TERMS OF REFERENCE

Development of ZHI Asset Management System

Contents

1.Background

Zimbabwe Health Interventions (ZHI) invites suitable qualified service providers for the submission of proposals for a comprehensive Asset management system. The required service provider will be responsible for the development of an asset management system and maintenance.

Objective

We seek the services of an efficient Asset Management System that will maximize operational efficiency and ensure all ZHI assets are properly and accurately tracked from acquisition, allocation, receipt, storage, issuance, retrieval, depreciation, and subsequent disposal, loss and damage of assets, among others. This system will enable the organization to establish the current assets, their location and condition. The records for each asset will be updated in real-time, ensuring control while preventing loss or misappropriation. The inventory management system should be able to optimize asset useful life, generate reports in real-time, in addition to providing asset verification and tagging services. Given the above context, the organization is seeking to procure an asset management system that will ensure all assets are properly recorded in the Asset Register, depreciation amounts are accurately captured, and assets that require disposal can be easily identified. Each person should be able to view all allocated assets. User-friendliness is essential for maximizing staff efficiency and usage by numerous and several types of users. The proposed system will help ZHI to increase accountability and transparency, establish and update control measures, file accurate accounting reports and financial statements based on updated information.

Scope of Work

The contracted company will be required to:

a) Develop an asset management system with unlimited assets storage capacity.

b) Generate bar-coded fixed asset tags with ZHI logo on aluminum foil tags. System to link with barcoding system.

c) Establish the physical existence / ascertain the location of assets recorded in ZHI's asset book.

d) Establish the condition of the assets (obsolete, spoilt or lost)

e) Track asset movement

f) Track asset maintenance

g) Track project specific assets

Deliverables

Development of an Asset Management System for ZHI with the following functionalities:

- Asset should be project based.
- System should be able to upload attachments.
- Every update should feed into the master record.
- Generating various asset reports when needed
- Confirmation of asset numbers to tally with the asset register.
- Establishing the condition of the assets (obsolete, spoilt or lost)
- Listing of all assets by description and asset code as per the asset register
- Verification of the asset register against the actual physical inventory and identify normal assets, number of assets tagged, obsolete/spoilt assets and lost assets.
- Generate a full report of updated asset register with any recommendations, actions and decisions required.

i. Importation of all existing asset lists to the system

ii. Provide maintenance service for the software on call basis till the end of the contract by:
    - Maintaining the software as required.
    - Implementing the necessary change request (i.e., develop / customize / upgrade etc.) the software.
    - Quarterly check-up for regular maintenance.
    - Training & Administration

Brief description of the system

The asset management information system shall be a web-based application. The design of the system shall be done in a way that the users can access the system through a desktop computer, tablet device and via the browsers of smartphones (responsive user interface design). The System shall allow users to collect the required data and enter the system through the web pages. Data entry shall be available as manual entry or by using the bar-code readers. The system shall allow the tracking of the movement of assets through the locations, manage the status of the assets, track the repair and maintenance path of the assets as well as their depreciation. It shall allow for the analysis of the collected data through the reports of the system. The system shall implement user management functions, which allow adding, modifying or deleting users from the system; and assign the roles and permissions for the users. The System shall be user-friendly and easy to learn. It shall also implement system management

functions such as backup and restoration of the database for a selected period. It shall implement a dictionary[1] management module allowing the system administrator to manage the system-related dictionaries in a centralized way. It shall also implement system management functions such as backup and restoration of the database for a selected period.

Sub-systems

The System shall include, at least, the following sub-systems:

1. Staff management module
2. Data entry sub-system
3. Reporting sub-system
4. System management
5. User management module
6. Dictionary management module

2 Functional specifications

The system shall provide a user-friendly interface for collecting the asset-related information and data entry. the next chapters define the characteristics/actions/functions for managing the data entry and the movement of assets.

2.1 Asset attributes

This chapter describes the data entry fields, which are mandatory for the assets. Mandatory fields for non-expendable assets include:

N	Attribute (field) name	Description
1	Asset tag / barcode	This field describes the part number of the asset. This field is notmandatory for expendable assets.
2	Serial number	The serial number is the number given by the HNEC after the acquisition of the asset. The serial number can be combined withthe barcode put on the asset
3	Chassis Number	This field describes the chassis number of the asset e.g., vehicle.
4	Model	This field describes the model of the asset.
5	Status	This field describes the latest status of the asset. Asset Status management is described below.
6	Category	This field describes the category of the asset.

