Copia Kenya Microfinance Solution

MVP Business Requirements

KYC

1. The system shall make the information about the user's current KYC information (e.g. transaction, balances) easily accessible.

Rationale: A user may need to review this information before initiating a transaction.

Provisioning

1. The system shall permit a user to register and activate a mobile microfinance systemAccount, whose capabilities and constraints are in alignment with regulation and law, without secondary approval or manual intervention by a third party.

Rationale: Self-registration/activation reduces barriers to financial inclusion and improves ubiquity of mobile payments capabilities.

2. The system should support self-registration via as many channels as supported by the available infrastructure and microfinance system(Native App, SMS, USSD, WhatsApp Chatbot, Website, PWA).

Rationale: More options improve likelihood that the user will complete the sign-up process.

3. When the Copia receives the appropriate self-registration request from a user, the system shall respond with the instructions for completing the registration, including any T&C to complete account registration.

Rationale: The user is unlikely to know the procedure.For example, if by the Native App, the system would respond with a sample template instruction. The user would then enter the requested information per the template instructions and submit it.

4. The system shall enforce minimum data requirements during registration. This should be kept to a minimum. As an example, the minimum required data could be first and last name, date of birth and national ID/alternate ID.

Rationale: We need to define the minimum data needed to identify a unique individual within the system.

5. Upon registration completion, the system shall associate the phone number (whenever available) to the user data provided.

Rationale: The registration/phone number relationship uniquely maps person to phone for a typical microfinance systemaccount where the user has their own SIM (which maps to the phone number).

6. Upon registration completion, the system shall send a notification to the account holder providing account details, terms and conditions, including the account ID and any account privileges.

Rationale: The user must receive clear indication of the registration success. Further, the user should be made aware of any use limits imposed on the account to improve clarity on how the account may or may not be used.

7. The system shall log all completed registration activities including the time of registration start, time of registration completion, phone number and the unique account ID.

Rationale: This information may be needed for troubleshooting if there are problems with registration or for general performance management.

8. The system should provide the ability to transition a customer user to an Agent user.

Rationale: Streamlining Agent registration process will encourage enrollment.

5.0 PIN Management

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1. Upon verification of the submitted registration data, the system shall require the user to create a PIN (i.e., enter and confirm PIN) to complete registration.

Rationale: The PIN is required for security (i.e., access control and activity authorization) of microfinance systemfunctions. In conjunction with the legal agreements with the Copia, the PIN also enables non-repudiation by validating that the microfinance systemaccount holder is authorized to perform subsequent actions.

2. The system shall encrypt the PIN during transmission and when stored.

Rationale: The user provides their PIN to authorize controlled activities, thus it must be protected against disclosure to unauthorized parties.

3. The user PIN shall never be captured in system logs or displayed on any system user interface in clear text or unencrypted form.

Rationale: To ensure non-repudiation, the PIN should never be visible to anyone after assignment.

4. The system must provide a mechanism for the user to reset the PIN without knowledge of the original PIN. Note: This would generally require other user secrets, in-person verification of identity by an authorized representative, or biometric confirmation.

Rationale: People forget or lose PIN numbers, so the system must provide a PIN reset that relies on other information that is available to the legitimate account holder.

6.0 Deprovisioning

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1. The system shall permit a consumer to unregister and deactivate (close) a zero-balance microfinance systemaccount without secondary approval or third-party assistance.

Rationale: There should be no barriers to an individual's discontinuing use of the system.

2. When an account is closed, Copia should retain all records of the account in accordance with law and regulation.

Rationale: Historical records will be required for analysis and reporting even after the account is closed.

3. When an account is closed, the user account holder shall be prevented from making further changes to the account, or performing any financial transactions. It may be desirable to allow users to view the closed account in read-only mode.

Rationale: Closed accounts are historical, and thus the original account holder should be prohibited from further use of the account.

4. The system should allow a user to request closure of an account with a positive balance, thus suspending service, but require a zero-balance state before closing the account.

Rationale: Disables use of the account and freezes the value, providing time to move the balance.

5. The system shall permit an authorized party to lock an account, prohibiting access by the account holder and suspending all financial transaction capability.

Rationale: There will be situations (e.g., fraud investigations) where the account value must be prevented from movement, or where the user should not be permitted access.

6. The system shall prohibit mobile financial transactions to or from the account when the account is suspended, except by an authorized party to transfer out residual value and enable closure.

