

# **FUNCTIONAL SPECIFICATION DOCUMENT VENDOR MANAGEMENT TOOLS**

**Version 1.0**

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## **REVISION HISTORY**

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1.0	30/12/2021	Haminullah	-		Initial Document

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# 1. Introduction

## 1.1. Background of Request

### 1.1.1. Functionality

Vendor Management Tools provide data and service related to the vendor database. The data & services consists of:

- Vendor general information
- Legal documents
- Vendor performance
- Contract database
- Spending database
- AML, B&L, and BIR Checking
- Sustainability

### 1.1.2. Design Constraint

N/A

## 1.2. Scope of Work

The new tools will save and proceed all vendor's information. The key objectives are to achieve the following:

- To have a new tool that will be able to perform below actions:
  - Automatically saved document which submitted by vendors via email (maker checker applied)
  - Send automatic reminder to all related parties (VM/user/SM) when the documents is close to maturity
  - Automatically update MCR (contract) and vendor database
  - Automatically Integrate vendor, contract and spending information
  - Automatically shows the Due Dil check result
- To support Business to reduce TAT of the due diligence and update database process
- To follow DBS standard security requirements (to be advised by IT)
- Maintenance of the application

### Detail Customer Business Requirement

NO	Requirement	Mandatory	Parameterized
<b>Vendor Management (vendor Database and Performance)</b>			
1	Login (Internal User) User id and password required	M	Y
2	Identify Scan Documentation submitted via email  System must have the capabilities to do the following a. Identify scan document submitted via email b. Automatically update the vendor database and dashboard c. Save the submitted document in respective folder	M	Y
3	Automatic update  System must have the capabilities to update list of submitted document to vendor database and dashboard	M	Y
4	Maker and checker required  Workflow for maker checker : VM staff → VM manager/Head of Procurement	M	Y

5	Vendor ID System must have the capabilities to list the vendor based on specific vendor ID (may refer to PSAP or Coupa vendor ID)	M	Y
6	Notification and reminder  System automatically send notification to VM/User/ Buyer for any close to maturity document	M	Y
7	List of email beneficiary for survey purposes  User able to set list of email beneficiary based on certain parameter (contract owner, PO report)	M	Y
8	Survey and Email Content User able to modify the survey and email content including the template	M	Y
9	Schedule survey template User able to set: <ul style="list-style-type: none"><li>- Schedule of survey to contract owner or PO requester</li><li>- Reminder for survey via email</li></ul>	M	Y
10	Survey Automatic update  System must have the capabilities to do the following <ul style="list-style-type: none"><li>a. update the survey result in the vendor database and dashboard</li><li>b. save the survey result on the respective folder</li></ul>	M	Y
11	Dashboard  System must have the capabilities to provide dashboard showing the summary of vendor information	M	Y
12	Report System to generated report that cover below information: <ul style="list-style-type: none"><li>- Vendor ID</li><li>- List of Documentation and its expiry date</li><li>- List of AML checking result and its expiry date</li></ul>	M	Y

	<ul style="list-style-type: none"> <li>- List of BL checking result and its expiry date</li> <li>- List of Vendor Spending, Year of Spending and Category</li> <li>- List of BIR checking result and its expiry date (for vendor with spending &gt; IDR 2bio)</li> <li>- List of Survey performance result</li> <li>- List of Vendor's Agreement</li> </ul> <p>User able to modify report content and the report integrated to Tableau</p>		
<b>Contract Database</b>			
1	Login (Internal User) User id and password required	M	Y
2	Upload the MCR report (Ms Excel)  Systems must have the capabilities/feature to upload MCR Report	M	Y
3	Identify info in MCR Report  Systems must have the capabilities to identify certain required information in the MCR to be integrated into vendor database :  a. Vendor ID b. Vendor Name c. Contract Name d. Contract est amount e. Contract start date f. Contract end date g. Contract Owner Name h. SM Name  The required information can be modified as per Bank needs	M	Y
4	Automatic update  System must have the capabilities to update several info in list of MCR (contract database) to vendor database and dashboard	M	Y
5	Notification and reminder  System automatically send notification to User, Buyer and CM for any close to maturity document	M	Y

<b>Spending Database</b>			
1	Login (Internal User) User id and password required	M	Y
2.	Upload the Transfer Data/Coupa report (Ms Excel) Systems must have the capabilities/feature to upload Transfer Data/Coupa Report	M	Y
3.	Identify info in Spending Report  Systems must have the capabilities to identify certain required information in the Coupa/Transfer Data Report to be integrated into vendor database :  a. Vendor ID b. Vendor Name c. Year d. Spending  The required information can be modified as per Bank needs and integrated to Tableau	M	Y
4	Automatic update  System must have the capabilities to update list of Vendor's Spending to vendor database and dashboard based on certain link (e.g Vendor ID)	M	Y
<b>AML checking</b>			
1	Login (Internal User) User id and password required	M	Y
2	List of email beneficiary for form submission purposes  User able to set list of email beneficiary based on certain parameter (PES email) and attach the checklist (Ms Excel) in the system	M	Y
3	Identify Documentation submitted via email  System must have the capabilities to do the following: a. Identify document (Ms Excel) submitted via email b. automatically updates the AML checking result (by capturing result in certain column)	M	Y

	on Ms Excel) to vendor database and dashboard		
4	<p>Checklist Automatic update</p> <p>System must have the capabilities to update the AML checking result in the vendor database and dashboard</p>	M	Y
<b>Sustainability</b>			
1	<p>Login (Internal User)</p> <p>User id and password required</p>	M	Y
2	<p>List of email beneficiary for Checklist purposes</p> <p>User able to set list of email beneficiary based on certain parameter (vendor PIC email) and attach the checklist (Ms Excel) in the system</p>	M	Y
3	<p>Identify Documentation submitted via email</p> <p>System must have the capabilities to identify document submitted via email (Ms Excel) and automatically update the checklist score to vendor database and dashboard</p>	M	Y
4	<p>Schedule checklist template issuance</p> <p>User able to set:</p> <ul style="list-style-type: none"> <li>- Schedule of checklist issuance to vendor</li> <li>- Reminder for checklist issuance via email</li> </ul>	M	Y
5	<p>Checklist Automatic update</p> <p>System must have the capabilities to update the checklist score in the vendor database and dashboard</p>	M	Y

## **1.3. Dependent/Related Projects**

Table 1 Dependent / Related Projects

No	Project Name	Dependency Description	Reference Documents Name

## 2. System Overview

Vendor Management Tools is a web based application which provide data & services related to vendor database. The vendor database consists of the following data:

- Vendor general information
- Legal documents
- Vendor performance
- Contract database
- Spending database
- AML, B&L, and BIR Checking
- Sustainability

The data is supplied by VM User, Other DBS Staff, and vendors. VM User interact with application through VM Tools directly, while other DBS Staff & Vendor interact with the system via email.

Technically, the interaction between user and system is showing in the following diagram.

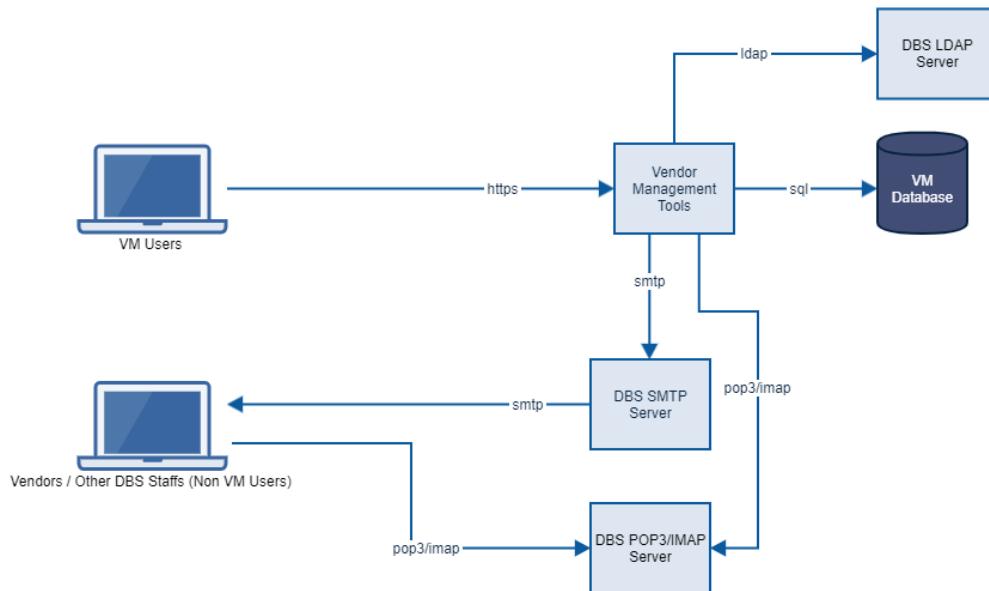


Figure 1. VM Tools Context Diagram

VM user will interact with the system by using a browser (Firefox, Google Chrome, Opera, etc). The access will use https to make sure the communication is secure. For authentication purpose, the system will pass through login request to DBS LDAP Server. All the data will be saved in database and local system folders (for documents).

Vendors and Other DBS Staff (Non VM Users) will communicate with the system by using email. The email (subject, body, attachments) will follow a certain format in order to VM System can extract the information from the email.

### 3. Functional Requirement

#### 3.1. Application Moduls

The front end application will provide this module and sub modules

No	Modul	Sub Modul	Function Description
1	Login / Logout		Login/Logout
2	Dashboard		<p>Provide dashboard of</p> <ul style="list-style-type: none"> <li>- Registered Vendor (Amount Only)</li> <li>- Contract (Amount Only)</li> <li>- Spending (Amount Only)</li> <li>- Contract Chart</li> <li>- Spending Chart</li> <li>- Registered Vendor Chart</li> <li>- Top 10 vendors with highest spending</li> <li>- Top 10 vendors with highest invoice</li> </ul> <p>This dashboard will consume data from current year and last year (2 years)</p>
3	Setting		
		Document Type	Provide tools to view/add/edit/delete master document
		Notification	Provide tools to view/add/edit/delete notification
		Currency Rate	Provide tools to view/add/edit/delete currency rate.
		Email Template	Provide tools to view/add/edit/delete email template. Every email which will be sent to vendors or DBS Staff will be generated based on these templates.
		Survey Template	Provide tools to view/add/edit/delete survey template. Survey content that will be sent to survey participants will be generated from these templates.
4	User Management		
		User	Provide tools to view/add/edit/delete users
		Role	Provide tools to view/add/edit/delete roles
5	Vendor Database		<p>Provide tools to :</p> <ul style="list-style-type: none"> <li>- Add new vendor</li> <li>- Display all vendors</li> <li>- View detail vendor</li> <li>- Edit vendor data</li> <li>- Export all data vendor to excel</li> <li>- Import vendors data</li> <li>- Import contract data</li> <li>- Import voucher payment data</li> <li>- Import invoice data</li> <li>- Import transfer data YFC</li> <li>- </li> </ul>
		Dashboard	This dashboard will contain total contract, total spending, total invoice, performance, and document status of a vendor. The dashboard will consume data from current year and 2 years before (3 years).
		Vendor Document	Provide tools to view, request, and approve legal document of a vendor.

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	Vendor Screening	Provide tools to view, request AML checking, and entry B&L and BIR data.
	Performance	Provide tools to view and conduct a survey of a vendor
	Contract	Provide tools to view contract data of a vendor
	Spending	Provide tools to view spending data of a vendor
	Sustainability	N/A

## 3.2. Business Process

### 3.2.1. Vendor Database & Performance

Vendor database consists of vendor initial data (Vendor ID, Name, Email, Registration Status, and Document Status), vendor legal documents and some of additional documents. This vendor documents can be requested by VM Staff or by VM system according to the notification setting. Vendors provide the documents to the VM System via email which will be received and processed by a sub system called **Email Receiver**.

The document request process is shown in the following diagram.

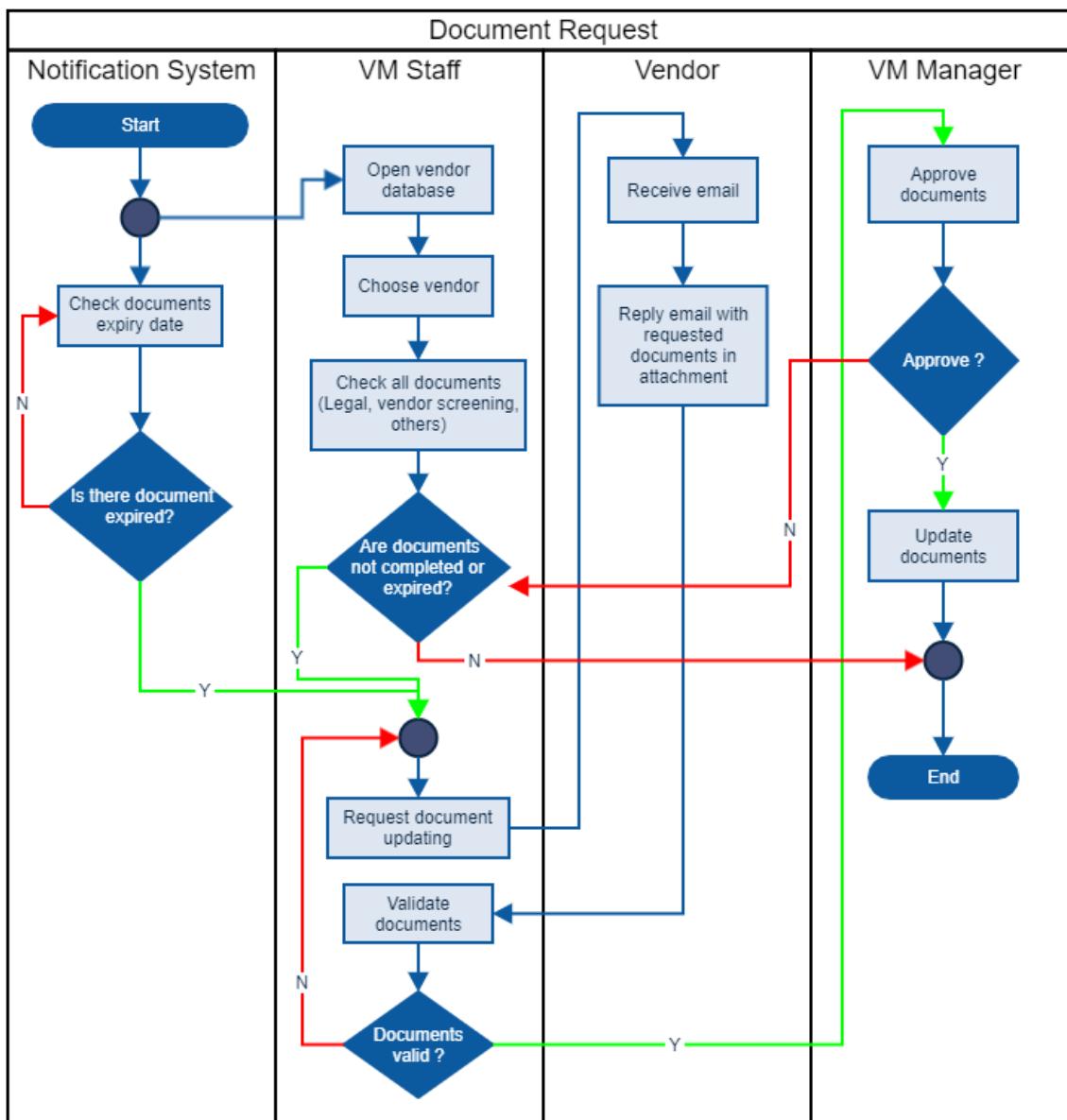


Figure 2. Vendor Document Request Flow

Vendor Performance is obtained through survey that involves DBS staff as survey participants. The survey is sent by VM System to the participants via email. The overall processes are shown in the following diagram.