[1] System dictionaries are the special tables of asset databases which contain the lists describing assets and other items of the system. Examples of dictionaries are the asset categories, user roles, list of field offices, asset types,asset statuses, etc. System dictionaries play an important role for the

7	Sub-category	This field describes the sub-category of the asset in the category.This is another way of grouping the asset for further reporting purposes.
8	Name	This is an optional field which allows assigning a name to the asset.
9	Supplier	This field describes the supplier of the asset.
10	Purchase date	This field describes the date when the asset was acquired.
11	Purchase cost	The cost of the asset defined by the purchase date.
12	Batch	This field describes the asset purchase batch numbers.
13	Asset Project Name	This field allows assigning a Project name to the asset.
14	Duration of warranty	This field will describe the coverage and warranty period of theasset, as specified by the supplier.
15	Depreciation duration	This field describes the duration of the depreciation by years.
16	Location	This field shall mention the location of the first storage. This fieldshall allow mentioning multiple elements of the information, including location, building and room.
17	Asset Owner	The system shall allow selecting the owner of the assets, which describes the responsible agent (office/person) of the asset. In casea field office has several people potentially eligible for the owner role, then the system shall filter these people after selecting the Locating field.
18	Quantity	This field is only for expendable assets. For the non-expendableassets, it always has a value 1.
19	Notes	This is the text field that allows for providing additional information or notes on the asset.
20	Created by	The user who created the record. Filled by the system.
21	Create date	Date of the creation of the record. Filled by the system.
22	Last updated by	The user who last updated the record. Filled by the system.
23	Last update date	Date of the last update made on the record. Filled by the system.

The values for the fields including Model, Status, Category, Sub-category, Supplier, Location and Asset owner will be populated earlier during the initialization of the system by the system administrator, and additional values can be added, or existing values amended. Information Technology assets will have more technical details for each asset.

2.2 Asset status

An asset can be in different statuses. The following table describes the various status that the assets may belong to. The status of the assets may change during data entry and subsequent management operations,

which are described in the next chapter.

#	Status	Description
1	Stored	This status describes the assets, which were added to the stores but not deployed yet.
2	Ready for Issuance	This status describes the assets, which were added to the store and ready to be deployed
3	In Transit	An asset is given this status after moving from the stores to the user location.
4	Honored	An asset is given this status after insurer has honored the claim.
5	Not Honored	An asset is given this status after insurer has not honored the claim.
6	Issued	An asset is given this status after moving from the stores to the user/location.
7	Lost/damaged	The asset is in a lost or damaged state.
8	Under maintenance	Asset get this status when sent to maintenance
9.	Depreciated	The system automatically assigns this status when the depreciation period for the asset expires with a nominal value.
10	Broken	The asset in the disrepair state.
11	Returned	This is when the asset is returned to the warehouse after some time of the usage
12.	Written-off	This is when an asset is given zero value. After this operation, the asset shall not be counted against the inventory.

2.3. Staff and non-staff management module

The system shall implement a staff management module identifying to whom the assets are assigned. The module shall allow the system administrator to add, update or delete the information about the staff/non-staff, including his/her name, project, department, contract start and expiry date, field office, etc. This information shall allow the system to track the current staff and non-staff at ZHI and prevent assigning the assets to non-working staff and cadres.

Suppliers should also consider the options to select the platform which implements HR Management features and consider data interoperability with external platforms. Using this separate HR management module can speed up the process of managing the staff and link the HR data with the asset management features. However, the vendor is only required to develop appropriate features to capture staff and cadres' data. The vendor is not required to develop a full-fledged HR module as this is not part of the scope of this RFP.

2.4 Data entry sub-system and asset operations

Data entry sub-system shall support the following actions against the assets. Throughout these operations, the System shall track the history of the operations and changes made against the assets.