Rationale: Provides ability to limit use of account except to meet the conditions for closure.

7. The system shall allow a user to reinstate or unlock a suspended or locked account. This process should involve ID verification. This same process would be involved for the user to cash out or transfer the funds to another account.

Rationale: At some point in time, the account holder will require access to their funds through the existing account.

7.0 Account Management

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1. The microfinance systemshall enable account holders to update their account details

Rationale: If updates are not supported, data will quickly grow stale and accounts would likely be abandoned, and even reopened with proper information.

2. The system should allow all notification messages to be configured on or off depending on user preferences.

Rationale: Added flexibility for the user to customize their microfinance systemaccount.

3. The system should enable the user to select the language of their choice from a list in the user interface.

Rationale: Increases usability if the user can select the preferred language.

4. During microfinance systemaccount setup, the system shall automatically establish a default account that is uniquely identified in the context of the payment system (typically by assignment of an account ID).

Rationale: Establishing an account at setup ensures the microfinance systemaccount can be used for financial transactions on conclusion of setup and differentiate between Agent and Customer account privileges.

8.0 Access a Mini-Statement

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1. The microfinance systemaccount shall provide a mini-statement function, displaying details for the account, including current status and historical activity.

Rationale: microfinance systemaccount holders may not have access to paper histories of their accounts. Providing visualization of the account history aids in issue resolution, supports enquiry of past activity, and facilitates tracking of transactions and understanding of fees.

2. The mini-statement shall require the user to enter their PIN prior to viewing.

Rationale: The account balance is private information.

3. The mini-statement should be free for the user to view.

Rationale: Encourages trust in the system.

4. If there is a fee for the mini-statement it shall be presented, and the user must agree before the fee is charged.

Rationale: Encourages trust in the system. However, a fee to access the mini-statement should be avoided if possible.

5. The mini-statement shall display the current balance of the account.

Rationale: The user will likely want to see this data frequently. It is recommended that the balance be displayed at the top of the history.

6. The mini-statement shall display historical transactions in reverse chronological order (i.e., newest to oldest).

Rationale: It is reasonable to assume the user will enquire regarding more recent transactions.

7. The UI shall provide the ability to scroll the display if all returned data is not viewable within the screen area.

Rationale: Some screens will not have the ability to display all of the paged transaction data, thus requiring some method to visualize the obscured off-screen data.

8. At a minimum, each mini-statement historical transaction record should indicate the following:

1. The name of the transacting third party (payee or payer, as appropriate)
2. The transaction amount
3. The transaction date
4. Any fee amount the user paid to execute the described transaction

Rationale: These are the minimum values needed to reasonably describe the transaction. However, the list is not exhaustive.

9. The mini-statement shall include headings for each data element presented.

Rationale: The data may not be intuitive. Providing headings reduces user learning curve and confusion.

8.0 Make a Payment

The microfinance systemshall allow the account holder to make payments of all types of orders (JNC, Normal, LPP, Online, Copia Jamii, Mteja Halisi) by a simple select order type filter. The account should show the user a list of all the orders pending payment once they select the order type. The system should attach these payments to the selected orders/order type.

1. The system shall enable a microfinance systemaccount holder to pay a third party by instructing Copia to transfer value from an account registered with the microfinance systemsystem.

Rationale: This is a core function of the microfinance systemsolution.

2. The user shall lose access and control of funds paid out from their account immediately upon execution of that payment.

Rationale: Needed to ensure validity of the payment system.

3. The microfinance systemaccount should allow the user to make a payment using any available payment channel (e.g., USSD,WhatsApp,Native App, PWA, Website).

Rationale: Improves ability to perform the transaction.

4. The system shall allow the user to designate the intended payee by entering the phone number, alternate ID, specific account number.

Rationale: Providing alternatives allows for better flexibility

5. The system may allow the user to designate the intended payee by selecting the intended payee through the phone's contact list.

Rationale: Using a contact list provides better usability for low-literacy users and prevents key-stroke errors.

6. The system shall enable the payer to select the payee from a list of the 5 most frequent payees, or to designate a different payee.

Rationale: Providing a most-used payee list improves usability, and potentially reduces data entry errors when designating a payee.

7. The system may allow the user to include a short message or note as part of the payment instruction.

Rationale: Larger payees may need detail on why the payment is being sent or to which bill it should be applied.