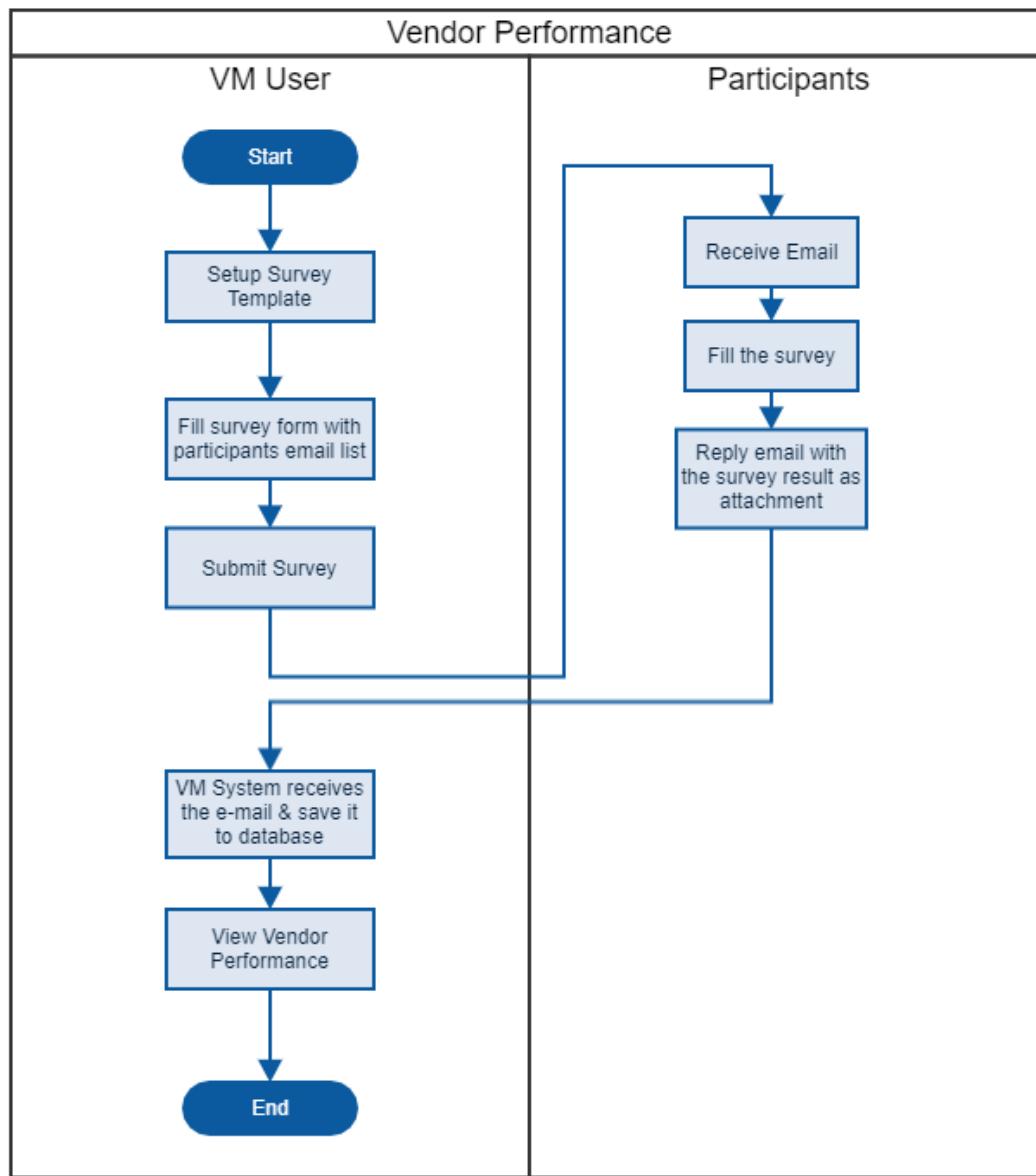


Figure 3. Vendor Performance Flow

### 3.2.2. Contract Database

Contract database is exported from MCR Report. VM user will regularly upload this document to the VM system. The data from MCR Report will be extracted by the system, saved to the database, and linked to each vendor.

The process flow is shown in the following diagram.

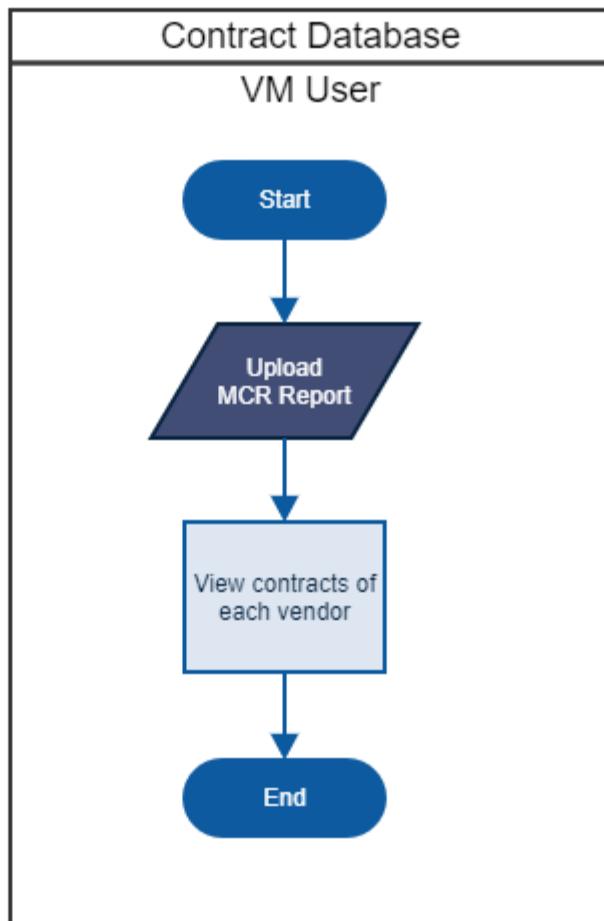


Figure 4. Contract Database Flow

### 3.2.3. Spending Database

Spending database is exported from Voucher Payment file, Invoice file, and Transfer Data FYC file. VM user will regularly upload this document to the VM system. The uploaded data will be extracted by the system, saved to the database, and linked to each vendor.

The process flow is shown in the following diagram.

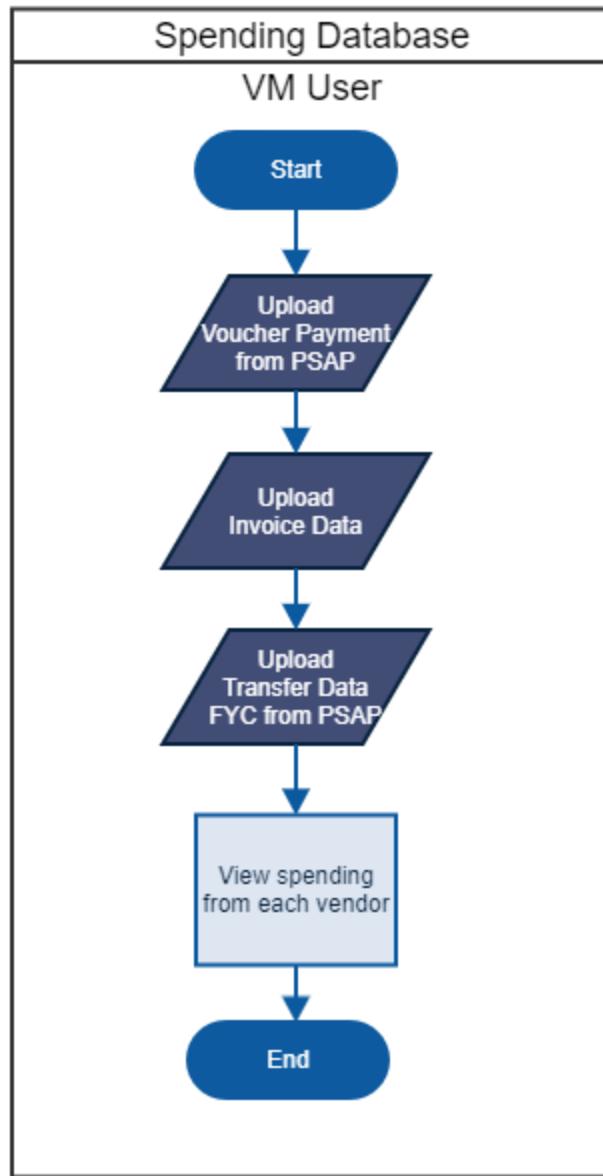


Figure 5. Spending Database Flow

### 3.2.4. AML, B&L, and BIR Checking

AML Checking process involves VM System, EWSS, AML Team and User. The process is started when a VM User upload AML Checking template to the VM System and submit it. After the submission, VM System will send the data to EWSS. All the process can be seen in the following diagram.

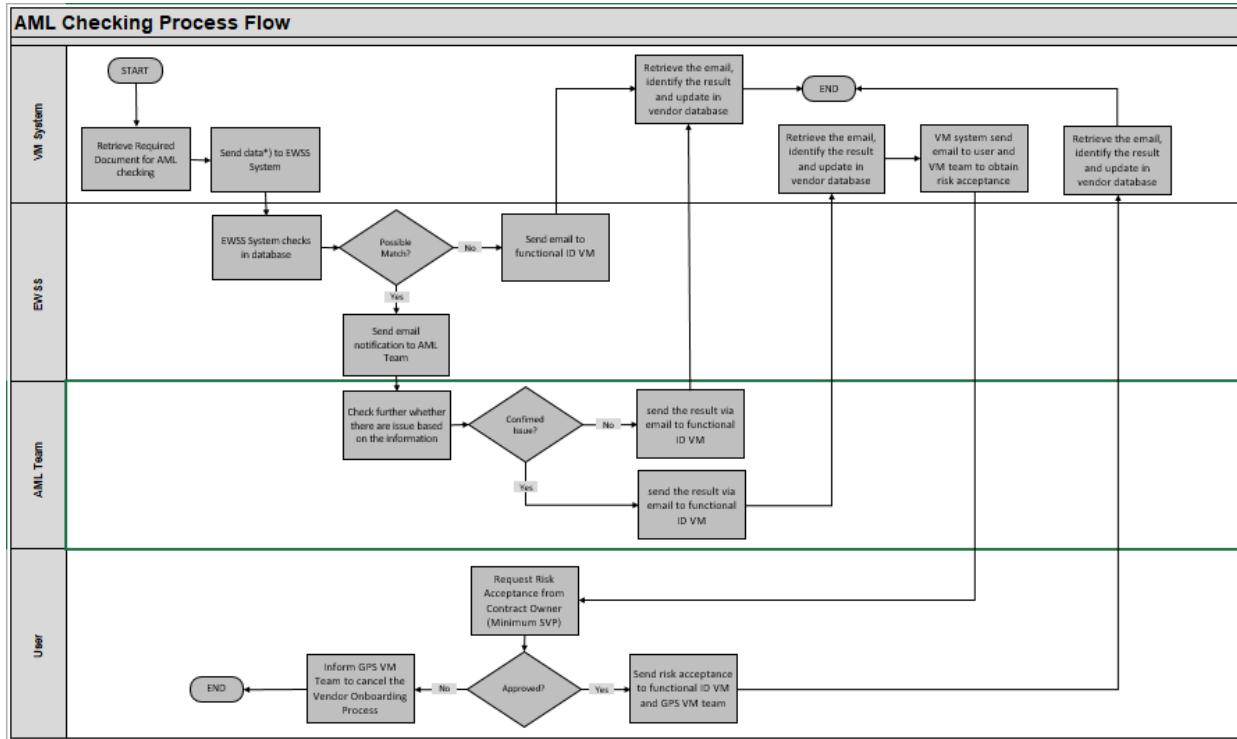


Figure 6. AML Checking Process Flow

While AML Checking has a complex process, B&L and BIR checking has a simple process. VM user just need to entry data to a simple form and submit it. The process flow is shown in the following picture.

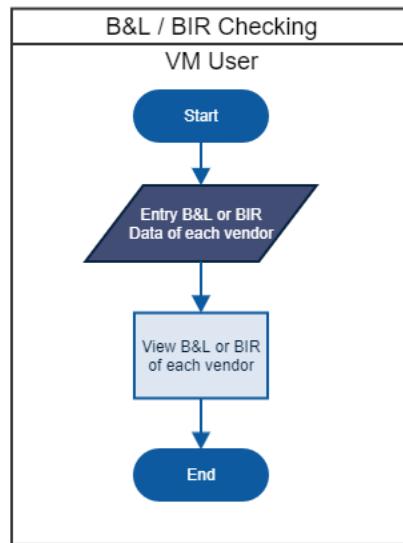


Figure 7. B&L / BIR Checking

### 3.2.5. Sustainability

## 4. System Design

### 4.1 Database Design

#### 4.1.1. Entity Relationship Diagram (ERD)

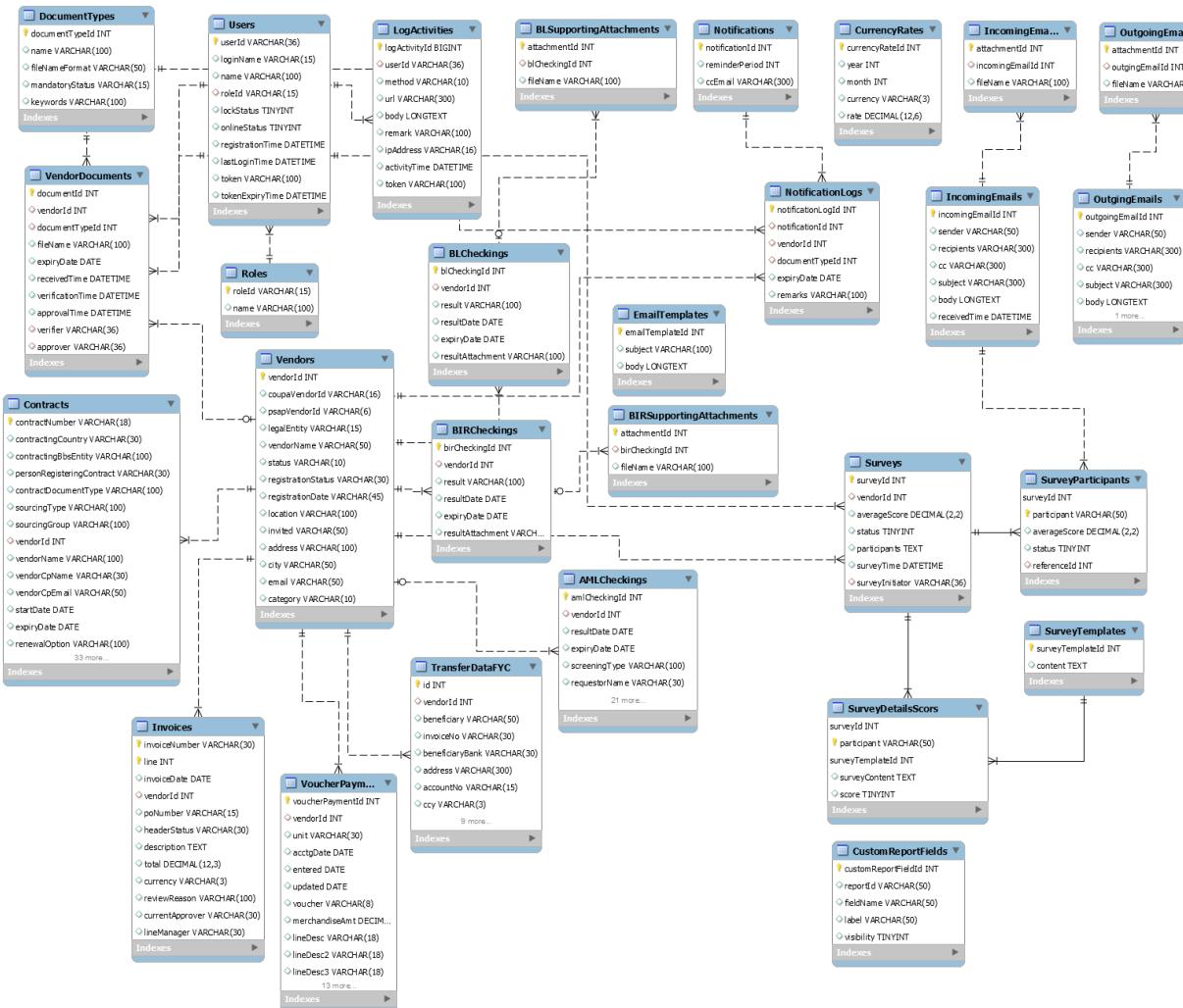


Figure 8. Entity Relationship Diagram

#### 4.1.2. Table Users

Field Name	Data Type	Attributes	Description
userId	varchar(36)	Primary Key, UUID	User id
loginName	varchar(15)	Unique	Login name
name	varchar(100)		User name
roleid	varchar(15)		Role id
lockStatus	tinyint	Default=0	Lock Status (1=Locked, 0=Unlocked)
onlineStatus	tinyint	Default=0	Online Status (1=Online, 0=Offline)

registrationTime	datetime		Registration Datetime
lastLoginTime	datetime		Last Login Datetime

#### 4.1.3. Table Roles

Field Name	Data Type	Attributes	Description
roleId	varchar(15)	Primary Key	Role id
name	varchar(100)		Role name

#### 4.1.4. Table DocumentTypes

Field Name	Data Type	Attributes	Description
documentTypeId	Int	Primary Key, Auto Increment	Document type id
name	varchar(100)		Document type name
fileNameFormat	varchar(50)		Format of file name
mandatoryStatus	varchar(15)		Mandatory status (Mandatory/Optional)
keywords	varchar(100)		Keywords for existing document migration

#### 4.1.5. Table Notifications

Field Name	Data Type	Attributes	Description
notificationId	int	Primary Key, Auto Increment	Notification id
reminderPeriod	int		Reminder period in days
ccEmail	varchar(300)	JSON Format	CC Emails

#### 4.1.6. Table NotificationLogs

Field Name	Data Type	Attributes	Description
notificationLogId	int	Primary Key, Auto Increment	Notification Log id
notificationId	Int	FK, reference: Notifications.notificationId	NotificationTypeId
vendorId	Int	FK, reference: Vendord.vendorId	VendorId
documentTypeId	Int	FK, reference: DocumentTypes.documentTypeId	Document type id
expiryDate	date		Expiry Date
remarks	varchar(100)		Remarks