New acquisition

The system shall allow the registration of the assets in the stores. New acquisition is taken up once an asset is added to the national stores. This is when the main asset record is created. The user who has permission to add an asset to the stores shall be able to invoke this function. After invoking the operation, the new record about the asset is created in the database and marked with the status "Stored". Stored assets cannot be issued the destination (for use) until the status is changed to "Ready for Issuance" by the stores administrator of the system. The new acquisition can be invoked by the users who have "system administrator" or "stores administrator" roles. The user shall be able to select from the status of the asset - either "Stored" or "Ready for Issuance".

a) The user shall provide all the necessary information (serial, tag, etc.) identifying the asset.

b) The user should be able to register the asset by using the bar-code reader, which has a function to read the individual code on the asset if it exists.

Further described functions are maintenance functions which create status records for the existing asset records. The system shall implement all the necessary interfaces and functions for performing all the described operations.

New issuance

The System shall allow issuance of the assets from the stores to the destination. The user who has permission shall be able to select the asset from the existing list in the stores and perform "New issuance" of the asset. "New issuance" function changes the status of the asset from "Ready for Issuance" / "In transit" to "Issued". During this operation, the user shall be able to provide the issuance date, the user/department/project who will receive the asset. New issuance can be invoked by a user who has "system administrator" or "stores administrator" roles.

Asset Acknowledgment

The System shall allow the asset acknowledgement by the user who received the asset and sending notifications to the user's supervisor. The issuer should get the asset acknowledgment confirmation which should be updated in the asset register. For non-staff (cadres), acknowledgment will be done through the district team leads who and the cadres' acknowledgments should be tied to each asset through uploading. Hence the system should be able to attach documents e.g., acknowledgment forms.

**System should notify users based on set timeline criteria on asset acknowledgment submissions.

Transfer

The System shall allow the transfer of the assets from office to office or one location to another. For this operation, theuser shall be able to select only the assets in the "Ready for Issuance" status and select the destination to where/whom the asset shall be transferred. During this operation, the date of the transfer shall be provided. During the transfer operation, the status of the asset is changed to "In-transit".Transfer can be invoked by a user who has a "system administrator", "stores administrator" or "field asset admin" roles.

Transfers are necessitated because of the following conditions.

- New Allocation
- Return (due to repair, replacement, resignation)
- Replacements

Scenarios

1. Issuer (**Asset Manager ()**->Driver (**transit (), Status (In transit**)- District Admin (**Asset Manager ()**-> Intended Asset holder (**User ()**)	In all the stages of acknowledgement, asset holds the temporary name of the person in possession of the assets in the master asset register. **Asset holder holds a ZHI email (Staff)
2. Issuer (**Asset Manager ()**->Driver (**transit (), Status (In transit**))- District Admin (A**sset Manager ()**-> Intended Asset holder (**NON-STAFF) -** through District Manager.	In all the stages of acknowledgement, asset holds the temporary name of the person in possession of the assets in the master asset register. **Asset holder does not have a ZHI email (non-staff/ cadre)

Asset transfer from the district should also be able to go through the same process until it gets back to the stores if an asset is transferred back to the National Office.
Admin from the districts (**Asset Manager**) -> Driver -> IT Personal (IT stores).

Bulk issuance

The System shall allow the bulk issuance of the assets. The user who has relevant permission shall be able to create bulk issuance operation to issue more than one asset to the destination. Bulk issuance operation sets the status of the assets to "Issued" state. Bulk issuance can be invoked by a user who has "system administrator" or "stores administrator" roles. This will apply for non-staff/cadre's asset allocations and the individual asset acknowledgments will need to be tied to each asset when signed.

This function is to be done by the staff member (Team Lead) who oversees the respective non-staff group.