8. The system shall display the common name of the payee in response to submission of the payee identifier (i.e., phone number, alternate ID, account number) provided prior to completion of the payment.

Rationale: Provides feedback to allow sender to confirm the entered information matches the expected recipient.

9. The system shall enable the payer to abort a payment process up until the user actively confirms the payment, enabling execution.

Rationale: Provides an opportunity to correct errors before committing the payment.

10. The system shall display the transaction details (e.g. recipient, total amount with any added fees) and require the user to confirm the transaction by entering in their PIN.

Rationale: Provides an opportunity to see a summary of the transaction and any fees before confirming the payment.

11. When a payment is sent, the system shall log all details of the transaction (e.g., amount, date and time, payer, payee)

Rationale: Logging enables historical review for issue resolution or later display.

13. The system should support multifactor authentication for transaction authorization in high-risk scenarios (e.g., funds transfer).

Rationale: Phones can be stolen, SIM cards can be cloned, PINs can be observed. By adding a second factor, it is more difficult to perpetrate fraud.

14. The system should be capable of utilizing time-limited, one-time-use passcodes for transaction authorization.

Rationale: Providing a one-time-use code with a limited lifespan enables financial transactions with businesses, or individuals when no lasting relationship is required. It also facilitates fraud prevention in the event a static PIN is compromised.

15. The microfinance systemaccount may enable the user to transfer value in response to a request for payment.

Rationale: Allows payer to respond directly to a bill, invoice, or other request for payment without having to enter all of the payee details.

16. The system may allow the user to schedule a payment to be executed at a future date and time.

Rationale: Providing future payment scheduling improves usability.

17. The system shall allow the user to cancel any payment schedule for a future date/time.

Rationale: Planned payments can change for a variety of reasons.

18. The system shall notify the user when funds have been transferred from the microfinance systemaccount

Rationale: Closes the loop on the user action and provides awareness in the event of misuse.

19. The notification of funds transfer should include payee name, payee ID, amount transferred, any fees paid, and the time and date of transaction completion.

Rationale: This is the minimum information needed to distinguish the payment.

20. The system should provide a notification if the transaction request times out and does not complete. The notification should include: recipient name, amount, date and time of failure, and suggested next step (e.g. "Please try again in a few minutes"). This notification message may also include Copia Customer Care phone number for users to follow-up with question.

Rationale: Let a user know when a payment submission failed so they can try to send again.

10.0 Report Issue

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1. The microfinance systemaccount should allow the holder to report fraudulent payment requests to Copia for review and follow-up action.

Rationale: Improves awareness at a higher level of the ecosystem, and makes the information available to improve fraud detection and prevention tools of the ecosystem partners.

11.0 Copia Pesa

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1. Copia shall send a notification (e.g., SMS message) to the designated beneficiary when a Copia Pesa has been issued for the benefit of the microfinance systemaccount holder.

Rationale: SMS is a typical out-of-band notification method in the expected environment.

2. If the Copia Pesa's effective value reaches zero (e.g., expired, retracted or its value exhausted), the Copia Pesa shall not be displayed in the available list in the microfinance systemaccount.

Rationale: Housekeeping—the Copia Pesa has no value, so there is no reason to clutter the user interface or give the impression that there may be some residual use.

3. The system shall log all Copia Pesa usage, including but not limited to Copia Pesa program type, participant IDs, amounts transacted, date/time of use, and the mode of use.

Rationale: This information may be needed for reporting and dashboard generation.

4.The system shall allow partial use of Copia Pesa value.

Rationale: Allowing for multiple transactions provides more flexibility to the user and promotes more frequent usage of the Copia payment services.

5. The system must subtract the expended value from the total defined Copia Pesa to provide the remaining available value to the beneficiary.

Rationale: Copia Pesa have a starting value that must be reduced with each expenditure to ensure the financial integrity of the Copia Pesa Programs.

6. The user must enter their PIN to approve the Copia Pesa transaction.

Rationale: Provides positive confirmation of intent and control of funds.

7. The microfinance systemaccount shall provide a listing of available Copia Pesa, including their value and expiration date (if applicable) on request of the user.

Rationale: The listing provides the recipient with a means to track Copia Pesa and plan how the value might be utilized.

8. The microfinance systemaccount shall require the user to enter a valid PIN before displaying the Copia Pesa list.

Rationale: The PIN provides an additional level of confidentiality, allowing the payee to reduce awareness of the available value.