#### 4.1.7. Table CurrencyRates

Field Name	Data Type	Attributes	Description
currencyRateId	int	Primary Key, Auto Increment	Currency rate id
year	int		Year
month	int		Month
currency	varchar(3)		Currency code
rate	decimal(12,6)		Currency rate

#### 4.1.8. Table EmailTemplates

Field Name	Data Type	Attributes	Description
emailTemplateId	int	Primary Key, Auto Increment	Email template id
subject	varchar(100)		Email subject
body	longtext		Email body

#### 4.1.9. Table SurveyTemplates

Field Name	Data Type	Attributes	Description
surveyTemplateId	int	Primary Key, Auto Increment	Survey template id
content	text		Content of survey. Content with surveyTemplateId value equals to 0 is survey guidelines, others are survey items

#### 4.1.10. Table IncomingEmails

Field Name	Data Type	Attributes	Description
incomingEmailId	int	Primary Key, Auto Increment	Incoming email Id
sender	varchar(50)		Email sender
recipients	varchar(300)		Recipient
cc	varchar(300)		CC
subject	varchar(300)		Email subject
body	longtext		Email body
receivedTime	datetime		Received time

#### 4.1.11. Table IncomingEmailAttachments

Field Name	Data Type	Attributes	Description
attachmentId	Int	Primary Key, Auto Increment	Attachment id
incomingEmailId	Int	FK, reference: IncomingEmails.incomingEmailId	Incoming email id
fileName	varchar(100)		File name

#### 4.1.12. Table OutgoingEmails

Field Name	Data Type	Attributes	Description
outgoingEmailId	Int	Primary Key, Auto Increment	Incoming email Id
sender	varchar(50)		Email sender
recipients	varchar(300)		Recipient
cc	varchar(300)		CC
subject	varchar(300)		Email subject
body	longtext		Email body
sentTime	datetime		Sent time

#### 4.1.13. Table OutgoingEmailAttachments

Field Name	Data Type	Attributes	Description
attachmentId	Int	Primary Key, Auto Increment	Attachment id
outgoingEmailId	Int	FK, reference: OutgoingEmails.outgoingEmailId	Outgoing email id
fileName	varchar(100)		File name

#### 4.1.14. Table CustomReportFields

Field Name	Data Type	Attributes	Description
customReportFieldId	Int	Primary Key, Auto Increment	Attachment id
reportId	varchar(50)		Report Id
fieldName	varchar(50)		Field name
label	varchar(50)		Label
visibility	tinyint	Default = 0	Visibility (0=Invisible,1=Visible)

#### 4.1.15. Table Vendors

Field Name	Data Type	Attributes	Description
vendorId	Int	Primary Key, Auto Increment	Vendor ID
coupaVendorId	varchar(16)	Unique	Vendor ID on Coupa
psapVendorId	varchar(6)	Unique	Vendor ID on PSAP
legalEntity	varchar(15)		Legal entity
vendorName	varchar(50)		Vendor name
Status	varchar(10)		Vendor Status (Active, Inactive)

registrationStatus	varchar(30)		Registration status (Registered, Bidding Participant, PIC OSP, Onboarding)
registrationDate	date		Registration date
location	varchar(100)		Location
Invited	varchar(50)		Invited
address	varchar(100)		Company address
city	varchar(50)		City
email	varchar(50)		Vendor email address
category	varchar(10)		Vendor category

#### 4.1.16. Table VendorDocuments

Field Name	Data Type	Attributes	Description
documentId	int	Primary Key, Auto Increment	Document id
vendorId	int	FK, reference: Vendors.vendorId	Vendor id
documentTypeId	int	FK, reference: DocumentType.documentTypeId	Document type id
fileName	varchar(15)		File name
expiryDate	date		Document expiry date. The value is 9999-12-31 if the document doesn't have expiry date
receivedTime	datetime		Received time of the document
verificationTime	datetime		Verification time of the document
approvalTime	datetime		Approval time of the document
verifier	varchar(36)		User id of verifier
approver	varchar(36)		User id of approver
status	tinyint		Document status (1=Active,0=Inactive)

#### 4.1.17. Table Surveys

Field Name	Data Type	Attributes	Description
surveyId	int	Primary Key, Auto Increment	Survey id
vendorId	int	FK, reference: Vendors.vendorId	Vendor id
averageScore	decimal(2,2)	FK, reference: DocumentType.documentTypeId	Average score of the survey
status	tinyint		Survey status (0=Open,1=Closed)
participants	text		Emails of the participants in JSON format
surveyTime	datetime		Survey time
surveyInitiator	varchar(36)		User id of survey initiaor

#### 4.1.18. Table SurveyParticipants

Field Name	Data Type	Attributes	Description
surveyId	int	Primary Key, FK, reference: Surveys.surveyId	Survey Id
participant	varchar(50)	Primary Key	Participant email address
averageScore	decimal(2,2)		Average Score

status	tinyint		Survey status (Open=0,1:Closed)
referenceId	int	FK, reference: IncomingEmail.incomingEmailId	Incoming email reference

#### 4.1.19. Table SurveyDetailsScore

Field Name	Data Type	Attributes	Description
surveyId	Int	Primary Key, FK, reference: Surveys.surveyId	Survey Id
participant	varchar(30)	Primary Key	Participant email address
surveyTemplateId	Int	Primary Key, FK, reference: SurveyTemplates.surveyTempalteId	Survey template id
surveyContent	text		Survey content
score	Int		Score of the survey item

#### 4.1.20. Table Contracts

Field Name	Data Type	Attributes	Description
contractNumber	varchar(18)	Primary Key	Contract number
contractingCountry	varchar(30)		Contracting country
contractingDbsEntity	varchar(100)		Contracting DBS entity
personRegisteringContract	varchar(30)		Name of person registering contract
contractDocumentType	varchar(100)		Contract document type
sourcingType	varchar(100)		Sourcing type
sourcingGroup	varchar(100)		Sourcing group
vendorId	int		Vendor id
vendorName	varchar(100)		Vendor name
vendorCpName	varchar(30)		Vendor contact person name
vendorCpEmail	varchar(50)		Vendor contact person email address
startDate	date		Start date
expiryDate	date		Expiry date
renewalOption	varchar(100)		Renewal option
contractCurrency	varchar(3)		Contract currency
contractAmount	int		Contract amount
remarks	text		Remarks
paymentType	varchar(100)		Payment type
productDescription	longtext		Product description
otherAssociatedContract	varchar(18)		Other associated contract
renewFrom	varchar(18)		Renew from
ownerRepresentative	varchar(30)		Owner representative
contractOwnerDept	varchar(50)		Contract owner department
contractOwnerSpv	varchar(30)		Contract owner SPV/ED
nameRankDoa	varchar(100)		Name & rank of DOA approving authority
pcCode	varchar(100)		PC code
Ifrs16Impacted	varchar(3)		IFRS16 impacted
generalRemarks	text		General remarks
conversionRate	decimal(11,7)		Conversion rate
contractAmountSgd	decimal(11,2)		Contract amount in SGD
registrationDate	date		Registration date
registrationStatus	varchar(100)		Registration status
openRegistrationDate	date		Open registration date

closedRegistrationDate	date		Closed registration date
contractStatus	varchar(30)		Contract status
sourcingManager	varchar(30)		Sourcing manager
lineOfBusiness	varchar(50)		Line of business
functionHead	varchar(30)		Function head
scoringUpdate	varchar(100)		Scoring update
biddingMethod	varchar(100)		Bidding method
reasonLt3Bids	text		Reason or using < 3 bids
vendorSignatoryName	varchar(30)		Vendor signatory name
vendorSignatoryEmail	varchar(50)		Vendor signatory email
vendorSignaturePhone	varchar(15)		Vendor signatory phone
dbsPtsName	varchar(30)		DBS PTS name
dbPtsEmail	varchar(50)		DBS PTS email
contractGovlawInSpore	varchar(3)		Contract governing law is Singapore

#### 4.1.21. Table Invoices

Field Name	Data Type	Attributes	Description
invoiceNumber	varchar(30)	Primary Key	Invoice number
line	int	Primary Key	Line
invoiceDate	date		Invoice date
supplier	varchar(100)		Supplier
vendorId	int		Vendor id
poNumber	varchar(15)		PO number
headerStatus	varchar(30)		Header status
description	text		Description
total	decimal(12,3)		Total
currency	varchar(3)		Currency
reviewReason	varchar(100)		Review reason
currentApprover	varchar(30)		Current approver
lineManager	varchar(30)		Line manager

#### 4.1.22. Table VoucherPayments

Field Name	Data Type	Attributes	Description
voucherPaymentId	int	Primary Key,Auto Increment	Id
vendorId	int		Vendor id
unit	varchar(30)		Unit
acctgDate	date		Acctg Date
entered	date		Entered
updated	date		Updated
voucher	varchar(8)		Voucher
merchandiseAmt	decimal(12,3)		Merchandise amt
lineDesc	varchar(18)		Line desc
lineDesc2	varchar(18)		Line desc 2
lineDesc3	varchar(18)		Line desc 3
lineDesc4	varchar(18)		Line desc 4
lineDesc5	varchar(18)		Line desc 5
lineDesc6	varchar(18)		Line desc 6
lineDesc7	varchar(18)		Line desc 7

invoice	varchar(30)		Invoice
date	Date		Date
vendor	varchar(10)		Vendor ID PSPA
account	varchar(15)		Account
pc	varchar(4)		P/C
account2	varchar(15)		Account
bank	varchar(30)		Bank
reference	varchar(6)		Reference
action	varchar(10)		Action

#### 4.1.23. Table TransferDataFYC

Field Name	Data Type	Attributes	Description
id	int	Primary Key, Auto Increment	Id
vendorId	Int		Vendor Id
beneficiary	varchar(50)		Beneficiary
invoiceNo	varchar(30)		Invoice number
beneficiaryBank	varchar(30)		Beneficiary bank
address	varchar(300)		Bank address
accountNo	varchar(15)		Account number
ccy	varchar(3)		CCY
grossAmount	decimal(12,3)		Gross amount
amountPaid	decimal(12,3)		Amount paid
transferDate	Date		Date of transfer
glNumber	varchar(8)		GL number
description	varchar(100)		Description
voucherId	varchar(8)		Voucher ID
description2	varchar(100)		Description
requestedBy	varchar(50)		Requested By
categorization	varchar(50)		Categorization

#### 4.1.24. Table AMLCheckings

Field Name	Data Type	Attributes	Description
amlCheckingId	Int	Primary Key, Auto Increment	AML checking id
vendorId	Int		Vendor Id
resultDate	Date		Date
expiryDate	Date		Date
screeningType	varchar(100)		Type of screening
requestorName	varchar(30)		Requestor name
country	varchar(30)		Country
typeOfStaff	varchar(50)		Type of staff
requesterBusinessUnit	varchar(100)		Requester business unit
cocName	varchar(50)		Candidate or company name
cocChineseName	varchar(100)		Candidate or company Chinese name
idNumber	varchar(50)		ID number
foreignIdNumber	varchar(50)		Foreign id number
passportNumber	varchar(50)		Passport number

nationality	varchar(50)		Nationality or company registration country
dob	Date		Date of birth or company registration date
address	text		Address
busuName	varchar(30)		BU/SU name
psCode	varchar(4)		PC code
regulatedRepActivity	varchar(50)		Regulated rep activity?
anyForeignEmployment	varchar(5)		Any foreign employment?
anyForeignResident	varchar(5)		Any foreign resident?
nameScreening	varchar(100)		Name screening: EWSS (ODA)
fcis	varchar(100)		Financial crime intelligent system
bldChecks	varchar(100)		Bankruptcy/litigation/directionship checks
riskAcceptanceEmailSubject	varchar(300)		Risk acceptance email subject
riskAcceptanceEmailBody	longtext		Risk acceptance email body

#### **4.1.25. Table BLCheckings**

Field Name	Data Type	Attributes	Description
blCheckingId	Int	Primary Key, Auto Increment	BL checking id
vendorId	Int		Vendor Id
result	varchar(100)		Result
resultDate	date		Result date
expiryDate	date		Expiry date
resultAttachment	varchar(100)		File attachment

#### **4.1.26. Table BLSupportingAttachments**

Field Name	Data Type	Attributes	Description
attachmentId	Int	Primary Key, Auto Increment	Id
blCheckingId	Int		BL checking id
filename	varchar(100)		File name

#### **4.1.27. Table BIRCheckings**

Field Name	Data Type	Attributes	Description
birCheckingId	Int	Primary Key, Auto Increment	BIR checking id
vendorId	Int		Vendor Id
Result	varchar(100)		Result
resultDate	date		Result date
expiryDate	date		Expiry date
resultAttachment	varchar(100)		File attachment

#### **4.1.28. Table BIRSupportingAttachments**

Field Name	Data Type	Attributes	Description
attachmentId	Int	Primary Key, Auto Increment	Id