**All types of issue functions (including the options for transferring the asset) should have the mandatory option to acknowledge receipt through the approved process flow ->user->supervisor and or an option to upload a signed acknowledgment form (for non-staff)

Loss or damage

The System shall allow the report of loss or damage operation. In this case, all staff/users shall have permission to report loss/damage incidents and for non-ZHI staff this will be done by a user (team lead) who has relevant permission to record loss or damage to the asset. Users shall create a record which describes the lost or damaged asset. Also, the cause of the damage or loss shall be provided, and an additional information box shall be available for providing relevant information. The loss and damage process must be accompanied by an option to upload a scanned copy of the paper report and other supporting documents such as the police report. A summary of the report could be providedin the prior mentioned additional information box. After this operation, the asset receives the status "Lost" or "Damaged" as the case may be. The assets with these statuses cannot be transferred to anotherlocation. Loss or damage operation can be implemented against assets belonging to any status. Loss/damaged assets will require an insurance action or maintenance action based on the asset administrators' decision and the status should be changed accordingly.

**Incident (nature) classes - Damaged, Stolen, Lost, not returned, Malfunction

Insurance tracking

The System shall allow the tracking of asset insurance from acquisition. Loss and damaged assets insurance claims updates will also need to be captured and tracked. Statuses such as honored/not honored should be updated based on the insurer's decision and a comment section to capture more insurance information.

Write-off

The System shall allow the write-off of assets that are fully depreciated/broken/lost. The write-off function should have project based multi-user approval (requestor->reviewer->approver). Write-off shall remove the asset from the asset register. In this case, the user who has permission to perform this operation shall be able to select the asset from the list and initiate and perform a write-off operation with the mention of relevant dates. When required, the system shall also allow the write-off of partially depreciated assets, broken or whose depreciation period has not yet expired.

The Write-off feature should have a mandatory option to upload a scanned copy of approval from the Donor. Some assets should not be written off without evidence of this physical approval.

Write-off assets should be kept in the system for the audit processes. In order to keep track of active assets separated from the write off assets, it is preferable to keep the write off assets in a different tableof the database. System should track the life span of the asset.

Asset maintenance

For assets that need repair and/or maintenance. The system shall allow the creation of the temporary status “Maintenance”. In this case, the user shall select the asset and create a maintenance record whichdescribes the problem, type of repairs and/or maintenance required, cost, start and end dates of the service and the service provider and its address/location. This operation can be done either by the users who have the “system administrator” or “field asset administrator” roles. After the repairs and/or maintenance,the system shall allow changing of the status to “Issued” or "Stored" as the case may be. If the asset is not fixed during repairs and/or maintenance, the system shall also allow the change of asset status to “Broken”. The system shall also support a status change of the assets from broken to written-off by following the write-off procedures described above. The system shall also support a status change of the assets from broken to written-off by following the write-off procedure

General operations

Beside the specific functions describing the movement of the asset, the System shall support the following operations:

a) User search of the assets using all possible asset attributes. Search functions shall be available in all pages that contain the list of assets. Edit the asset fields. This operation allows users to adjust or correct asset fields, e.g., in case of any misspelling, or wrong data were provided.

b) Delete the asset. This operation shall be available only for the system administrator. If this operation is required, the system shall warn the user about the consequences of losing the history of the asset once the relevant record is deleted. It is preferable to keep the deleted assets in the separate table. Deletion of the asset requires the approval of 2 users - the Head of Operations Director and system administrator.

c) The system should have the ability to issue a staff asset status and clearance form. The clearance form shall be issued once staff has handed over all assets under his/her name and shall be mandatory for final payment release and clearance for separation from the organisation.

Reporting sub-system

The system shall implement a reporting module. The reporting module shall be accessed through a special link in the web interface of the system. All reports shall be available for extracting into Excel or PDF files. The system shall implement the following standard reports:

#	Report type	Description
1	Accessory Report	This report provides information about the inventory items available in the stores
2	Custom Asset Report	This report shall have all the asset fields available to serve as a filter criterion. The user shall select the fields which are to be displayed in the report
3	Asset distribution per staff	This report shall allow the aggregation of the distributed assets per staff.

4	Depreciation Report	This special depreciation reports shall cover assets that are subject to depreciation and current status of the depreciation/current value.
5	Asset Maintenance Report	This report shall provide users with timely information on assetsundergoing repairs and /or maintenance
6	Asset Write-off Report	This report shall provide users with information regarding assetsthat were written-off
7	Asset Loss/Damage Report	This report shall provide users with information regarding lost ordamaged assets
8	Deleted asset report	This report shall provide users with information regarding thedeleted records of assets

Report generation module shall have a rich search and filtering module, which allows filtering of the records before the generation of the report. Filtering options shall include all available fields of the assets and assigned staff.