9. If no Copia Pesa available, the mobile wallet shall positively state that case.

Rationale: This helps avoid confusion on the part of the user. For example, "Sorry, no Copia Pesa available."

12.0 Deposit Cash (Cash In)

Requirements

1. The microfinance systems olution should allow the user to selectively enable methods for receiving funds from the funds receipt methods available through the Copia account system.

Rationale: The user may choose to limit available options to those they intend to use, reducing training requirements and simplifying use while also reducing opportunities for error.

2. The user shall be notified when funds have been transferred to the microfinance systemaccount.

Rationale: Notification improves awareness.

3. The notification of funds transfer should include sender name, sender ID, amount transferred, and time and date of transaction completion.

Rationale: This data is needed to clearly identify the transfer.

4. The system should provide a mechanism that would allow the recipient to message the sender to respond to notification messages.

Rationale: Nice to have convenience.

5. The system should allow the user delete notification messages with or without review.

Rationale: Enables easier housekeeping if volume of messages is high.

13.0 Withdraw Cash (Cash out)

Requirements

1. The system shall allow an authorized recipient to withdraw cash through Mpesa account / Agent.

Rationale: This is a primary capability of the microfinance systemsolution.

2. The system shall notify the account holder when a cash-out transaction is performed.

Rationale: Notification provides confirmation of the transaction success and awareness in the event the transaction was not initiated by the account holder.

3. The cash-out notification to the account holder shall include the user ID, date/time, amount, authorization method, and any fee amount.

Rationale: This is the minimum data needed to understand the transaction from a historical perspective.

4. The system shall track the amount withdrawn separately from the fee charged as a consumer protection measure.

Rationale: This helps Copia monitor the transaction history

5. If the consumer has linked a biometric profile to their microfinance systemaccount, biometric verification shall be accepted for authorization of account transactions, in lieu of the account holder's mobile device.

Rationale: Biometric verification provides out-of-band authorization for the transaction, and ensures that the authenticating individual is the same person that performed the biometric enrollment. This method is at least as valid as physical control of a mobile device.

14.0 ERP Reporting

Requirements

1. The Copia ERP should have robust information systems that provide accurate current and historical data.

2. The Copia ERP shall provide a search interface enabling authorized users to view historical data.

3. The Copia ERP shall provide the ability to limit the search scope by date/time, transaction type, involved PMS accounts, specific users, amount and location.

4. For basic reporting, the ERP should provide a paged view of the response data from a report request.

5. For basic reporting, the ERP should allow the user to export the data in XML, CSV, PDF and Excel formats.

6. The ERP should provide access control to the lowest unit of data stored (i.e., the field).

7. The ERP shall be able to report the user-level data in a de-identified way.

8. The ERP may provide a configurable reporting interface allowing an administrator to customize the reports to fit their specific reporting requirements.

9. The ERP shall expose transaction detail for reporting to authorized users.

10. The ERP should provide a reporting interface for authorized internal users.

15.0 Microfinance System Solution (MFS) Reporting

Requirements

1. The microfinance systemshould enable the account holder to designate a historical transaction as a favorite.

Rationale: Allowing the account holder to recall designated prior transactions enables easy reauthorization without the need for rekeying.

2. The microfinance systemaccount should retain a list of up to 10 favorite transactions for recall by the account holder.

Rationale: Allowing the account holder to recall designated prior transactions enables easy reauthorization without the need for rekeying.

3. The microfinance systemshould allow the account holder to automatically repeat a favorite transaction.

Rationale: Reduces likelihood of user keying error by automatically populating the payment detail.

4. The microfinance systemshall require the user to enter their PIN in order to repeat a favorite transaction.

Rationale: The user must always provide authorization at the time a payment is executed.

16.0 MicroFinance System Performance

Requirements

1. At a minimum, the system must be able to complete 1,000 message transactions per second.

Rationale: This number may adjust based on the demand for processing services.

2. The system must sustain an average message processing time of no more than 1 second over any 60-minute period.

Rationale: One second for processing is reasonably attainable and should allow for the entire payment transaction process to complete in a timeframe.

3. Server response time for rendering the user interface should be no more than 1 second.

Rationale: Good design practice to ensure server-side work does not consume too much of the overall response time perceived by the end user, making sure that time is available for transmission to and presentation of the end-user interface.