birCheckingId	Int		BIR checking id
fileName	varchar(100)		File name

## 4.2 User Interface (UI) Design

### 4.2.1. User Interface

#### 4.2.1.1. Login Page

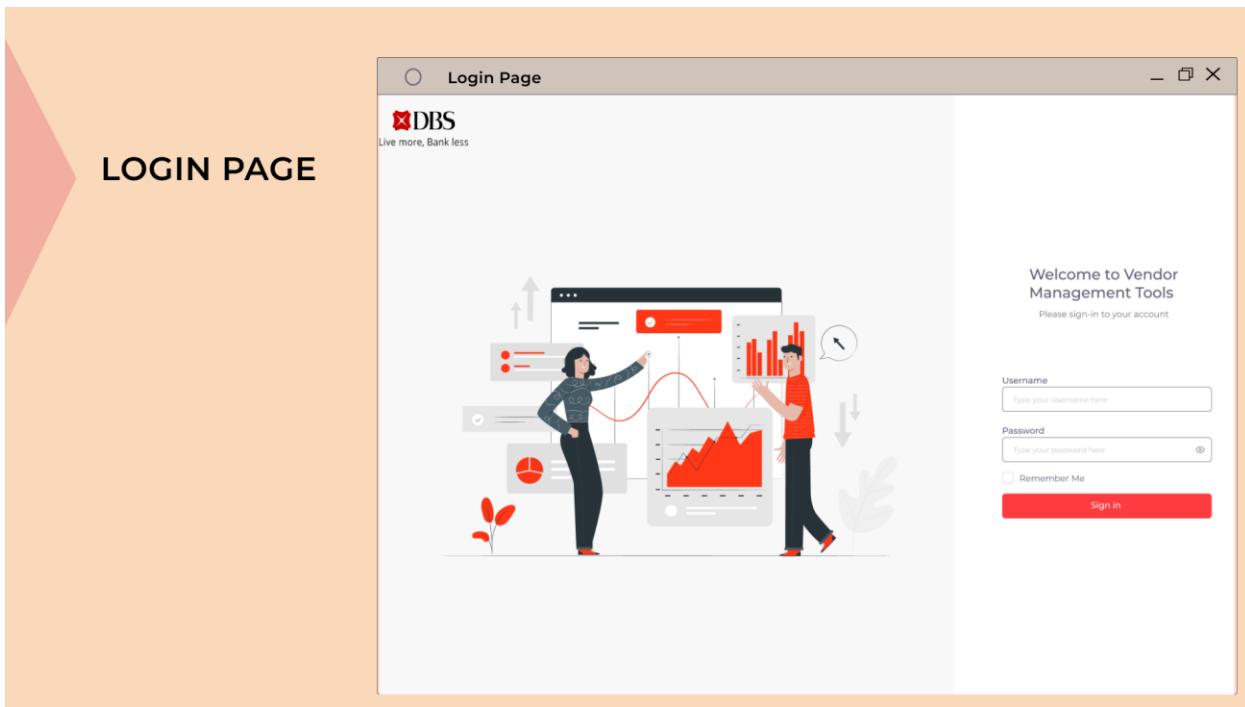


Figure 9. Login Page

#### 4.2.1.2. Main Dashboard

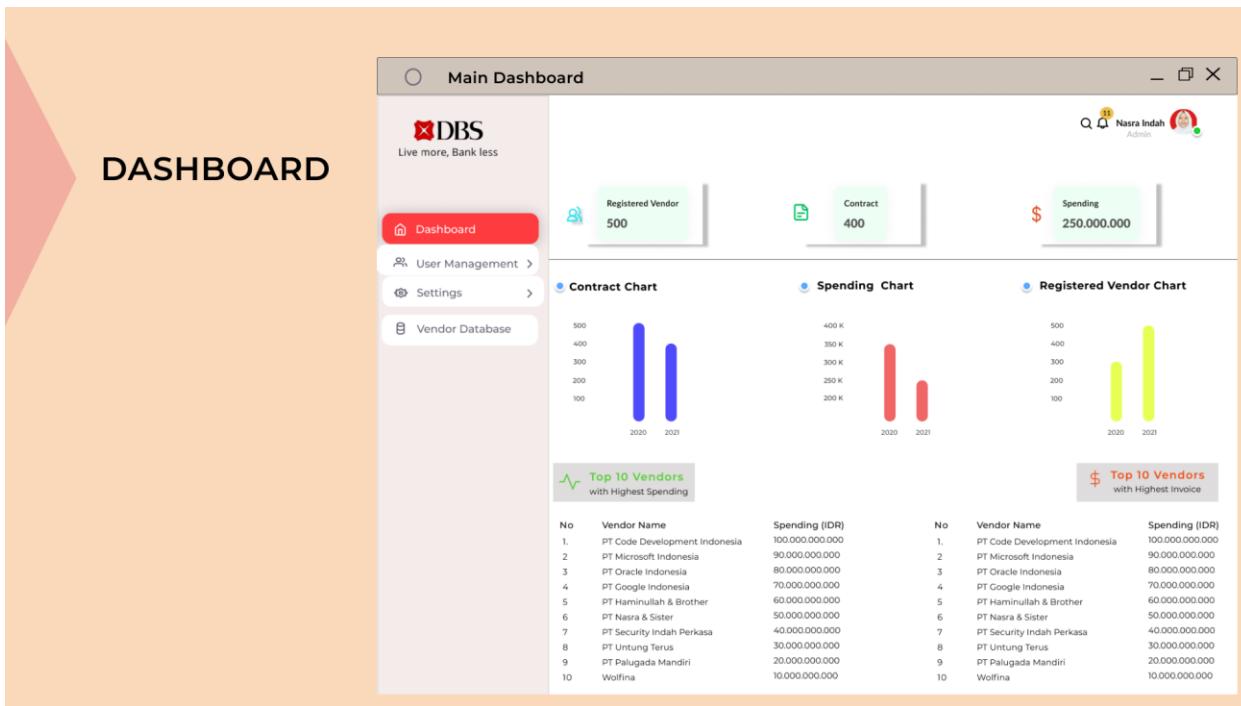


Figure 10. Main Dashboard

#### 4.2.1.3. User Management

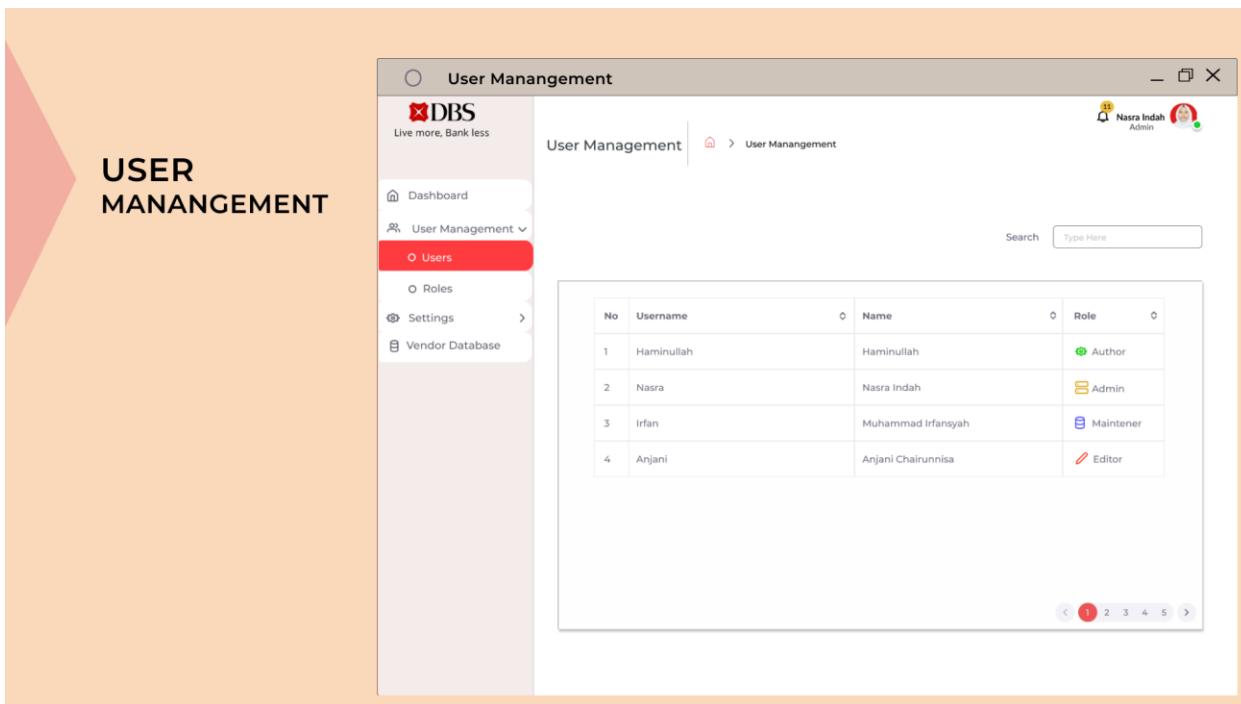


Figure 11. User Management

#### 4.2.1.4. Setting – Document Type

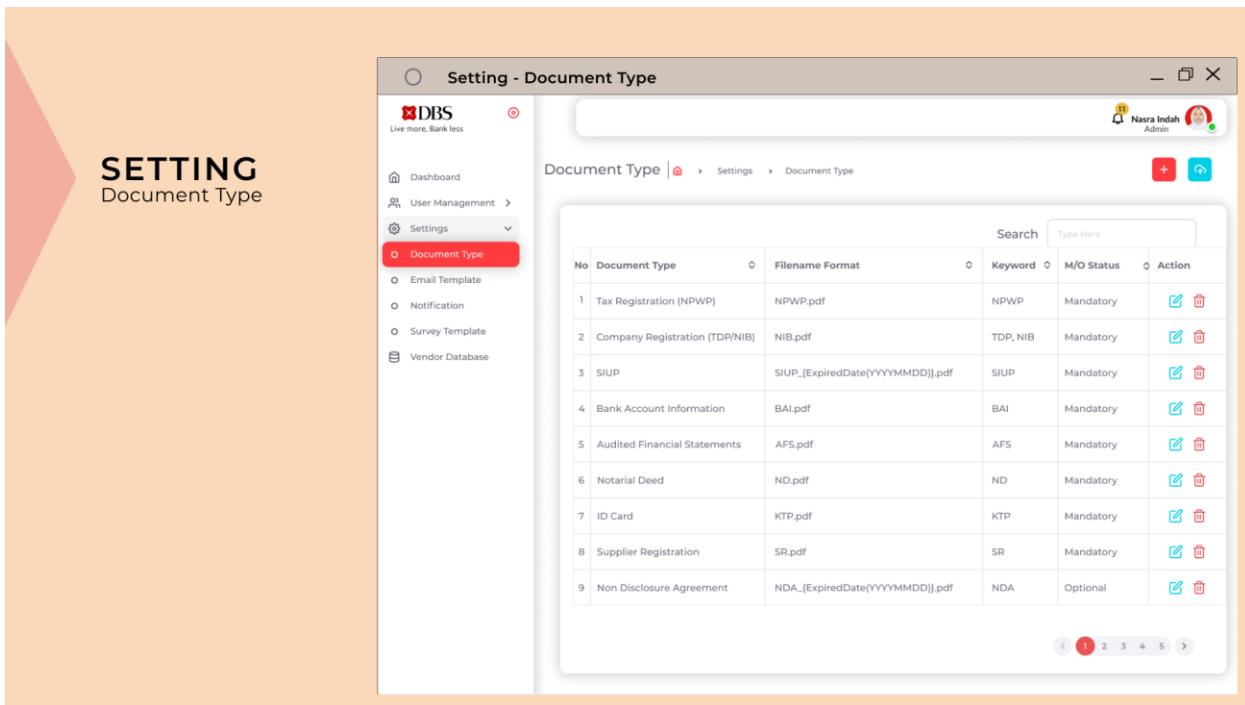


Figure 12. Setting - Document Type

#### 4.2.1.5. Setting – Email Template

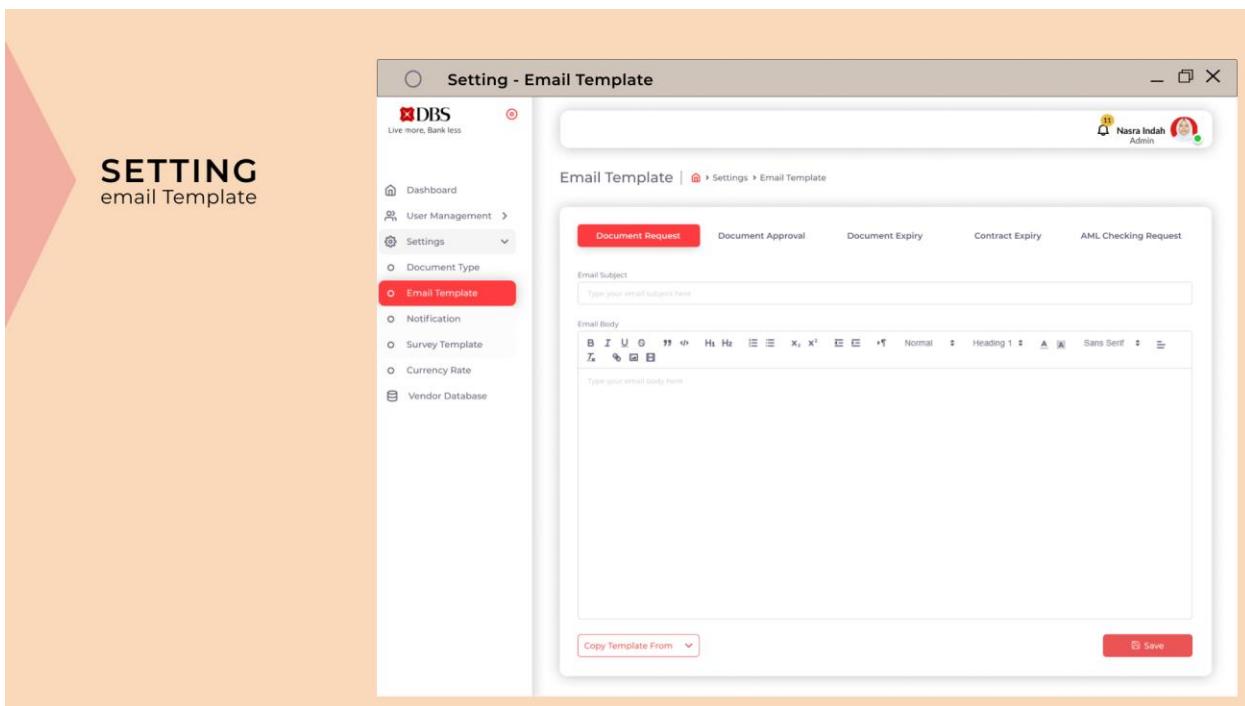


Figure 13. Setting – Email Template

#### 4.2.1.6. Setting - Notification

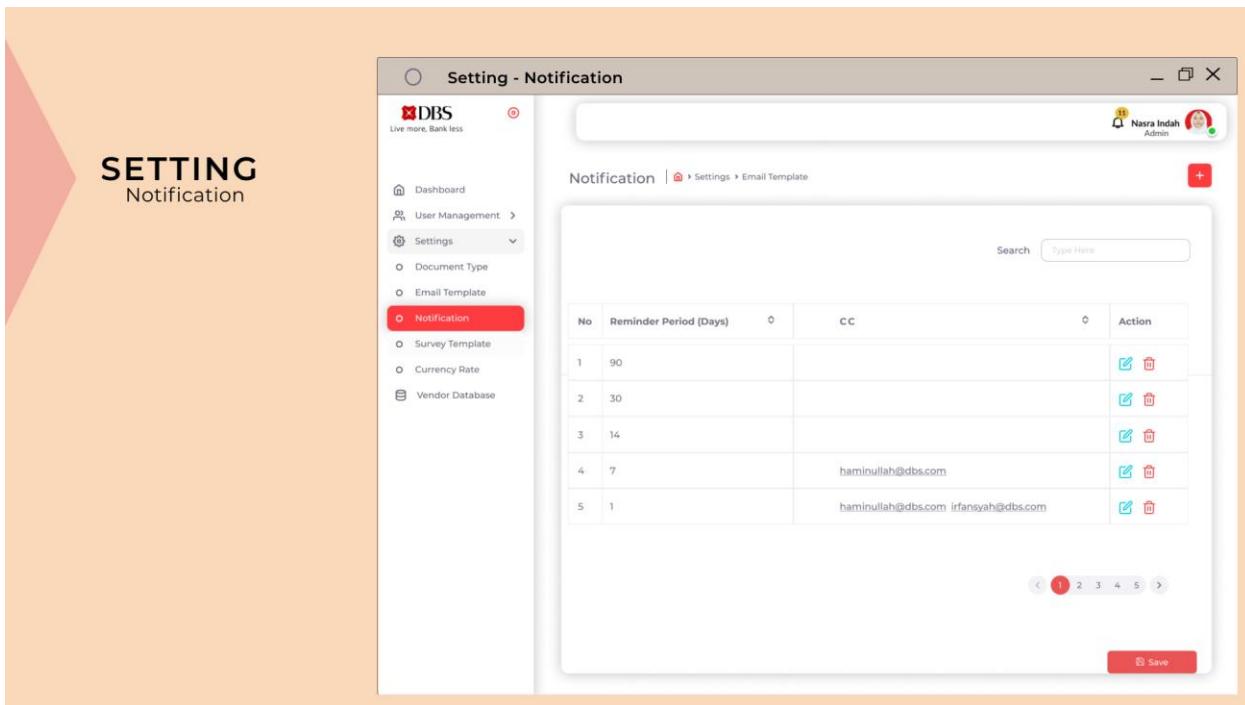


Figure 14. Setting - Notification

#### 4.2.1.7. Setting – Survey Template

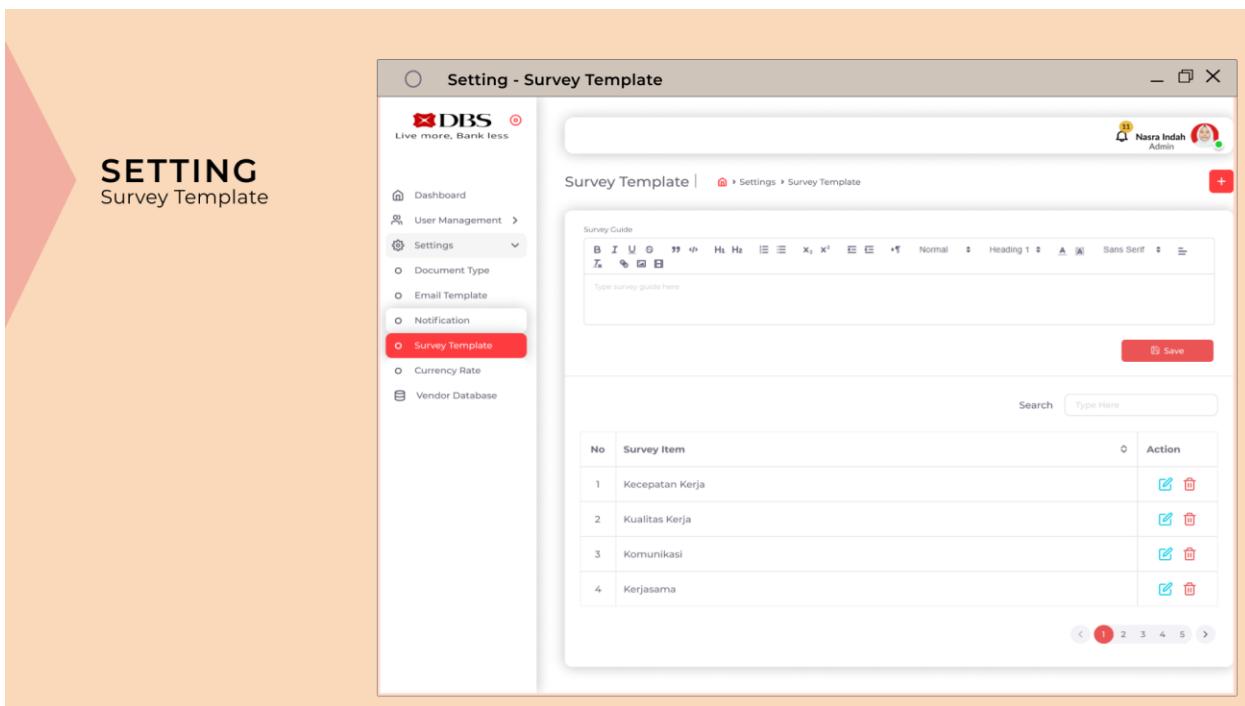