Report generation module shall allow the user to select the aggregation options. For each report, the user shall be able to select the aggregation category (per staff, per field office, per asset category, per user and, etc.)

User management sub-system

The System shall implement user and permissions management module, which allows creating, editing,deleting users of the system, and managing their permissions.

The system shall have the ability to create a group of users. The system shall have the following pre-defined group of users available in the system.

a) System administrator. This group of users have all the necessary permissions to perform any operation in the system.

b) *Stores administrator*. This group of users can perform stores operations like new acquisition, distribution, bulk issuance, etc.

c) Field (including NO) asset administrator. Field asset administrator shall be able to accept assets issued to his field office. He shall be able to report the maintenance, transfer and loss and/or damage, as well.Evaluation of accountability for loss or damage shall be the responsibility of NO. Field asset administrator has user permission over assets assigned to his Field Office only. Final Loss or Damage Report shall be approved by NO – and supported by documentary evidence for NO approval, and only after this approval can the process be considered as valid.

d) Reporting user. This user has no rights to perform data entry operations and can only search for asset information and/or prepare reports.

When creating the user, The System shall collect the following information:

#	Field name	Description
1	Username	Full name of the user (First Name / Last Name)
2	Position	This field should be a selected item. The System shall allow for a dictionaryof the positions to be maintained for system users
3	Phone	Landline and mobile phone numbers
4	E-mail	This field shall serve as a unique identifier for the user. User must enterthe system via e-mail and the password (only ZHI email account)
5	Employmen tplace	This field should be a selected item. The system shall allow for a dictionaryof the field offices (and the places where the system is available) to be maintained for system users (Start and expiry date of the contract)

When the administrator first creates a user in the system, the confirmation email shall be sent to the user. The email shall contain the activation link and the temporary password for the user. Users must activate the account via the link and change password after the first login. The function of confirmation email shall be optional and configurable through the system management interface.

The user management module shall allow the performance of the following actions:

#	Function	Description
1	User login	The System shall have a front page for the user login. Front page shall contain the email and password fields, as well as the links for the, forgot password action described below.
2	User forgot password	Through this action, the user can request a password change. The system shall provide a separate window where the user shall enter his email address. If the email exists in the system, the user will receive an email with the password reset link.
3	User Reset password	With the password reset link described above, the user shall enter the web page where he/she can provide and confirm a new password. The password shall have minimum length and complexity. requirements.

4	List and search users	The System shall provide an interface for the administrator to list all the users of the system, to search the user(s) by name, contact details, employment place, and position.
5	Register user	Any user of the system with administrative privileges can register a user from the system. This administrator shall enter the user-related information as described in the table for the user attributes. After filling in all the required fields, the system shall create a user and send the activation email to the user with the email entered by the administrator.
6	Assign permission	The administrator of the system shall be able to grant and revoke permission to the user of the system. The permission assignment and revoke details should be stored in the database for audit purposes
7	Block/suspend user	The administrator shall have the possibility to block/suspend the users of the system temporarily. In which case, the user will not be able to enter the system. On the other hand, the user record willnot be deleted from the system.
8	Unblock/reinstate user	With this function, the administrator shall be able to unblock the user, which was blocked/suspended before. After unblocking the user, this user will regain the ability to enter the system and perform the actions authorized by the administrator. The user must reset the password once reinstated by the administrator.
9	Deactivate user	The administrator shall be able to deactivate a user from the system. Bythis action, all access and operational rights of the user will be withdrawn. The user should not be able to login or request a password reset. The system should prevent deletion of the user if the user has an active asset custody record.
10	Audit user actions	The System shall provide an interface for the administrator to view the user activity log. This means that the system shall record all the actions performed by the user and store these in a special table.

