications will be considered an advantage;
 - b. Experience in at least 2 implementation projects similar to the solution proposed for the MOF from the securities management and settlement area;
 - c. Deep knowledge of the practices and procedures, mechanism and methodologies regarding securities management and settlement systems, MIFID related software systems and domestic payment processing;
 - d. Operational experience with state securities issuing, management and settlement would be a significant advantage.
 - e. Language proficiency in English is required; Working knowledge Romanian is mandatory.
- 2. Key Personnel no. 2 –Solution architect/ Software Development Lead:** responsible for defining the technical architecture and components installation/configuration of the solution in accordance with established requirements:
 - a. Work experience of at least 5 years as solution architect in transaction management software solutions for the banking or securities management sector;
 - b. Relevant experience in deployment, configuration and customization of the software offered to the MOF from the banking

or the securities sector;

- c. Experience in architecting solution that include SWIFT MT5XX message management and exchange
- d. Relevant Certification would be an advantage;
- e. Language proficiency in English is required; Working knowledge Romanian would be an advantage.

3. Key Personnel no. 3 – Securities Management Specialist: responsible for analyzing the business requirements covering the process of issuing the state securities, making them available on the retail platform, covering market operations for the retail platform as per requirements and covering the securities and coupon settlement processes. The following are the minimum key requirements:

- a. Work experience of at least 10 years in working with government securities or corporate bond management and settlement software solutions;
- b. Relevant experience in using SWIFT MT5XX format messages and software modules that support management and exchange of such SWIFT MT5XX format messages;
- c. Relevant experience in MIFID related projects after January 1, 2017
- d. Relevant Certification(s) would be an advantage;
- e. Language proficiency in English is required; Working knowledge Romanian would be an advantage.

4. Non-Key Personnel no. 4 - Project manager: responsible for effective project management, according to the detailed requirements established in the RFP. Possession of a certificate, such as Program Manager Professional (PMP), PRINCE2 or equivalent would be an advantage;

- a. Work experience of at least 10 years in various banking and securities applicative software project implementations;
- b. Experience in a minimum of 2 completed projects in the last 3 years in the role of project manager for the duration of at least 6 months during the projects;
- c. Experience in a minimum of 1 implementation based on offered solution, in the role of project manager for the duration of the project;
- d. Familiarization with central banks' mission, policies and procedures including bank supervision would be a significant advantage; and,
- e. Language proficiency in English is required; Working knowledge Romanian is mandatory.

5. Non-Key Personnel no. 5 – Test/quality assurance: responsible for defining test scenarios and for establishing the detailed quality criteria and quality assurance of deliverables, organization of test process, validation of result for internal tests and those of the Beneficiary, preparation and implementation of plan for remedying deficiencies

- a. Work experience of at least 10 years in IT;

- b. Minimum 5 years of experience in test management (scenario definition, testing process coordination, issue solving using relevant tools (e.g., Test Director, Bugzilla, JIRA, etc.) and quality assurance role;
- c. CTM – Certified Test Manager certification or equivalent will be considered as an advantage;
- d. Language proficiency in English is required; Working knowledge Romanian would be an advantage.

Attachment 9. Team Composition, Assignments, Qualifications and Level of Effort

Name of Staff and Position Assigned	Position Requirements/ Tasks/ Responsibilities	Relevant Qualifications and Experience	Level of effort* - Base Contract	Level of effort* - Option Period

*Should correspond to the Detailed Budget

Attachment 10. CV Template

[Name]

[Proposed Position]

[Summary of personnel experience] Mr./Mrs. ...

EDUCATION: [Degree], [Field of Study], [University], [Year Graduated]

PROFESSIONAL EXPERIENCE:

Year [Position], [Project if any], [Company name], [Country]

.

LANGUAGE: [Language][Level]

8.1 REFERENCES: [PLEASE SPECIFY THREE REFERENCES]

- [Name], [Position], [Company], [Email], [Phone number]

Attachment 10. FINANCIAL PROPOSAL – OUTLINE AND TEMPLATES

The full Financial Proposal must include all elements listed below. Templates are provided for selected items in the list. A more detailed description of these items is included in [Proposal Instructions](#).