Figure 15. Setting - Survey Template

#### 4.2.1.8. Setting – Currency Rate

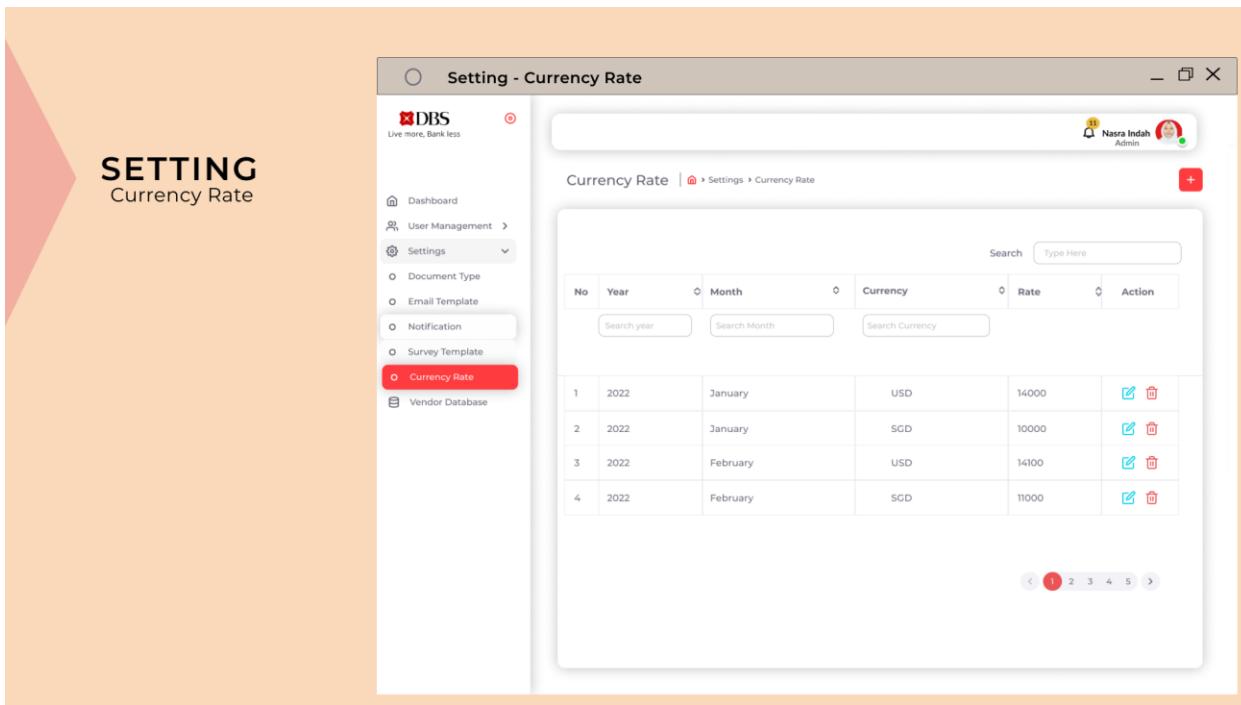


Figure 16. Setting - Currency Rate

#### 4.2.1.9. Vendor Database

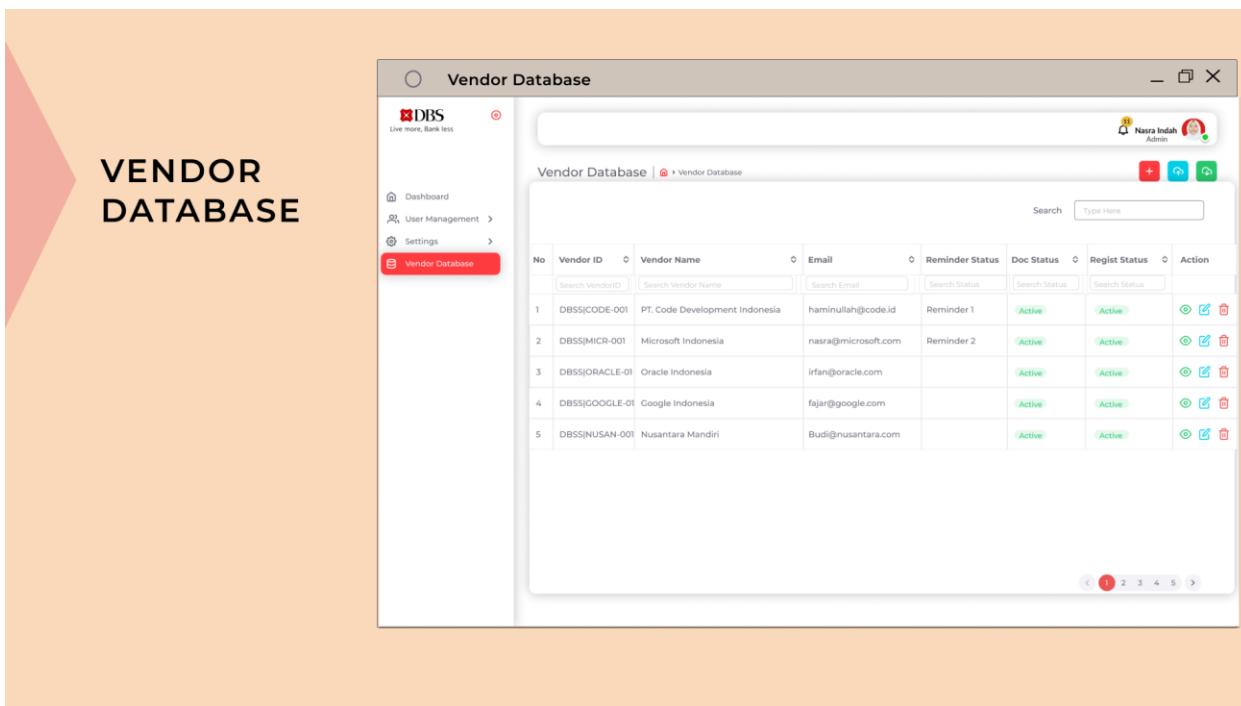


Figure 17. Vendor Database

#### 4.2.1.10. Vendor Database - Dashboard

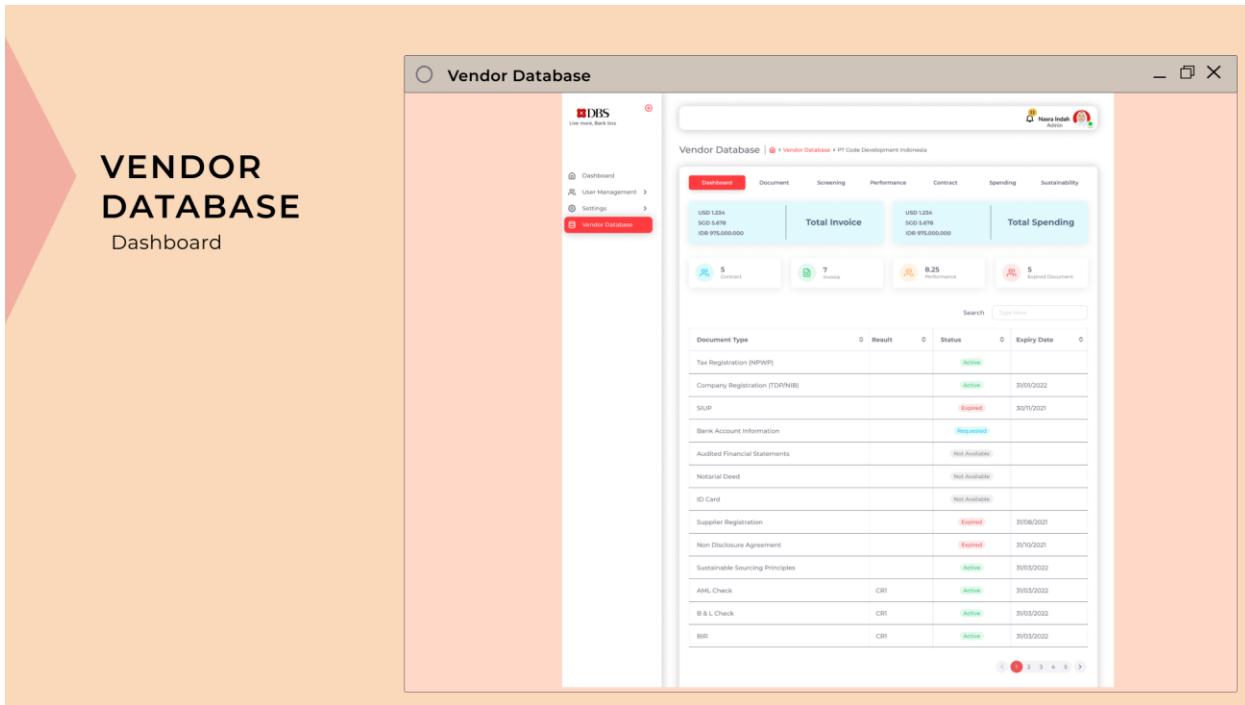


Figure 18. Vendor Database - Dashboard

#### 4.2.1.11. Vendor database – Document

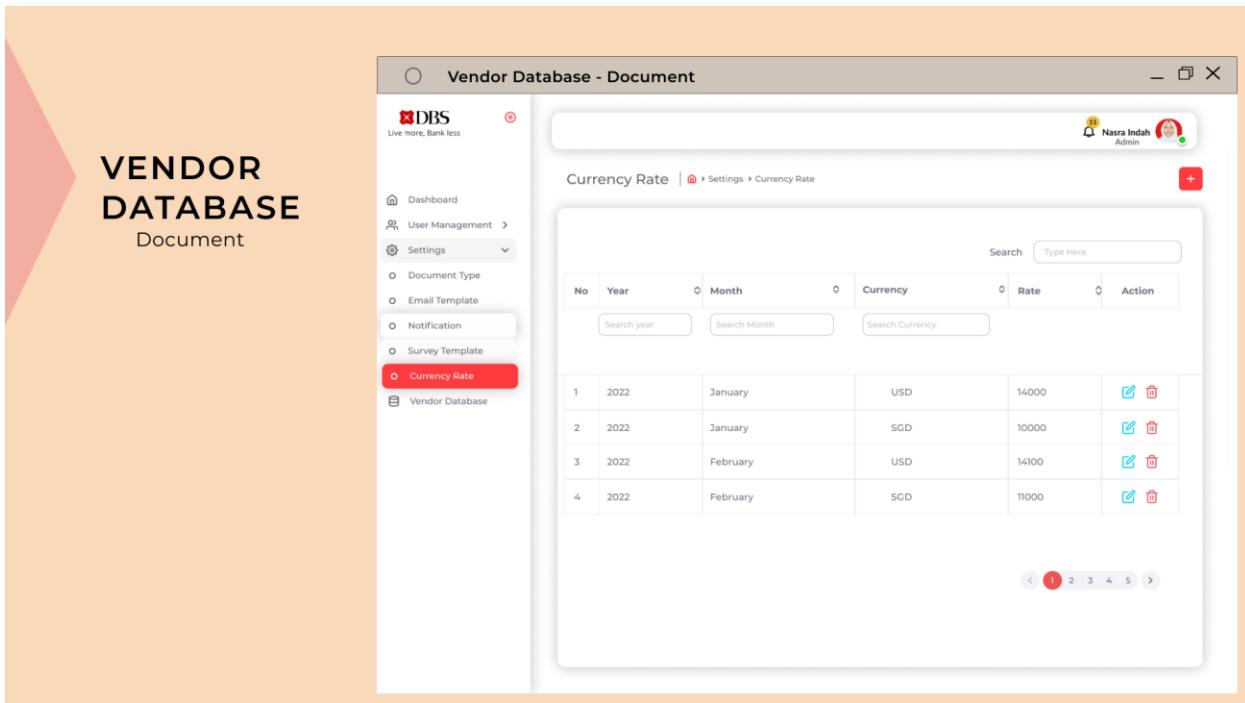


Figure 19. Vendor Database - Document

#### 4.2.1.12. Vendor Database – Document (View)

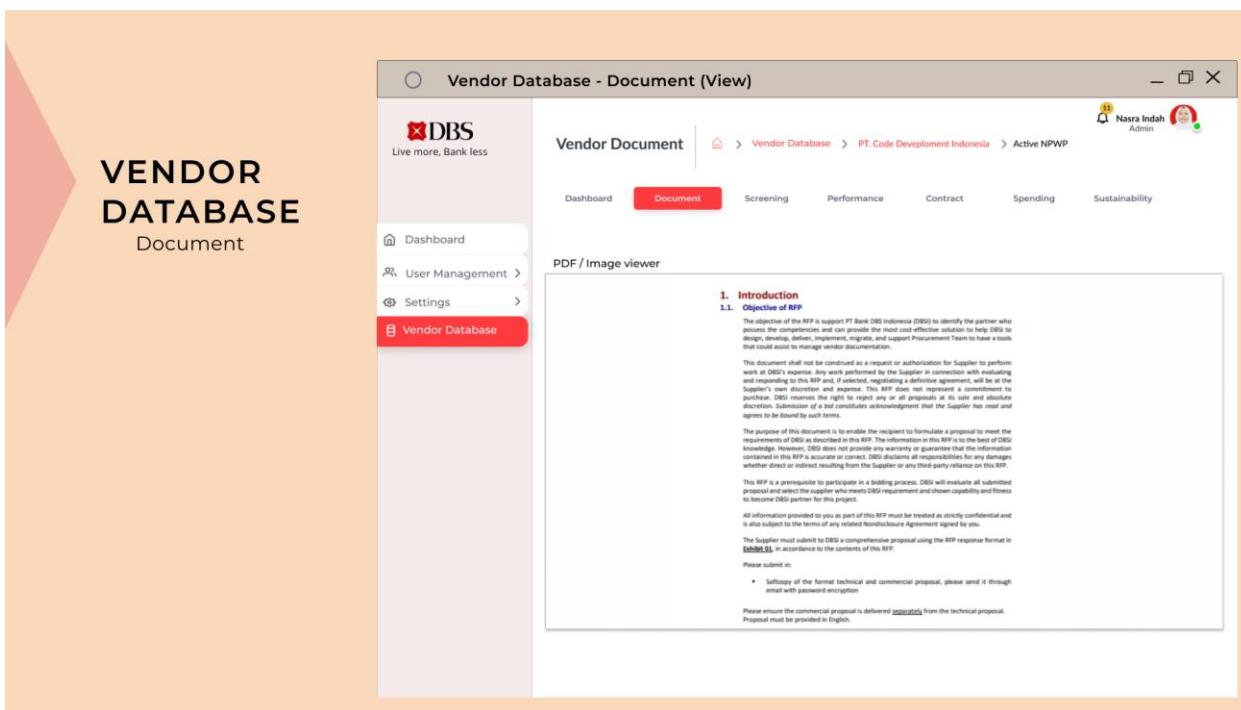


Figure 20. Vendor Database - Document (View)

#### 4.2.1.13. Vendor Database – Document (Approve)

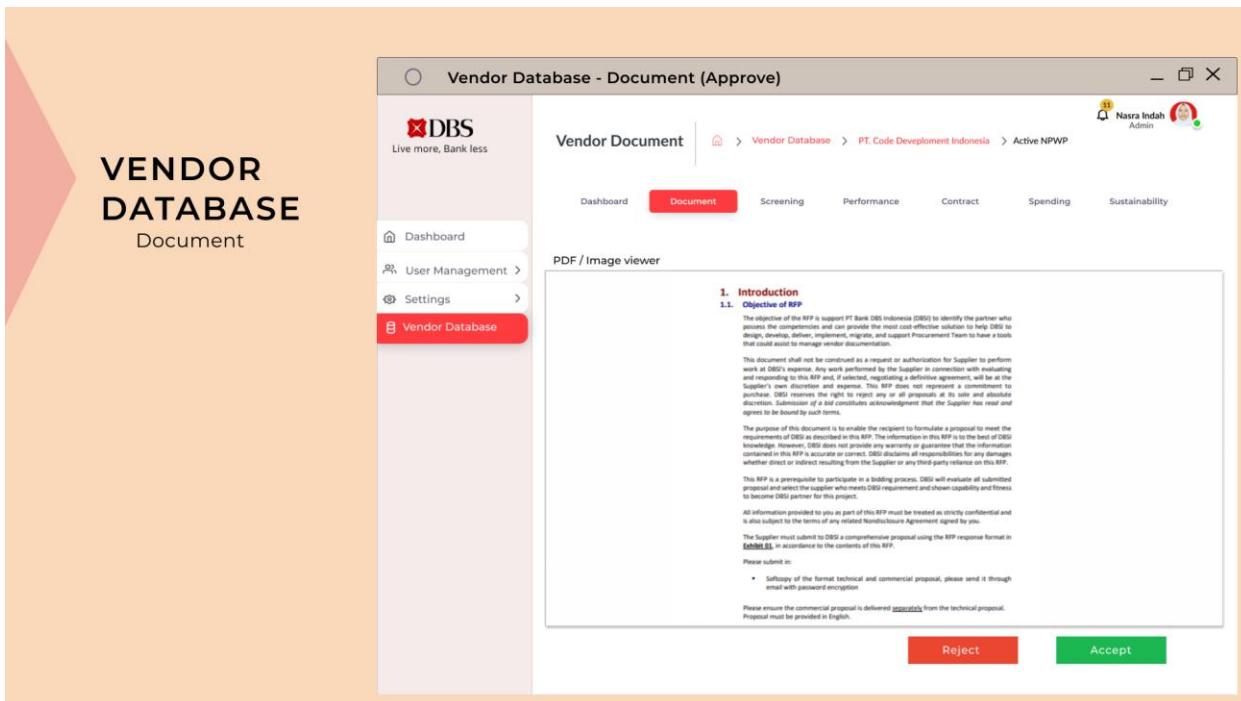


Figure 21. Vendor Database - Document (Approve)