2.5 System management sub-system

System management shall allow the performance of the following functions:

a) *Backup of the system database:* The System shall provide a user-friendly interface for the systemadministrators to be able to back up the system database manually. The System shall provide thespecial link in the administrative menu of the system to access the system backup web page. TheSystem administrator shall be able to activate the

backup operation and select the location where the database backup will be stored. The system shall be designed in a way that it shall continue to run and serve the requests from the users of the system during the backup operationof the system. The system shall support the creation of automatic backups at defined intervals.

b) *Management of data dictionaries*: System dictionaries are the classifiers for the attributes of the system objects. The dictionaries shall allow the classification of objects into various groups to facilitate further reporting needs. The system shall implement the following catalogues:

- Asset categories. This catalogue shall include the following basic records[5]:
  - Communication (mobile phones, smartphone, etc.)
  - Transport (sedans, minibus, etc.)
  - IT equipment (laptops, desktops, etc.)
  - Visual Aids (cameras, projector, etc.)
  - Electrical (UPS, etc.)
  - Furniture (desks, chairs, cabinets, fixtures, etc.)
  - Security (HH metal detectors, CCTV cameras, etc.)
- Asset sub-categories
  - Items will be defined later during the preparatory stage.
- Companies
  - Items will be defined later during the preparatory stage.
- Suppliers
  - Items will be defined later during the preparatory stage.
- Locations / Field offices
  - Items will be defined later during the preparatory stage.
- Asset statuses
  - Stored
  - Ready for issuance
  - Issued
  - Lost/damaged.
  - Under repair and/or maintenance
  - Depreciated
  - Written-off.
  - Returned (Unused)

The system administrator shall be able to select a dictionary for the further standard

operations to apply against the concrete dictionary. Data entry personnel shall not have access to the catalogue management module. Dictionary management module shall allow the standard data entry functions including:

- List the dictionary items. (If the dictionary has more than 20 items in the list, the system shall implement paging functionality for viewing the dictionary records)
- Search the dictionary item by name. Each dictionary shall have a possibility to search item(s) by name.
- Add new dictionary item. The system shall prevent the double entry in case the item with the same name already exists in the database.
- Edit the dictionary item. The system shall prevent the double entry in case the item with the same name already exists in the database.
- Delete dictionary item. The system shall prevent the deletion of the record if the record has already been used by any of the other related records in the database.

3. Technical specifications

All dictionaries shall have an option to edit the name field and add additional categories when required. [5]The available dictionary values shall be populated during the initialization of the system and the system's administration should be able to add and amend dictionary content.

The technical characteristics of the system include:

a) The system shall be accessible for the users only through the HTTPS protocol.

b) The system shall use the open-source code, preferably Python.

c) The system shall preferable based on the existing off the shelf platform, which has a modular structure.

d) The system shall use open-source database platforms like MySQL, PostgreSQL or MariaDB

e) The system shall be accessible through modern browsers, particularly Google Chrome

f) The system shall be user-friendly with access through desktop computers, tablet devices andsmartphones (responsive UI).

g) The system shall allow the use of barcode readers to scan the 2D and 3D barcodes on the assets.

3.1 *Documentation Requirements*

The Supplier shall develop the following documents and submit to ZHI as a component of thescope of this assignment:

a) *Administrator's manual:* this document will offer all the guidelines and instructions necessary for the management of the system. The content shall include system and data storage; restoration of the system and database; launch and disconnection of the system; security management of the users and data; minutes of data communication and applicable procedures;and maintenance of the log table.

b) *Technical design documents and source code*: this document should present the System in an extensive manner so that the programmer/analyst possessing the relevant knowledge shall be able to use it and the software codes to recreate the system from scratch. It incorporates user operation diagrams; program process logics; table description; all data components; descriptionof data; and interface specifications (input and output). The source code shall be available in one of the public source code repositories like GitHub, Bitbucket, Azure DevOps, etc. with detailed code documentation/description.

c) *Guidelines on system* installation and system maintenance (backup, restore) management.

d) *User's manual:* the content of the user's manual should be explicit and understandable in the presentation of all the processes available to the users. In particular, the logic of data entry standard operations includes create, edit, delete, search and show the lists. The sentence describes that system operator shall have option to select the concrete dictionary from the menu after which the system shall open theweb page for the user to perform any of the operation mentioned above. Report generation should be explained on a perceivable and step-by-step basis for each of the modules. The manual shall contain screenshots of important steps/operations.