1. Financial Proposal Submission Letter (Attachment 11)
2. Budget Narrative – 8 apages
3. Detailed Budget (Attachment 12)
4. Total Cost of Ownership Narrative
5. Total Cost of Ownership Calculations – please provide the cost of yearly maintenance and support of the software solution for the Years 1 to 5 after Final Acceptance.
6. Evidence of Responsibility (Attachment 13)
7. Section 889 Certification (Attachment 14)

Attachment I I. Financial Proposal Submission Letter

[Location, Date]

To: [Name and address of Client]

Dear International Development Group LLC:

We, the undersigned, offer to provide the consulting services for [Insert title of assignment] in accordance with your Request for Proposal dated [Insert Date] and our Technical Proposal. Our attached Financial Proposal is for the sum of [Insert amount(s) in words and figures], all taxes inclusive.

Our Financial Proposal should be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature [In full and initials]: _____

Name and Title of Signatory: _____

Name of Bidder: _____

Address: _____

Attachment 12. Detailed Budget

Use the Excel attachment to complete the requested budget. The Budget and the Budget Narrative should be separated by the deliverables included in the Base Contract and Option Period. Please note that the Contracting Authority has the right to not exercise the Option Period that includes the Build Phase Part II if the overall project is delayed. Please note that IDG has the right to not exercise the Option Period that includes the Build Phase Part II if Build Phase Part I is delayed. The table below is displayed here for informational purposes only.

Item #	Description	Unit	Quantity	Rate (USD)	Total (USD)
I	Labor				
I.1	ex) Technical Director	ex) Day	ex) 5	ex) \$300	ex) \$1,500
I.2				\$ -	\$ -
I.3				\$ -	\$ -
I.5				\$ -	\$ -
I.6				\$ -	\$ -
I.7				\$ -	\$ -
I.8				\$ -	\$ -
Labor Sub-Total					\$ -
II	Expenses				
2.1	ex) Communication	ex) Per day	ex) 90	ex) \$5	ex) \$450
2.2				\$ -	\$ -
2.3				\$ -	\$ -
2.4				\$ -	\$ -
2.5				\$ -	\$ -
2.6				\$ -	\$ -
2.7				\$ -	\$ -
Expenses Sub-Total					\$ -
Total Estimated Value					\$ -
TOTAL VALUE					\$ -

Attachment I3. Evidence of Responsibility

1. AUTHORIZED NEGOTIATORS

2. ADEQUATE FINANCIAL RESOURCES

[Company Name] has adequate financial resources to perform the contract, or the ability to obtain them.

[expand your certification with brief supporting information, as necessary]

Please briefly describe your relationship with your bank, your line of credit, etc. this should be one sentence. Where does your working capital come from?

Also indicate how the company will be able to obtain adequate financial resources to manage the program.

3. ABILITY TO COMPLY

[Company Name] is able to comply with the required or proposed delivery or performance schedule, taking into consideration all existing commercial and governmental business commitments. [expand your certification with brief supporting information, as necessary]

- Briefly describe the systems your company has in place for project management, administration, financing, monitoring, and reporting. These should be a couple of sentences. Briefly describe the systems your company uses to identify and mitigate risk throughout the life of a project. Confirm that your company complies with reporting requirements.
- Briefly identify the number of projects completed, the amount, and whether or not there were any cost overruns, and whether task orders were completed on time.

Include a statement that the company is able to comply with the proposed delivery or performance schedule, having taken into consideration all existing business commitments, commercial as well as governmental.

4. RECORD OF PERFORMANCE, INTEGRITY, AND BUSINESS ETHICS

[Company Name] has a satisfactory performance record in accordance [expand your certification with brief supporting information, as necessary]

- Confirm that your company has complied with contract requirements in the past adhered to contract schedules, including the administrative aspects of performance
- Confirm your company's record of forecasting and controlling costs f. Confirm that your principals have never been debarred or suspended
- Explain how the company will work with the client to ensure work quality.

[Company Name] has a satisfactory record of integrity and business ethics. [expand your certification with brief supporting information, as necessary]

- Confirm that your company has never been accused of unethical business practices
- Reference your completion of the Representations and Certifications document.
- Identify your company's code of conduct or code of ethics, and briefly describe its contents

5. ORGANIZATION, EXPERIENCE, ACCOUNTING AND OPERATIONAL CONTROLS, AND TECHNICAL SKILLS

[Company Name] has the necessary organization, experience, accounting and operational controls, and

technical skills, or the ability to obtain them (including, as appropriate, such elements as production control procedures, property control systems, quality assurance measures, and safety programs applicable to materials to be produced or services to be performed by the prospective contractor and subcontractors).