4. The microfinance systemshall support continuation of transaction processes in the event that the transaction is interrupted by a connection loss (e.g., USSD gateway session time-out).

5. If, for any reason, performance is compromised, the system must not allow improper transactions. Depending upon the level of performance degradation, a "system unavailable" message or transaction queuing/prioritization scheme must be in place, to either reduce the volume of transactions to be processed (by stopping the inflow) or manage transactions as gracefully as possible given the volume or state of the system.

Microfinance System

1   Executive Summary

This document details the Functional Specifications for a payments management system for Copia. The intended audience will evaluate and agree on the schedule for the proposed phases.

The Minimal Viable Product (MVP) build should be ready by **31st August 2022**, will have the following key features:

1.   Integrated to Copia channels (SMS, USSD, Native Android App, PWA and POS)

2.   Customer registration (Bulk-registration, agent-based registration, self-registration, and KYC levels)

3.   Cash-in/Out (at agent or via systems)

4.   Send Money (non-proximity – using mobile number as key identifier)

5.   VAS (such as Airtime Top-up)

6.   Agent and Merchant Payments (native Copia account or 3rd party STK)

7.   Inquiries (balance, limits, statement)

8.   Finance & accounting :

-       Automated reconciliations
-       Synchronized accounts with ERP and ancillary systems (delivery, Kitting etc)
-       Auto calculation of different Agent commission/incentives and Customer incentives.
-       Automatic offsetting of outstanding Agent/Customer credit balances for multiple programs e.g JNC, smartphone financing and/or insurance premium deductions e.g turaco insurance
-       Verification of user credit score, identity and tax information.

Copia needs to build a solution that:

●   Integrates into the existing channels (Native App, WhatsApp, USSD, SMS) and other ancillary systems (CRM, Finance & ERP). All verifications, authentication and authorization of transactions will be handled by this platform.
●   Comes with a customer service representative portal to access information and provide support to users. An integration into existing CRM should be considered. This can also be in the form of APIs being exposed for this integration to be done.
●   Comes with an administration and support portal to access customer information, provide support and a process to generate and authorize changes to limit and fees and configuration.
●   Exposes a set of APIs to Copia middleware to enable integration to ancillary systems within the business. debit card transactions. Required APIs can be detailed at implementation stage when the required integrations are ascertained.
●   Properly documented system and architecture (user, platform, operations, and APIs).

2   Introduction

2.1   Purpose

The document identifies the specific capabilities of a Payment Management Solution intended to meet the core needs of Copia Agents, the Customers, and Internal Business Functions, enabling them to make or receive payments and access funds through the Copia ordering channels – Native App, WhatsApp, Website & PWA.

2.2   Intended Audience

Copia Product and Technology Teams are responsible for evaluating, specifying, and operating the Microfinance Systems. A vendor will be selected to configure and implement the system.

2.3   Users of the Microfinance System

The following People starting from the age of 18 are the Target Audience for the Mobile account Solution

- Copia Internal Functions (Product, Technology, Customer Care, Finance)
- Copia Agents
- Copia Customers

2.4   Reference Documents

The Business Requirements Document (BRD) will be used initially. There are other activities and workshops yet to happen that will also feed into this FSD. Other technical documents will be produced out of this functional specification.

2.5   Scope

This document describes the functional and non-functional requirements to implement for MVP. This MVP provides the foundational architecture to support payments across Copia functions and DFS in general. The intent is to fully describe the core payment management solution capabilities envisioned for this project that would enable the Users to send and receive electronic payments with appropriate participants in the Copia payment ecosystem securely and reliably.

Item	In-Scope Items	Details
1	Digital Onboarding	User registers and self-activates a payment management account
2	Cash in	Transfer value to payment management account by depositing cash
3	Cash out	Transfer value from payment management account to receive cash
4	Make peer-to-peer payment	Send money to another consumer payment management account , other account(s) or wallets and bank account(s)
5	Purchase goods or services from a merchant using stored value funds	Utilize the payment management account stored value account as a payment source to purchase goods or