All user's manuals should be presented in English versions. Technical guidelines should be compiled in English. The manuals must be submitted as deliverable in both printed

and electronic versions. Electronic versions should be open to modification in cases when there is a need to revise system environment, functional properties, and operational properties.

3.2. Training requirements

The supplier shall organize training courses for the system administrators and end-users of the system. The supplier shall prepare the presentation materials and other documents for the training. There is a need for two types of training.

a) **Administrator training**. During this training, the Supplier shall perform a two-day training course for the ZHI IT Department to transfer the ownership of the system administration. The topics of this training shall include the installation, operation, and maintenance of the system. As part of the training, a copy of the source code with code explanation should be provided to the ZHI IT department.

b) **User training**. During this training, the supplier shall train the end-users in the use of the system (3 days). The user manual shall be used as a primary source for the training.

3.3. Testing Requirements

During the preparation stage, the Supplier shall develop a **system testing and acceptance plan** and submit the same for ZHI approval. Testing and acceptance plan shall include testing scenarios and testing environment.

Supplier shall install the testing environment for the ZHI. The testing environment shall be available during the design, development, testing and post-implementation stages. The testing environment shall use a separate database and separate endpoint. Supplier shall provide all the necessary credentials for the ZHI to perform all the operations on the testing environment. During UAT, all the final functional requirements shall be tested with feed-back to the Supplier. To conduct the UAT, the Supplier shall develop functional requirement checklists for UAT in agreement with the ZHI. The ZHI staff shall be trained in the use of these checklists to fill them in during the testing. UAT shall be conducted in cycles. After each testing cycle, the filled checklists from the Client staff

shall be collected and analyzed by the Supplier. In the case of revealed discrepancy between functional requirements specifications and UAT testing, the Supplier shall identify the revealed bugs andappropriately fix them. In the following cycle, the revealed bugs need to be re-tested by the ZHI,and the next cycle checklist will be provided to the Supplier. This process shall go on until all the requirements in the checklists are tested and identified as correct by the ZHI and approved in compliance with the final functional requirements.

3.4. Hardware requirements

The contractor shall develop and discuss the hardware requirements for the system. During the preparatory stage (described later) detailed hardware specifications of the hardware components (server, barcode readers, printers, etc.) shall be developed and provided to ZHI for approval. Based on these specifications, ZHI will conduct a separate procurement process to gather all the required hardware components for the system. The contractor shall install and configure the hardware and train the ZHI on how to use the peripheral hardware components such as barcode readers and printers.

3.5. Technical Support

After the official handover of the software, the supplier shall provide 06 months' technical support for the system. Within this support period, the software updates and software releases should be providedto correct the errors and bugs of the system.

ZHI can report all the revealed error cases and bugs to the Supplier in written form (email), thoroughly describing the nature and timing of the encountered inconsistency.

Technical support terms need to be considered during the servicing periods including but not limitedto:

a) The technical support for the software is valid only when the System is installed and implemented in the hardware with required technical specifications of the system in agreementboth with the ZHI and the Supplier.

b) Errors are software defects which cause incorrect functions of the software package. The types of errors described including but not limited to:

- Not all entered data is saved in the database.

- Database calculation fields do not provide the precise value due errors in calculation formula.
- Not all operations are processed in a single transaction.
- Reports do not expose the expected results.
- Software package generates messages of unsolvable problems and exits without usercommands.
- The response of the request is delayed, and this delay is not connected with the databaseoperations.

c) Bugs are those system operation conditions which do not cause data completeness defects or reports calculation errors.

d) Technical support service conditions consist of the following provisions:

- If the revealed errors and bugs impact the main functions of the software (it is impossible toenter data, or data entry is done with errors, reports are not generated correctly or receivedwithin the reporting period), then the problem should be solved within 48hours after the ZHI's notification is received.
- All the errors and bugs which are categorised as non-critical by the ZHI should be collectedin a new software release and submitted to the ZHI within 5 working days.

4. Schedule and deliverables

4.1. Deliverables

During the bidding stage, the Supplier shall submit an initial plan of the Project Implementation withinits proposal outlining the requirements. After signing the contract, the supplier, within the first phase (1 month) of the implementation, shall develop an action plan based upon the initial plan outlining all the phases of the implementation. The Plan shall include the following documents to be approved by the ZHI:

- Detailed implementation schedule and activity plan
- Testing and acceptance plan

- Installation and implementation plan
- Training plan
- Support and warranty plan.