#### 4.2.1.14. Vendor Database – Document (History)

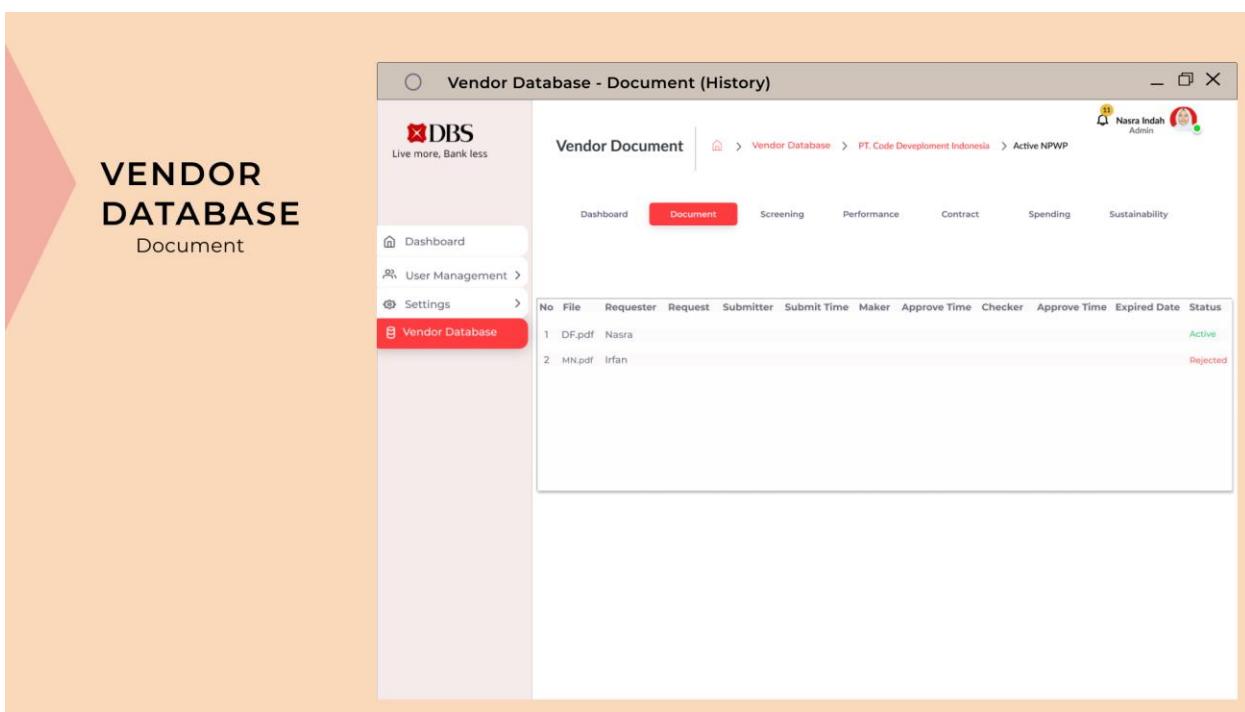


Figure 22. Vendor Database - Document (History)

#### 4.2.1.15. Vendor database – Screening

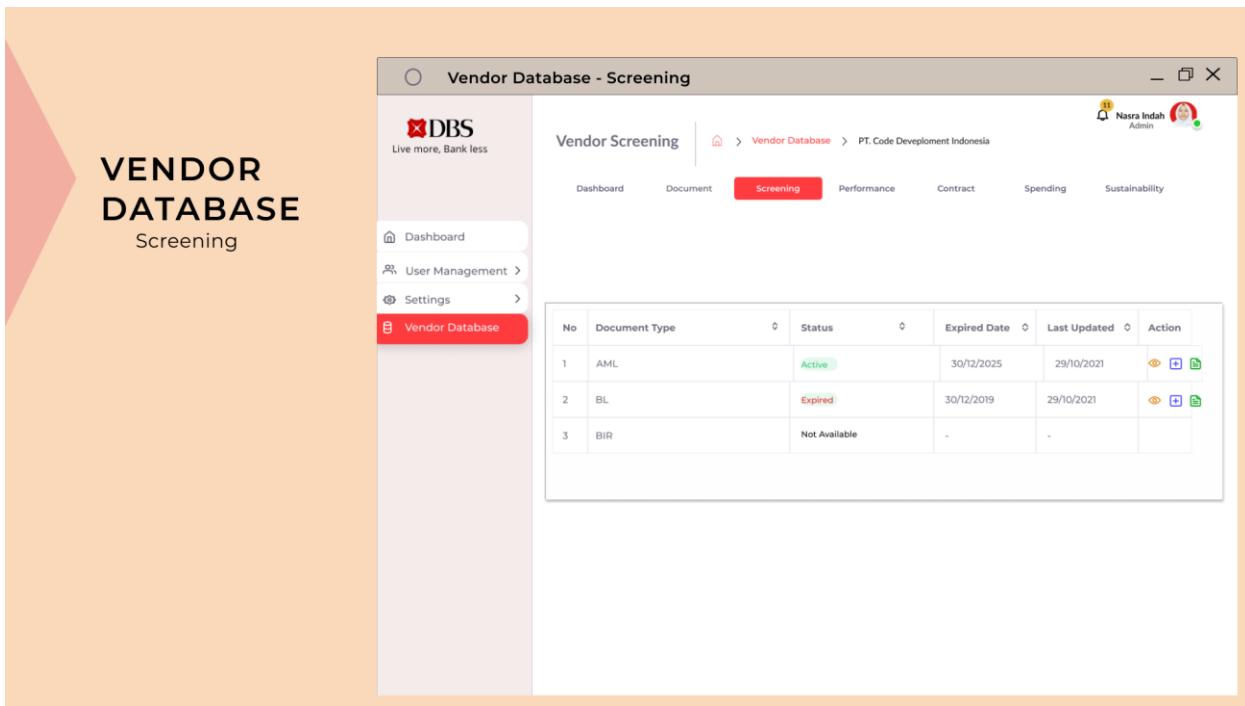


Figure 23. Vendor Database – Screening

#### 4.2.1.16. Vendor database – Screening AML (View)

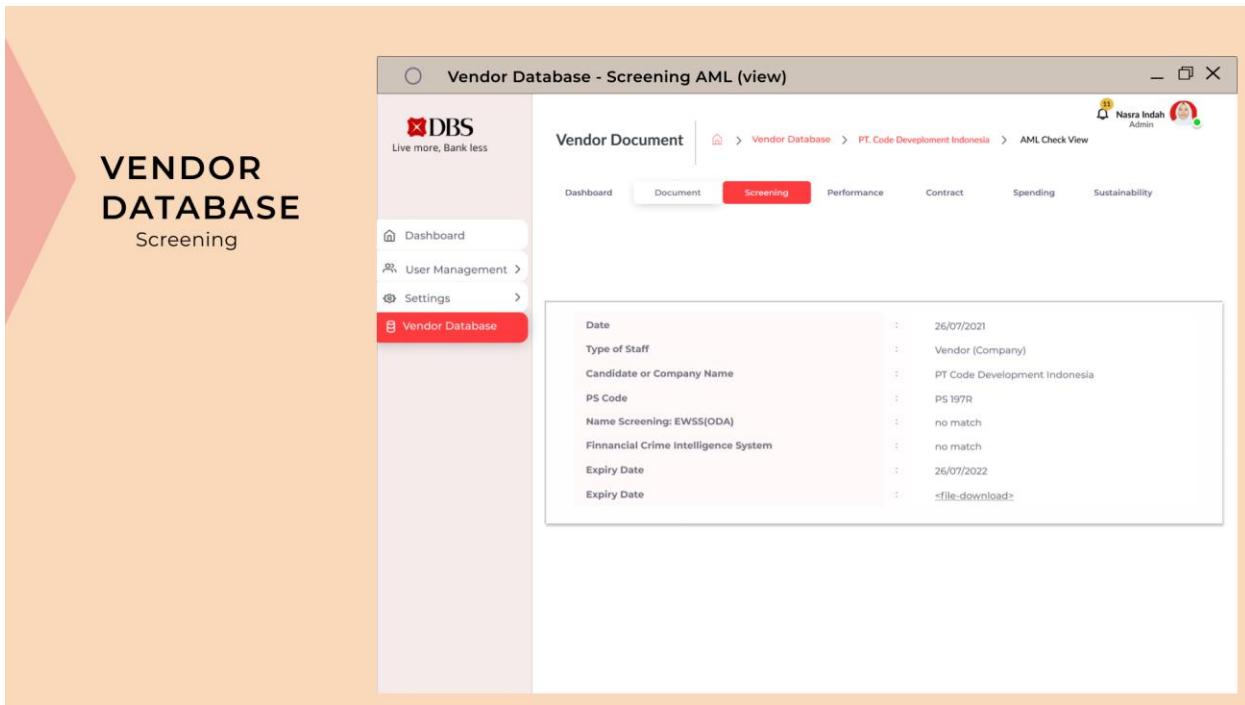


Figure 24. Vendor Database - Screening AML (View)

#### 4.2.1.17. Vendor database – Screening AML (Add)

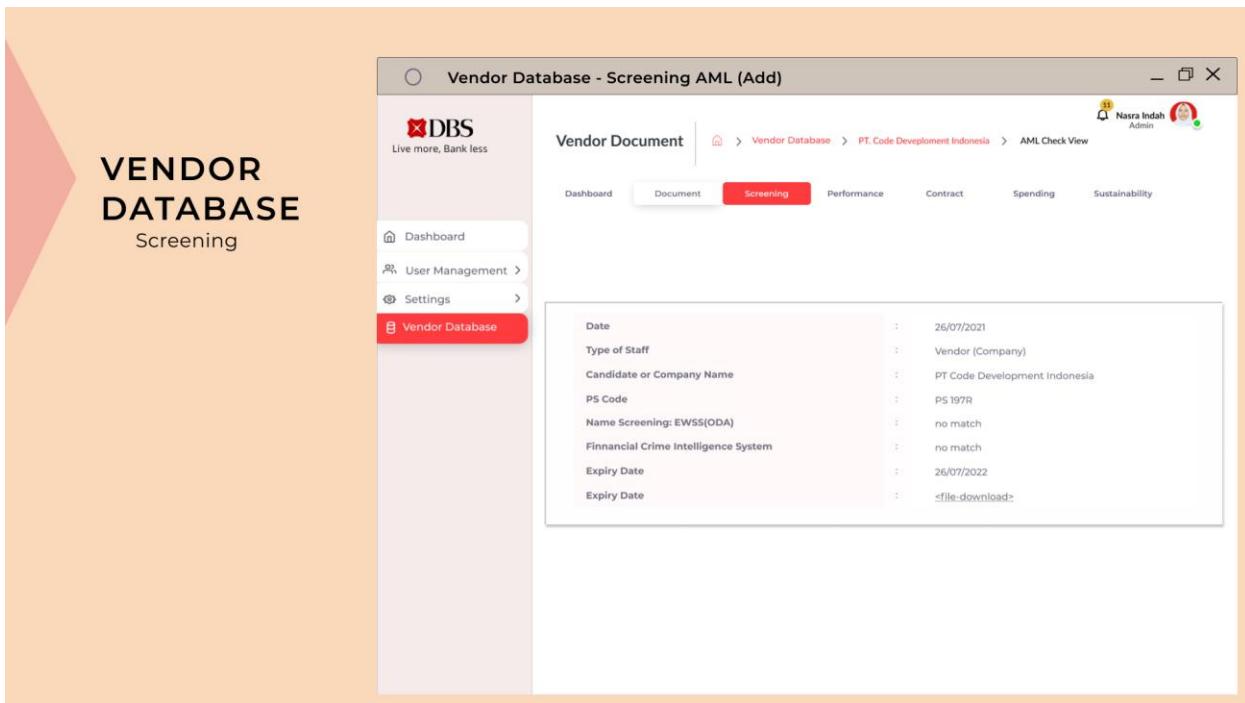


Figure 25. Vendor Database - Screening AML (add)

#### 4.2.1.18. Vendor database – Screening AML (History)

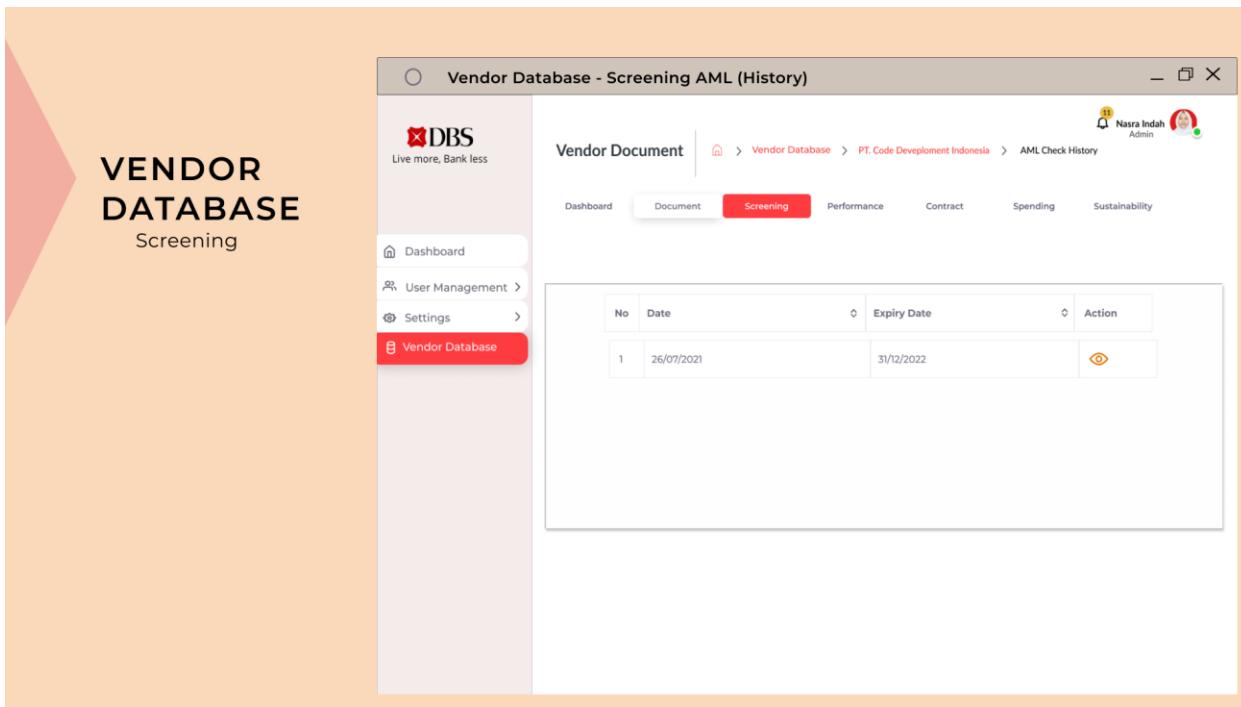


Figure 26. Vendor Database - Screening AML (History)

#### 4.2.1.19. Vendor database – Screening BL (View)

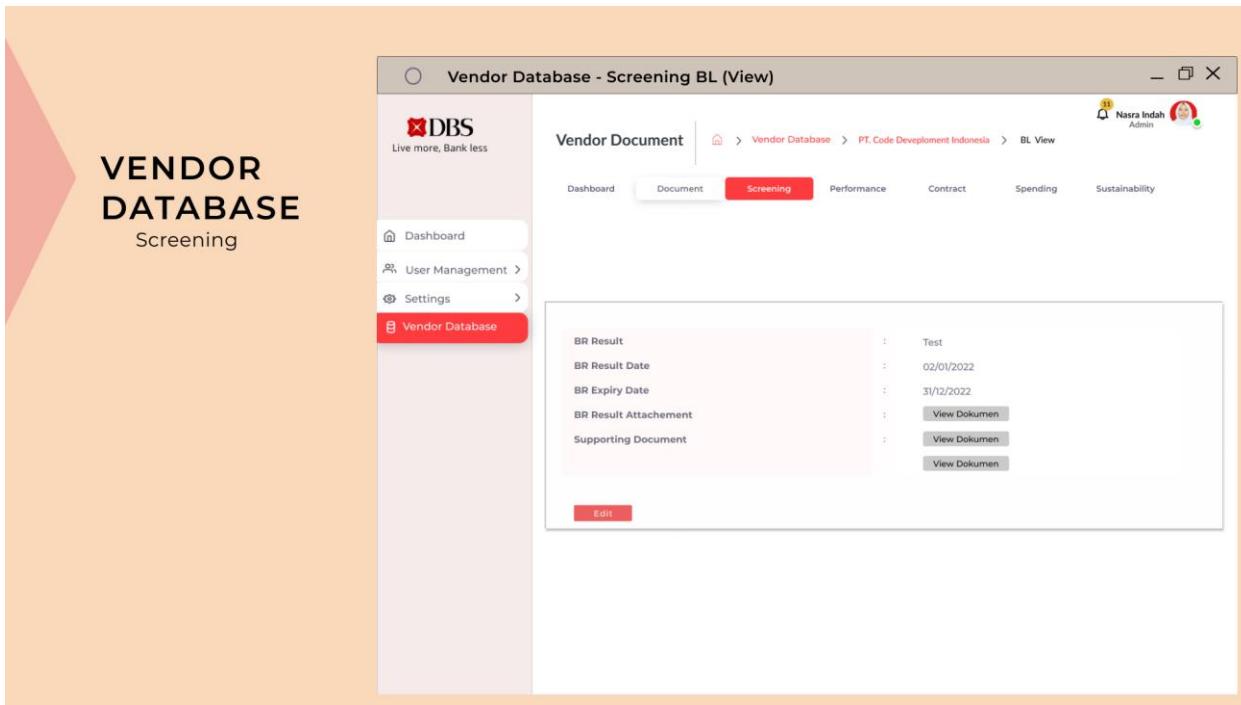


Figure 27. Vendor Database - Screening BL (View)

#### 4.2.1.20. Vendor database – Screening BL (Add)

The screenshot shows the 'Vendor Database - Screening BL (Add)' page. The left sidebar has a red arrow pointing right with the text 'VENDOR DATABASE' above 'Screening'. The main content area has a header 'Vendor Document' with a back arrow, 'Vendor Database', 'PT. Code Development Indonesia', and 'BL Check Add'. Below the header are tabs: Dashboard, Document, **Screening**, Performance, Contract, Spending, and Sustainability. The 'Screening' tab is active. The main form contains fields: 'BR Result' (input field), 'BR Result Date' (input field), 'BR Result Attachment' (input field), 'Supporting Document' (input field containing 'Supporting-document1.pdf' with a trash icon), and a 'Submit' button.