		services
6	Support multiple account(s) per user	Should enable an individual be able to operate several account(s) linked to their profile e.g. savings , loyalty
7	Review pending transactions	List in process activities requiring action by the user to complete the specific business processes
8	Pay bill	Consumer uses payment management account to transfer value to biller, satisfying demand for a presented bill
9	Get mini-statement	Display balance and recent transaction
10	Get full-statement	Ability to show a users full list of transactions carried during a specified time period
11	Agency Banking	Ability to do Cash-in & Cash-out at agent locations
12	Manage account	Update information related to the consumer payment management account account
13	Perform biometric registration	User extensions for biometric authentication and authorization
14	Loan Origination	The platform should be able to allow users to make loan requests .
15	Loan Disbursement	The platform should be able to create and disburse requested loan amounts to various loan accounts
16	Loan Management	The platform should be able to manage the life cycle of a loan from origination, payments and default
17	Credit Limit Definition and Management	Should be enable Copia do limit assignment on the platform for various use cases.
18	Credit Scorecard Implementation and Management	Should be enable Copia configure and mange multiple scorecards on the platform
19	Instant Credit Decisioning	Should be able to provide a credit decision upon inquiry by a user or after provision of various parameters as requested.
20	Support integration with other payment modes	Platform should enable integration with other payment channels e.g. card management systems, international

		money transfers
21	Back-office functionality	To enable configurations of various pricing plans, business rules, reconciliations, fraud management , audit trail function; security features , password management ,
22	User Management	Enable creation of various users based on defined profiles
23	Front Office Functionality	For use by support functions
24	Document Management	Enable users to upload / capture documents shared by users as part of a business process e.g. collateral
25	Bulk Payments	Should enable back office team process bulk transactions via upload through various formats e.g. csv , excel , pdf
26	Reverse Transactions Functionality	Platform should enable users reverse transactions based on certain conditions
25	Reporting	The platform should be able to provide a reporting function that is configurable by users I.e. can allow various users to define reports needed via a graphical user interface

Copia will need the Components & APIs described below (not limited to this) to provide account functionality to the Copia ecosystem:

1.   Company (Hierarchy) Management API

Company management API that helps manage the corporate organization structure and company entity lifecycle. This can be a Bank, a Merchant, or any enterprise organization etc.

2.   User Management API

User Management APIs support the lifecycle of users interacting with the system. These users could be subscribers, internal users, merchants, administration, customer representatives etc. User management includes assigning roles, collecting, and storing user data, and setting account states.

3.   Money Container API

Money Container APIs are used to create links between financials instruments like bank account, SVA, rewards or card and a user or company entity. Money Container API facilitate the collection, validation, and secure storage of payment accounts. Money Containers are used to specify the source and destination of financial transactions.

4.   Finance and Accounting APIs

APIs to manage the movement of money between two parties. These transactions include merchant payments, Person to Person transfers (P2P), international remittances, bill payment, deposit/withdraw money to and from the banks, refund etc. Financial transactions support payment instructions on accounts to be hosted on this platform.

5.   Rules Engine

The capability to modify transactions in-flight to apply additional processing steps such as AML and Fraud checks, to apply velocities and limits to transactions, and to add Fees or Taxes to transactions. Rules are configurable by program, transaction type, user, and account.

6.   3rd Party Connectors

A connector framework to integrate 3rd party partners.

7.   Authentication and Authorization APIs

End users who interact with this platform must first successfully authenticate themselves on the platform. Authentication is to be supported through a series of configurable steps, each requiring additional information to identify the user.

A robust API framework is thus expected, and software development kits and documentation are expected. for the development and integration of end-user mobile and web applications. Open APIs should be supported, and these will be consumed by external systems such as Issuer or Payment processor.

3 Deliverables

3.1 High Level Deliverables

The following is a high-level description of the items to be delivered in the MVP by the vendor. The items described include Documentation, User Interfaces, and daily processing files:

Document	Description
UI/UX Design Document	All the UX and design will be jointly approved based on the discussions to be held during discovery and the iterations based on the lockdown of functions. (This is in relation to the vendor's front end functionalities. Should we feel it can look better , there should be provisions for the same. All else e.g. UI/UX for the Copia apps , ussd etc will be on us and we will just agree on the workflows ….)
APIs Specs for Integration	Documentation of all APIs delivered by either party, including format, field description and response messages.

Requirement	Feature	Comments
FSD	Agent account	App Supported on: - Android (where applicable)
	Customer account	Web Browser: - (where applicable)
	Company Accounts	USSD - USSD (long code and short codes) WhatsApp - (where applicable)
	APIs for Integration	Request and Response format along with the error Codes would be shared later in the API document.
	Admin & Support Portal	Web Browser App (from: IE 9.0; Firefox 10; Safari 5.0; Opera 8.01; Netscape 8.0)
	Fee Configuration Process	Fee configuration and structure for different processes
	Output for Reconciliation and Settlement	Output for reconciliation and SVA account management

The following use cases are in scope for Delivery in MVP. This section will be expanded to include use cases and services for later phases of the roadmap, which will be finalized along the way.