4.2. Reporting

- The contractor is expected to liaise/interact/collaborate with the technical staff of the ZHI for the enquiry of any required information and everyday communication.
- The contractor shall provide weekly progress reports during the development stage.
- The Contractor shall provide the means for the ZHI IT staff to be able to access and evaluate the results of the work progress (nightly builds, source codes, testing environment).

4.3. Price and schedule of payments

The bid price should cover the total price to carry out the whole development, development space, maintenance including but not limited to:

i. Initial capital cost, set up costs and licencing fees (# of licences included and cost for additio nal if applicable
ii. Reoccurring licencing and/or maintenance fees
iii. Support/Helpdesk costs
iv. Implementation and/or consulting fees
v. Hosting costs (if applicable)
vi. If applicable, please break down the costs of different modules.

Prices must include VAT.

The schedule of the payment is described in the table below:[2]

Deliverables	Payment percentage

[2] Payment schedule for the system should follow information on the table above.

The following documents are submitted and approved [3] ▪ Detailed implementation schedule and activity plan ▪ Testing and acceptance plan ▪ Installation and implementation plan ▪ Training plan ▪ Support plan ▪ Hardware requirements	05%
Submission of a detailed report and client certification for the development of software and system is ready for initial testing	25%
Users and System Administration Training and the manuals developed, submitted and approved by client	20%
Report on User acceptance testing and final implementation of the system.	40%
Completion of technical Support	10%

5. Criteria for Evaluation of the Software

The criteria for evaluation of the Proposals may include but is not limited to: ZHI will use the following criteria in evaluating the proposal received.

a) System Features and Functionality – Overall system approach and functionality is considered in the evaluation process, including fulfilling the requirements of the Scope of Work, ease of use, intuitive and flexible user interface, administration, and reporting tools.
b) Experience and Expertise – Experience, expertise, and qualifications of the firm and key personnel in providing required services including the financial stability of the firm. Previous experience with similar or like services as outlined in this RFP is also considered.
c) Implementation, Training and Ongoing Support – The implementation process, data conversion capabilities, approach to project management and ongoing customer support options and availability (online chat, phone, email, etc.) and availability will be considered.
d) Additional Value-Add Services Offered – Other related products or services offered that add value to this solicitation.
e) Licensing flexibility – Should ZHI wish to expand its use of the software; we advantage s oftware in our scoring that can accommodate growth at a low cost. Changes to software l icensing should be easy to change.
f) Proven Industry track record – References and widespread use and acceptance in the ind ustry. Past contracts indicating client name, duration of contract, value of contract, and brief description of outputs, delivered by the bidder in the past three years.

[3] Required documents to be submitted by all bidders.

These criteria will be used to determine the best overall value to ZHI as any other criteria that may become evident during the evaluation process.

6. Duration of Assignment

The assignment is expected to take a maximum period of 3 months.

7. Submission of Proposals

ZHI is now inviting qualified firms and consultants to submit their **Proposals** including a cover letter on or before 16/08/23 to the following email address: procurement@zhi.co.zw Email: with **the** subject: "Asset Management System: RFP.ZHI.SHARED.2023.08.127**".**

The submissions should include the following documents:

a) Technical proposal
b) Copies of certificate of registration/incorporation (for firms)
c) Names and contacts of Directors (for firms)
d) Company profile (for firms)
e) Curriculum Vitae of proposed project team members
f) Tax registration certificates (Income Tax and VAT in case of firms)
g) Full contact details (physical address, telephone and fax numbers and e-mail addresses)
h) Contact person and contact details of Project Lead/Manager (for firms)
i) Past contracts indicating client name, duration of contract, value of contract, and brief description of outputs, delivered by the bidder in the past three years.
j) Three references and contacts of three referees (on Company letterheads)
k) Certificates of completion of previous work
l) Cost of implementing the assignment including the cancellation clauses.

Note: All configurations including login credentials remain the property of ZHI