Figure 28. Vendor Database - Screening BL (Add)

#### 4.2.1.21. Vendor database – Screening BL (History)

The screenshot shows the 'Vendor Database - Screening BL (History)' page. The left sidebar has a red arrow pointing right with the text 'VENDOR DATABASE' above 'Screening'. The main content area has a header 'Vendor Document' with a back arrow, 'Vendor Database', 'PT. Code Development Indonesia', and 'BL Check History'. Below the header are tabs: Dashboard, Document, **Screening**, Performance, Contract, Spending, and Sustainability. The 'Screening' tab is active. The main content area contains a table titled 'Screening History' with columns: No, Date, Expiry Date, and Action. The table has two rows:

No	Date	Expiry Date	Action
1	26/07/2021	31/12/2022	
2	03/01/2021	31/12/2022	

Figure 29. Vendor database – Screening BL (History)

#### 4.2.1.22. Vendor database – Screening BIR (View)

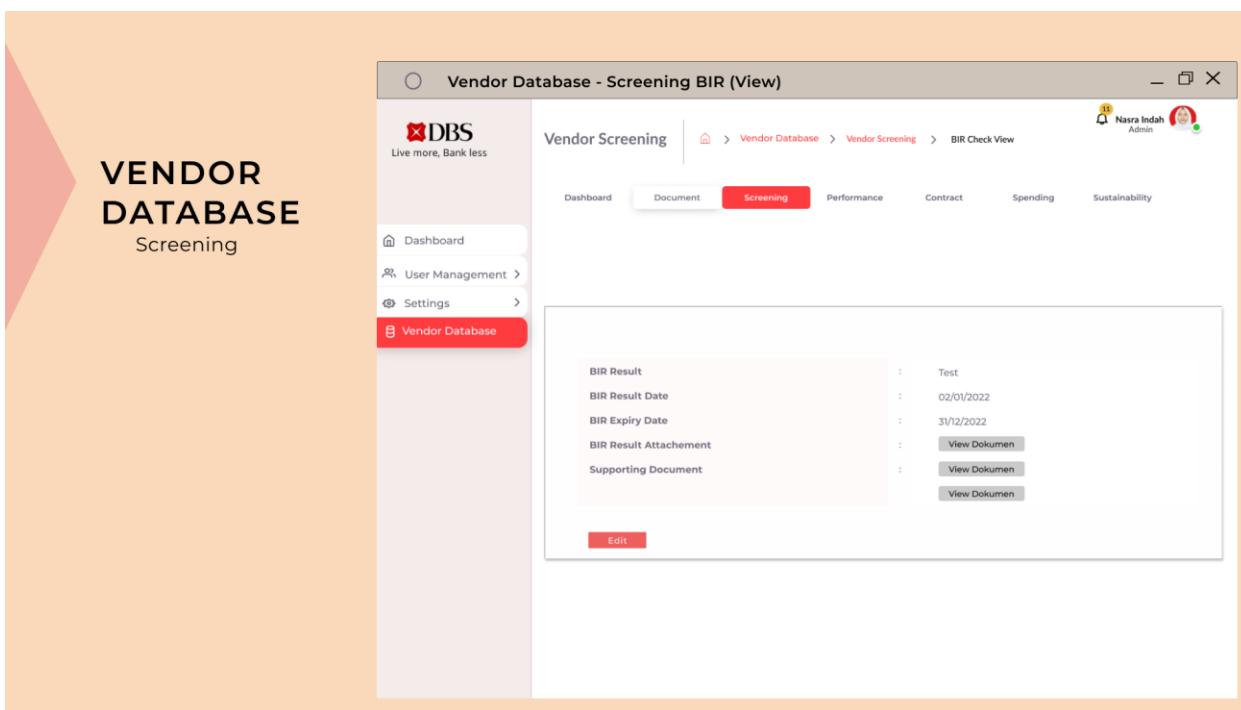


Figure 30. Vendor database – Screening BIR (View)

#### 4.2.1.23. Vendor database – Screening BIR (Add)

BIR Result	<input type="text"/>
BIR Result Date	<input type="date"/>
BIR Result Attachement	<input type="file"/>
Supporting Document	<input type="file"/> Supporting-document1.pdf

Figure 31. Vendor database – Screening BIR (Add)

#### 4.2.1.24. Vendor database – Screening BIR (History)

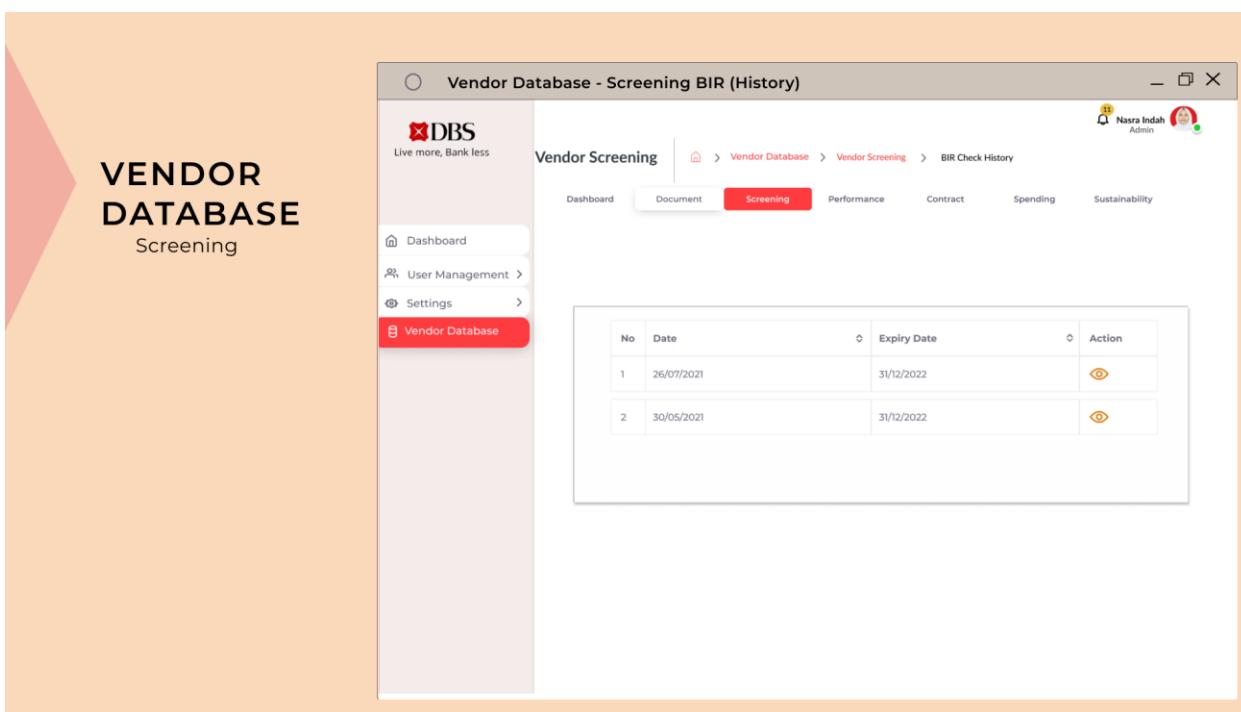


Figure 32. Vendor database – Screening BIR (History)

#### 4.2.1.25. Vendor database – Performance

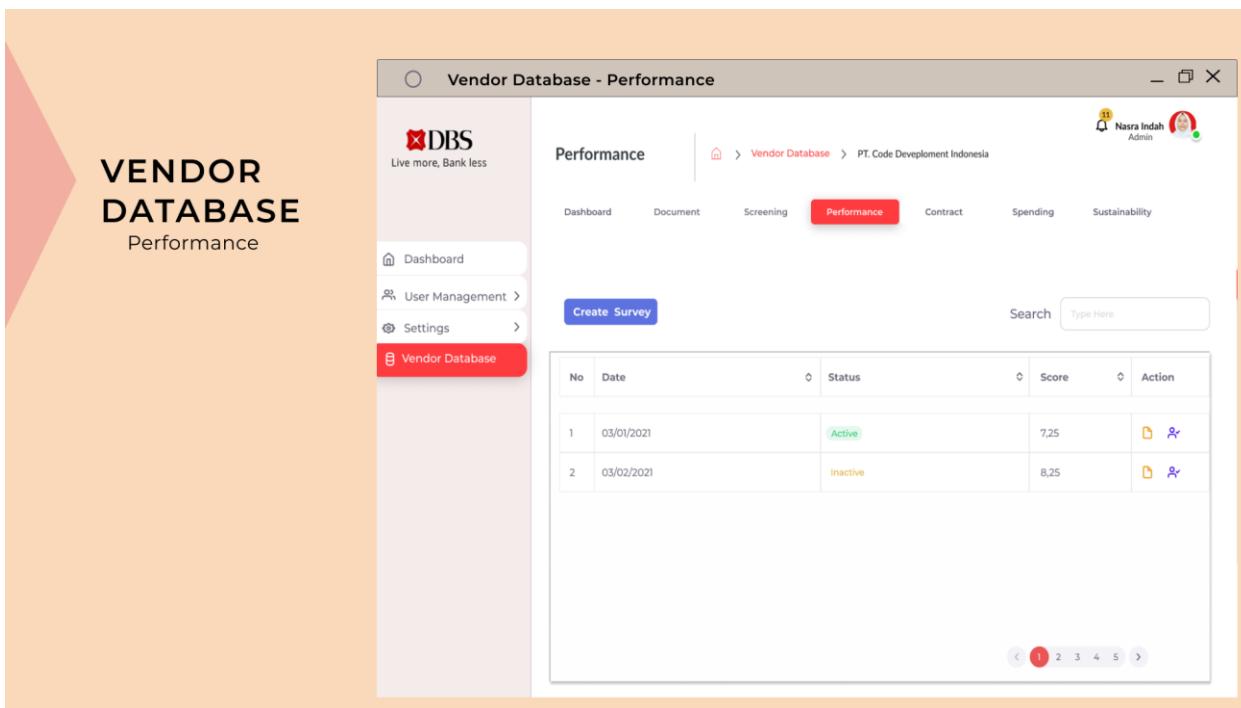


Figure 33. Vendor database – Performance

#### 4.2.1.26. Vendor database – Performance (Survey Participants)

The screenshot shows the 'Vendor Database - Performance (Survey Participants)' interface. The left sidebar has a red arrow pointing right and the text 'VENDOR DATABASE' above 'Performance'. The main content area has a header 'Survey Participants' with a back arrow, a breadcrumb 'Vendor Database > PT. Code Development Indonesia', and a user profile for 'Nasra Indah Admin'. Below the header are tabs: Dashboard, Document, Screening, **Performance**, Contract, Spending, and Sustainability. A 'Create Survey' button is at the top left of the main content. A search bar is at the top right. The main area displays a table of survey results:

NO	Participants	STATUS	SCORE	ACTION
1	Haminullah@dbs.com	Submitted	7	<button>View</button> <button>Resend</button> <button>Change Email</button>
2	nasra@dbs.com	Submitted	8	<button>View</button> <button>Resend</button> <button>Change Email</button>

Pagination controls (1, 2, 3, 4, 5, >) are at the bottom of the table.

Figure 34. Vendor database – Performance (Survey Participants)

#### 4.2.1.27. Vendor database – Performance (Survey Results)

The screenshot shows the 'Vendor Database - Performance (Survey Results)' interface. The left sidebar has a red arrow pointing right and the text 'VENDOR DATABASE' above 'Performance'. The main content area has a header 'Survey Results' with a back arrow, a breadcrumb 'Vendor Database > PT. Code Development Indonesia > Survey Results', and a user profile for 'Nasra Indah Admin'. Below the header are tabs: Dashboard, Document, Screening, **Performance**, Contract, Spending, and Sustainability. The main area displays a table of survey items:

No	Survey Items	Average Score	Action
1	Kecepatan kerja	8	<button>View Details</button>
2	Kualitas kerja	9	<button>View Details</button>
3	Komunikasi	7	<button>View Details</button>
4	Kerjasama	5	<button>View Details</button>

A summary box at the bottom shows 'Score 7,25'. Pagination controls (1, 2, 3, 4, 5, >) are at the bottom of the table.

Figure 35. Vendor database – Performance (Survey Results)

#### 4.2.1.28. Vendor database – Contract

The screenshot shows the 'Vendor Database - Contract' interface. The left sidebar has a pink arrow graphic and the text 'VENDOR DATABASE' above 'Contract'. The main area has a header 'Contract' with a back button, a breadcrumb 'Vendor Database > PT. Code Development Indonesia', and a navigation bar with tabs: Dashboard, Document, Screening, Performance, Contract (which is highlighted in red), Spending, and Sustainability. On the right, there is a search bar and a table listing contracts. The table columns are: NO, Contract Number, Start Date, Expiry Date, Contract Amount, Contract Owner Name, and Contract Owner SM. Two rows of data are shown:

NO	Contract Number	Start Date	Expiry Date	Contract Amount	Contract Owner Name	Contract Owner SM
1	Y21-DBS-IDN-00001	03/01/2021	03/12/2022	IDR 100.000.000,-	Haminullah	Irfansyah
2	Y21-DBS-IDN-00002	05/01/2021	05/06/2022	IDR 50.000.000,-	Fajar	Nasra

At the bottom right of the table is a page navigation with numbers 1, 2, 3, 4, 5, and a next/last icon.

Figure 36. Vendor database – Contract

#### 4.2.1.29. Vendor database – Spending

The screenshot shows the 'Vendor Database - Spending' interface. The left sidebar has a pink arrow graphic and the text 'VENDOR DATABASE' above 'Spending'. The main area has a header 'Spending' with a back button, a breadcrumb 'Vendor Database > PT. Code Development Indonesia', and a navigation bar with tabs: Dashboard, Document, Screening, Performance, Contract, Spending (highlighted in red), and Sustainability. On the right, there is a table listing spending data. The table has two sections: 'SPENDING' and 'INVOICE'. The 'SPENDING' section has columns: NO, YEAR, IDR, USD, SGD, and KET. The 'INVOICE' section has columns: NO, YEAR, IDR, USD, SGD, and KET. Two rows of data are shown:

NO	YEAR	SPENDING			INVOICE			KET
		IDR	USD	SGD	IDR	USD	SGD	
1	2021	30.000.000	0	0	30.000.000	0	0	
2	2022	20.000.000	0	0	20.000.000	0	0	

At the bottom right of the table is a page navigation with numbers 1, 2, 3, 4, 5, and a next/last icon.