1.   Customer / Agent Layer

Use Case	Native Android	Progressive Web	USSD/SMS
Customer self-registration	Y	Y	N
Customer activation	Y	Y	Y
Customer login/out	Y	Y	Y (pin)
Forgot Password	Y	Y	N
Customer PIN/Password Change	Y	Y	Y
Account Inquiries (balance, statement)	Y	Y	Y
Profile Management	Y	Y	N
P2P on/off net; Cash in/out	Y	Y	Y
Loan Origination	Y	Y	Y
Loan Disbursement	Y	Y	Y
Loan Management	Y	Y	Y
Credit limit Implementation and Management	Y	Y	Y
Scorecard Implementation and Management	Y	Y	Y
Instant Credit Decisioning	Y	Y	Y

2.   Back Office

Use Case	Web; fixed IP
Reports (Financial, Operational, Regulatory)	Y
System Configuration (Fees, limits)	Y
Fraud and Risk Monitoring	Y
Account Enquiries (balance, statement)	Y
Interface Credentials: PIN/Password Change	Y
Profile Management & Configuration (KYC)	Y
Initiate Load/Unload e value	Y
Customer Management (Create, Lookup, Delete)	Y
Reconciliations	Y

* Admin and Support Portal segregation of functions description is to be updated as the project evolves.

3.2 Functional Requirements

Find attached the functionality

Copia Kenya
Payment Manageme

3.2.1 Agent and Customer account Apps

Agents and Customers will have the ability to do transactions on their accounts using their current access channels (PWA, Native App, Web, USSD & SMS). The following are functions are expected – and should allow for registration, activation, and movement of funds within the platform.

1.   Register at an Agent
2.   Bulk registration by Copia
3.   Self-registration
4.   Activate account
5.   Credentials Criteria
6.   KYC Limits
7.   Login/out
8.   Account balance
9.   Transaction History
10.   Profile Management
11.   Transfers on-net (within Copia ecosystem)
12.   Transfers off-net (with 3rd party partners)
13.   Cash-in/out
14.   Bulk payments into customer/agent accounts

3.2.2 Integration APIs for Integrations

During the Discovery sessions the team is to capture End-To-End processes for the various use cases. This will help get the request and response formats for the exchange of APIs. This will have to be signed off:
1.   Middleware login, security, and session management
2.   Load/Unload store value account (SVA) management

3.2.3 Admin and Support Portal

1.   Admin and support portal
2.   Transaction correction and reversals
3.   Fee configuration management
4.   Reconciliations and settlements
5.   Report & Analytics dashboards
6.   Notifications

3.3   Non-Functional Requirement

Key Features:

•   Multi-tenancy support for hosting Copia operating countries

•   Extendable to valued added services (offers, loyalty...) provided with mCommerce and Digital Financial Services

•   Integration with 3rd party platforms.

•   Maintaining security, audit, and logging system activities throughout the core platform

•   Optional sandbox feature is available to expedite testing and integration.

1.1.a.   **1. Solution Hosting Environment**

Hosting

Copia will identify an appropriate hosting facility, ordinarily AWS. The hosting facility will cover install and operate the facilities, network, server and storage hardware, and virtualization services.

1.1.b.   **2. Information Security Requirements**

Public Key Infrastructure (PKI) as a layer of security on information and data transfer in the environments. User Information security would follow standards for the following

1.   User Password Policy (E.g. length, alphanumeric, uppercase)
2.   Account Credentials
3.   Device Mapping
4.   Password retrieval process
5.   Login Attempts
6.   Limits
7.   Two factor authentication (optional)

1.1.c.   **3. Network Data Flow**

Configure network to minimize unnecessary or unintended data flow.

Authorized servers initiating outbound connections are configured to route connection requests through dedicated servers configured for Network Address Translation (NAT). NAT servers maintain host Firewalls (IP Tables) that allow only pinpoint connections of authorized servers connecting to authorized 3rd party service endpoints on designated ports and protocols.

1.1.d.   **4. Business Continuity/Recoverability**

Copia will maintain and operate the Primary and Backup processing centers to ensure service availability, platform stability and scalability, and program security.