[expand your certification with brief supporting information, as necessary]

- Identify the number of projects your company has completed as evidence of its experience.
- Reference your company's past performance record
- Demonstrate that your company has the capacity in accounting and financial capacity to complete the project
- Identify the type of accounting software your company uses and justify the selection of this software. Is it secure and equipped to handle government contracts?

6. EQUIPMENT AND FACILITIES

[Company Name] has the necessary production, construction, and technical equipment and facilities, or the ability to obtain them. [expand your certification with brief supporting information, as necessary]

- Briefly describe your company's building and facility.
- Briefly describe your company's Information Technology systems including hardware, software, and internet connectivity.

7. ELIGIBILITY TO RECEIVE AWARD

[Company Name] is otherwise qualified and eligible to receive an award under applicable laws and regulations. [expand your certification with brief supporting information, as necessary]

- Recertify that neither your company nor any of your principals are presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contract by any Federal agency
- Certify that neither your company nor any of its principals have been convicted of or had a civil judgment rendered against them for commission of fraud, or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) contractor subcontract
- Confirm that neither your company nor any of its principals has been convicted of committing embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property, and are not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with commission of any of the offenses enumerated above.

8. COGNIZANT AUDITOR

9. ORGANIZATION OF FIRM

With the signature below, [Company Name] certifies that the above statements are accurate, complete, and current.

Signature: _____

Name: _____

Title: _____

Date: _____

ATTACHMENT 14: SECTION 889 CERTIFICATION

DATE:

FROM:

TO: International Development Group Advisory Services, LLC

SUBJECT: Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment (Section 889)

FIRM NAME certifies that it is in compliance with the below Federal Acquisition Regulations (FAR).

52.204-24 Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment (Dec 2019)

The Offeror shall not complete the representation in this provision if the Offeror has represented that it “does not provide covered telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument” in the provision at [52.204-26](#), Covered Telecommunications Equipment or Services-Representation, or in paragraph (v) of the provision at [52.212-3](#), Offeror Representations and Certifications-Commercial Items.

(a) *Definitions.* As used in this provision—

“Covered telecommunications equipment or services”, “critical technology”, and “substantial or essential component” have the meanings provided in clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

(b) *Prohibition.* Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. Contractors are not prohibited from providing—

- (1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
- (2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(c) *Procedures.* The Offeror shall review the list of excluded parties in the System for Award Management (SAM) (<https://www.sam.gov>) for entities excluded from receiving federal awards for “covered telecommunications equipment or services”.

(d) *Representation.* The Offeror represents that it. ____ will, ____ will not provide covered.

telecommunications equipment or services to the Government in the performance of any contract, subcontract or other contractual instrument resulting from this solicitation.

(e) *Disclosures.* If the Offeror has represented in paragraph (d) of this provision that it “will” provide covered telecommunications equipment or services”, the Offeror shall provide the following information as part of the offer—

(1) A description of all covered telecommunications equipment and services offered (include brand; model number, such as original equipment manufacturer (OEM) number, manufacturer part number, or wholesaler number; and item description, as applicable).

(2) Explanation of the proposed use of covered telecommunications equipment and services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b) of this provision.

(3) For services, the entity providing the covered telecommunications services (include entity name, unique entity identifier, and Commercial and Government Entity (CAGE) code, if known); and

(4) For equipment, the entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the OEM or a distributor, if known).

The Offeror is required to inform the prime contractor within one (1) business day of identifying any covered equipment/services as required by FAR 52.204-25.

52.204-26 Covered Telecommunications Equipment or Services-Representation (Dec 2019)

(a) *Definitions.* As used in this provision, “covered telecommunications equipment or services” has the meaning provided in the clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

(b) *Procedures.* The Offeror shall review the list of excluded parties in the System for Award Management (SAM) (<https://www.sam.gov>) for entities excluded from receiving federal awards for “covered telecommunications equipment or services”.

(c) *Representation.* The Offeror represents that it. ____ does, ____ does not provide covered.

telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument.

The Offeror is required to inform the prime contractor within one (1) business day of identifying any covered equipment/services as required by FAR 52.204-25.

Name and Title: _____ Signature