1.1.e.   **5. Operations, System Monitoring Data Requirements**

Copia will manage user access to servers, applications, and services through environment configuration and user management.

1.1.f.   **6. Schedule Requirements**

Milestone	Duration	Start Date
Discovery		
Requirements gathering, definitions and designs		
Development and Integration		
Hosting Deployment		
QA Testing including DR Testing		
Live Launch		

1.1.g.   **7. Training Requirements**

Vendor shall provide training on the Software, Hosted Platform, Functional Operations and any other Service for support and maintenance purposes.

The vendor is to provide the source code to Copia for support and maintenance.

1.1.h.   **8. AML, Regulatory and Compliance Requirements**

KYC/AML checks provisions should be in place. APIs will be required to check customers on registration and during every financial transaction.

1.1.i.   **9. Volume/Capacity Requirements**

Individual transaction response times vary based on the amount of database interaction, amount of data accessed, and interactions with auxiliary services e.g. MNO Middleware. The vendor is expected to provide SLA on this. Confirmation is needed on number of users, transaction rates, concurrent transactions with platform response and the response times.

1.1.j.   **10. Support Requirements**

Vendor shall provide support services on the Software, Hosted platform and any other service as requested by Copia. This can be firmed up on award of contract.

1.1.k.   **11. Project Management Requirements**

The following documents would be required from the vendor for managing this project.

- Status Dashboard
- Issues Log
- Change Request Log

- Risk Log

1.1.l. **12. Documentation Requirements**

Vendor shall provide the following documentation for this project

2. Project Approach Document
3. Functional Specification Document
4. Transaction Flow Diagrams
5. Integration Document (Integration to Odoo ERP hosted on the cloud)
6. Project Management Plan
7. Test Plans, System Integration Plan, Performance Test
8. Training Plan
9. API Documentation
10. Operations and Maintenance Manual
11. Service Level Support Plan

11.1.a. **13. Development Operations**

Copia will provide a pre-production testing environment hosted out of the Amazon AWS service center. This environment should host the appropriate version of the platform that will be used for the production program and will have restricted access to only authorized Copia development networks.

Copia QA resources should have access to the testing environment with full access to the API and services for testing purposes. Performance and Load Testing will require coordination between vendor and Copia to ensure environment stability.

12. **4. Assumptions, Dependencies & Constraints**

12.1. **4.1 Assumptions**

12.2. **4.2 Dependencies**

The current list of dependencies is based on assumptions that may require the dependency mapping to be updated and agreed throughout the project lifecycle.

Dependency	Comments

12.3. **4.3 Constraints**

This section would be updated during the lifecycle of the project.

13. **5. Addendums**

The following use cases are in scope for Delivery in MVP

Use Cases	Customer Apps		Middleware	Web App	Process
	Android	Web + PWA	APIs	Admin & Support	
Customer Self-Registration	YES	YES	NO	NO	NO
Customer Activation	YES	YES	NO	NO	NO
Resend Activation Code	YES	YES	NO	NO	NO
Customer Login/Logout	YES	YES	NO	NO	NO
Forgot Password	YES	YES	NO	NO	NO
Customer Pin/Password Change	YES	YES	NO	NO	NO
Mobile account Account Balance	YES	YES	NO	NO	NO
Mobile account Transaction history	YES	YES	NO	NO	NO
Profile Management	YES	YES	NO	NO	NO
Transfer On Net	YES	YES	NO	NO	NO
Transfer Off Net	YES	YES	NO	NO	NO
Program SVA Load & Unload Funds	NO	NO	YES	NO	NO
Program SVA Withdraw and Report	NO	NO	NO	YES	NO
Support User Lookup	NO	NO	NO	YES	NO
Support User Password Management	NO	NO	NO	YES	NO
Customer Lookup	NO	NO	NO	YES	NO
Validate KYC	NO	NO	NO	YES	NO
Reset PIN/Password for Customer	NO	NO	NO	YES	NO
Resend Activation code for Customer	NO	NO	NO	YES	NO
Transaction Support	NO	NO	NO	YES	NO
Suspend-Unsuspend User	NO	NO	NO	YES	NO
Close Customer Account	NO	NO	NO	YES	NO
Fees Configuration	NO	NO	NO	NO	YES
Limits	NO	NO	NO	NO	YES

* Minimum expected functionality