Figure 37. Vendor database – Spending

## 4.2.2. High Fidelity

### 4.2.2.1. Login

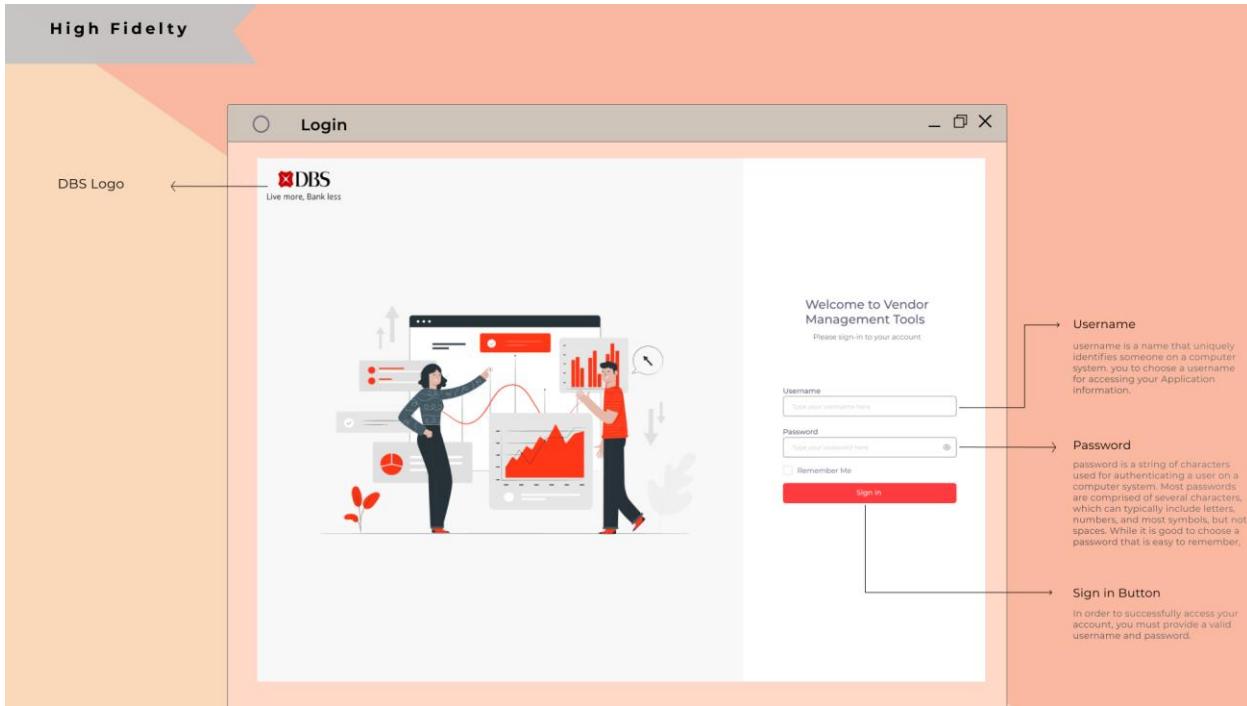


Figure 38. Login

### 4.2.2.2. Dashboard



Figure 39. Dashboard

#### 4.2.2.3. User Management

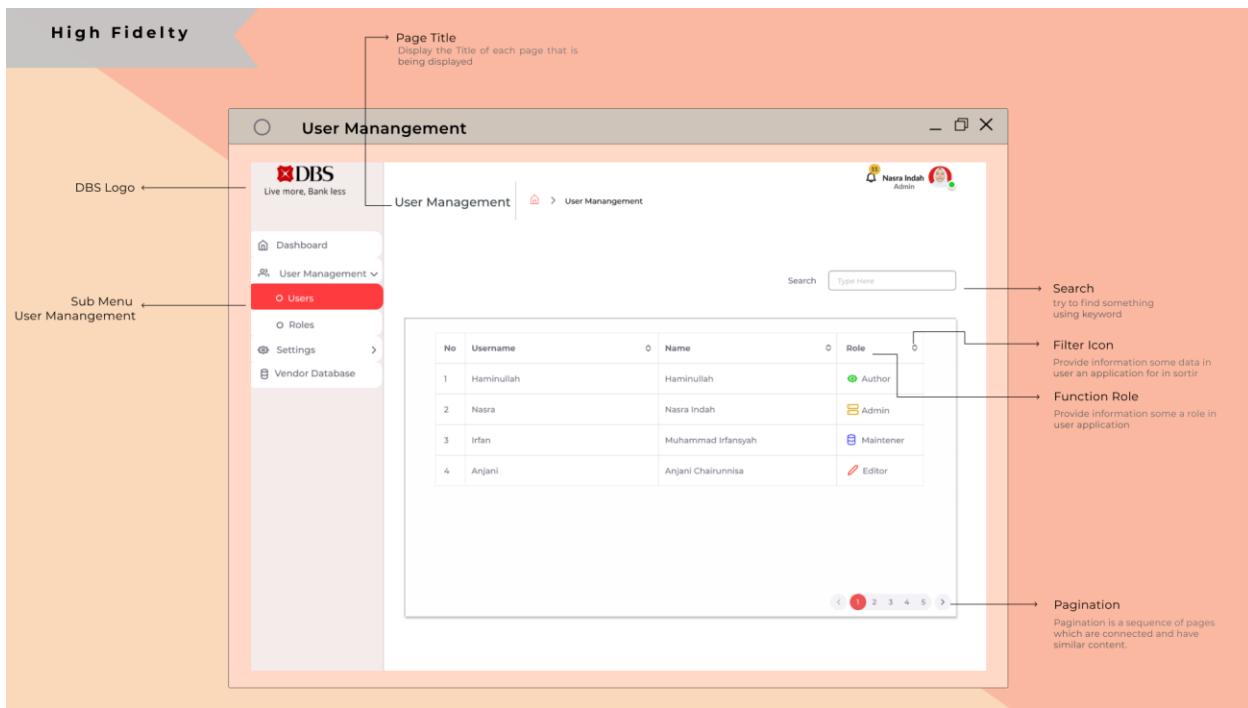


Figure 40. User Management

#### 4.2.2.4. Setting – Document Type

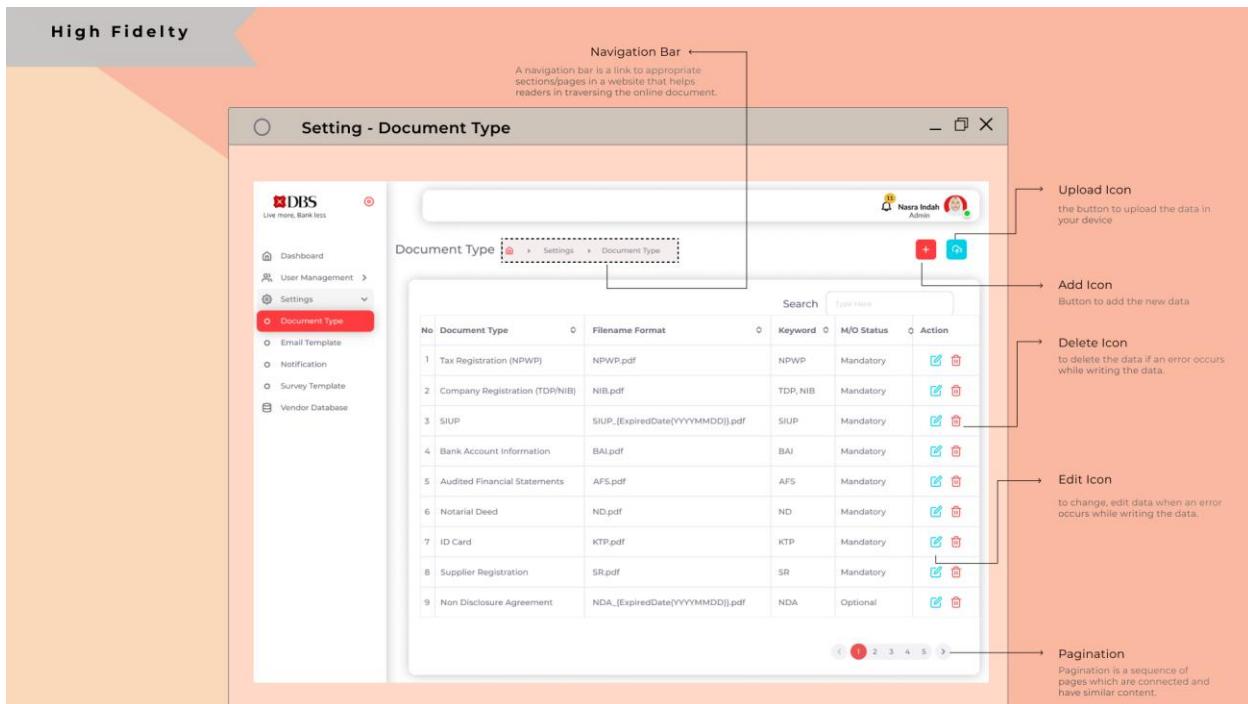


Figure 41. Setting - Document Type

#### 4.2.2.5. Setting – Email Template

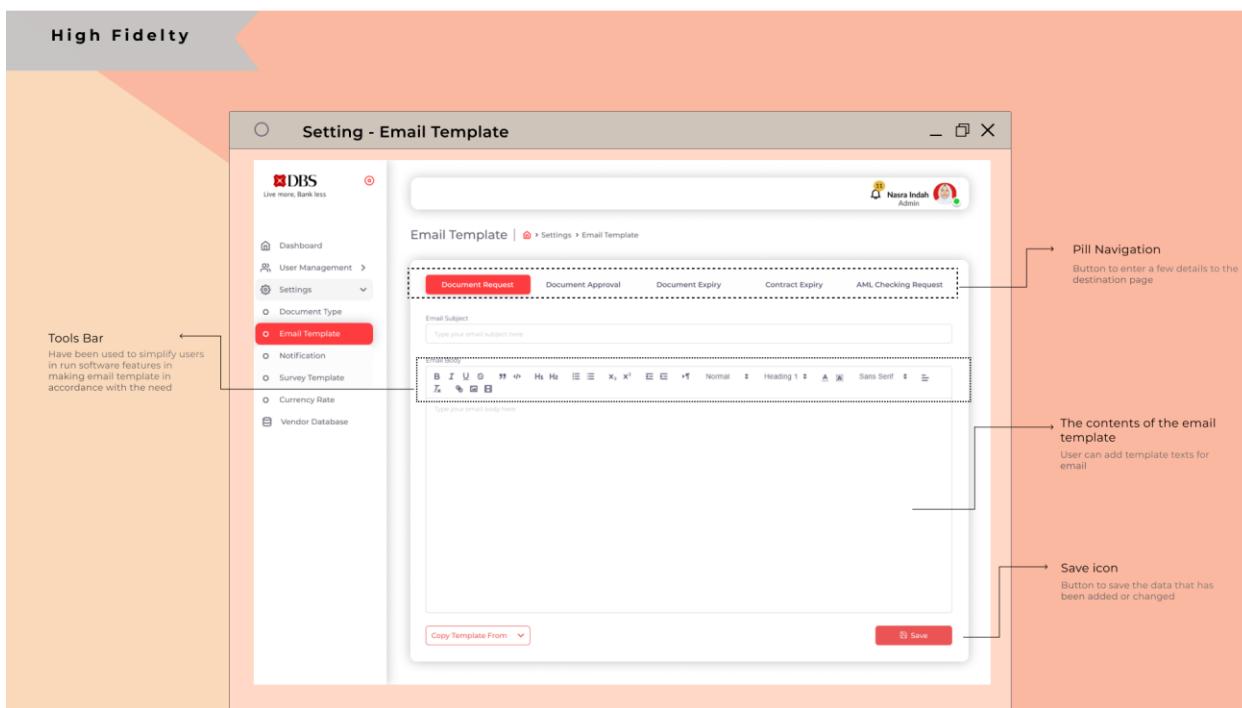


Figure 42. Setting – Email Template

#### 4.2.2.6. Setting – Notification

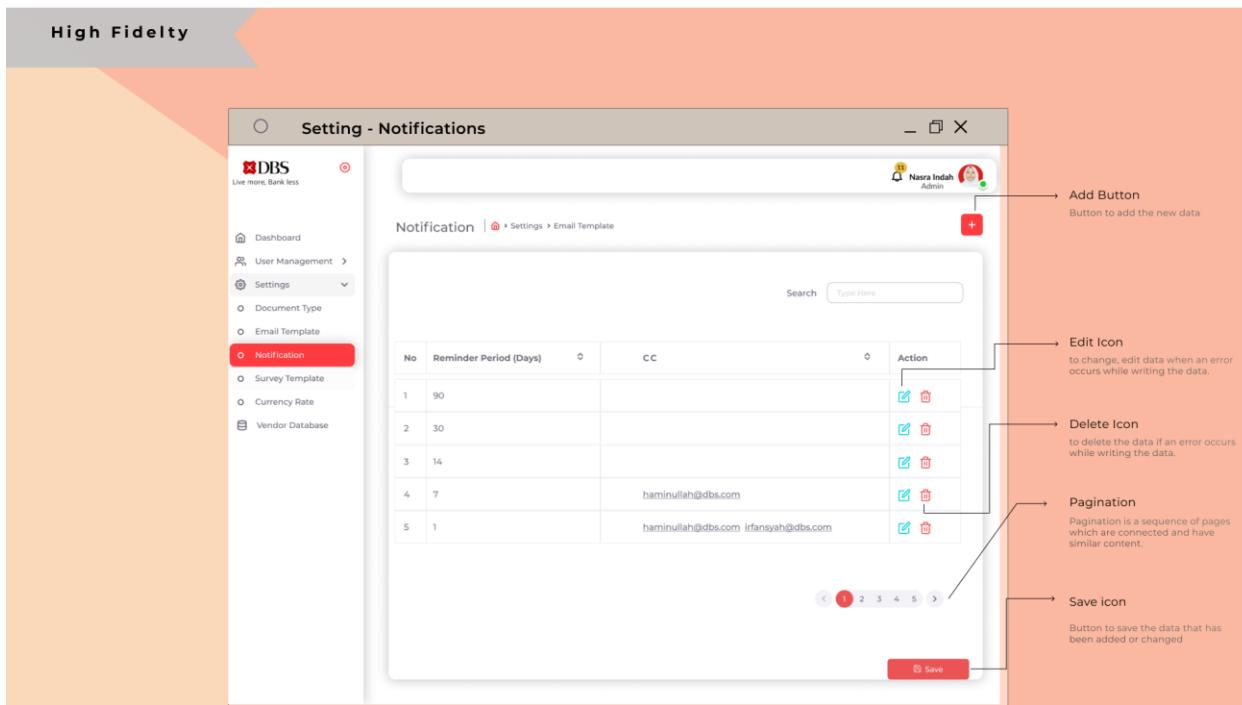


Figure 43. Setting – Notification

#### 4.2.2.7. Setting – Survey Template

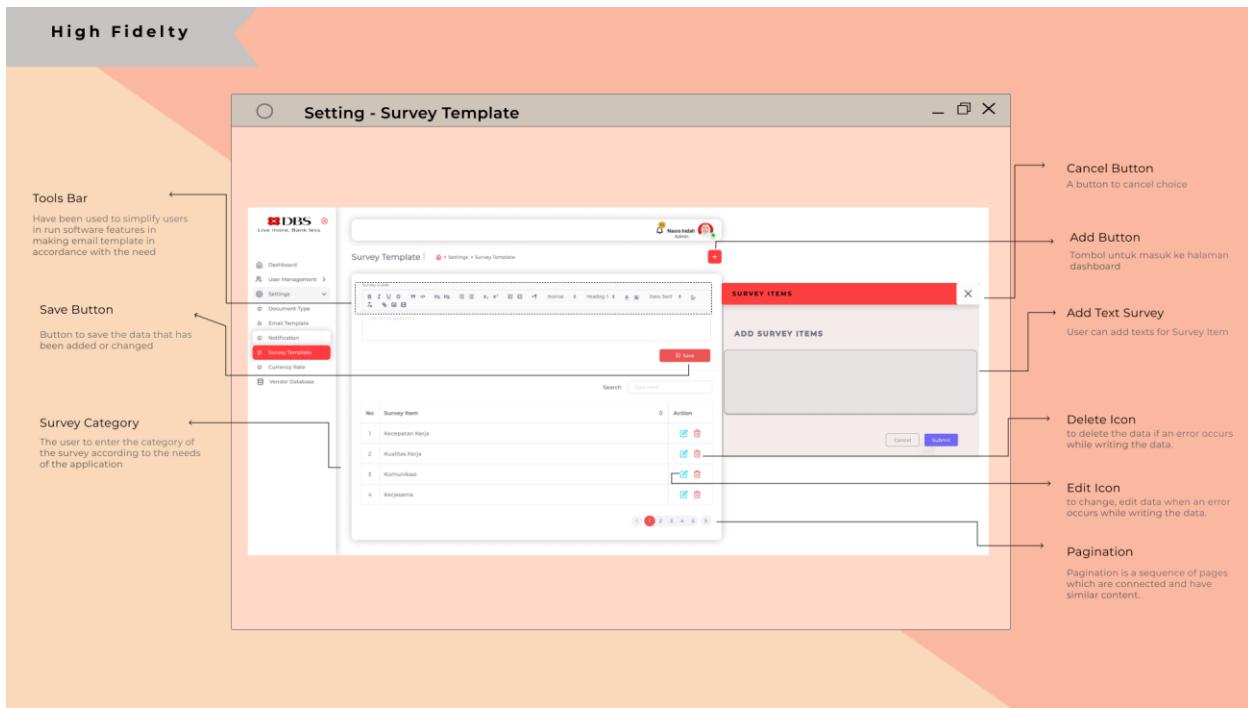


Figure 44. Setting – Survey Template

#### 4.2.2.8. Setting – Currency Rate

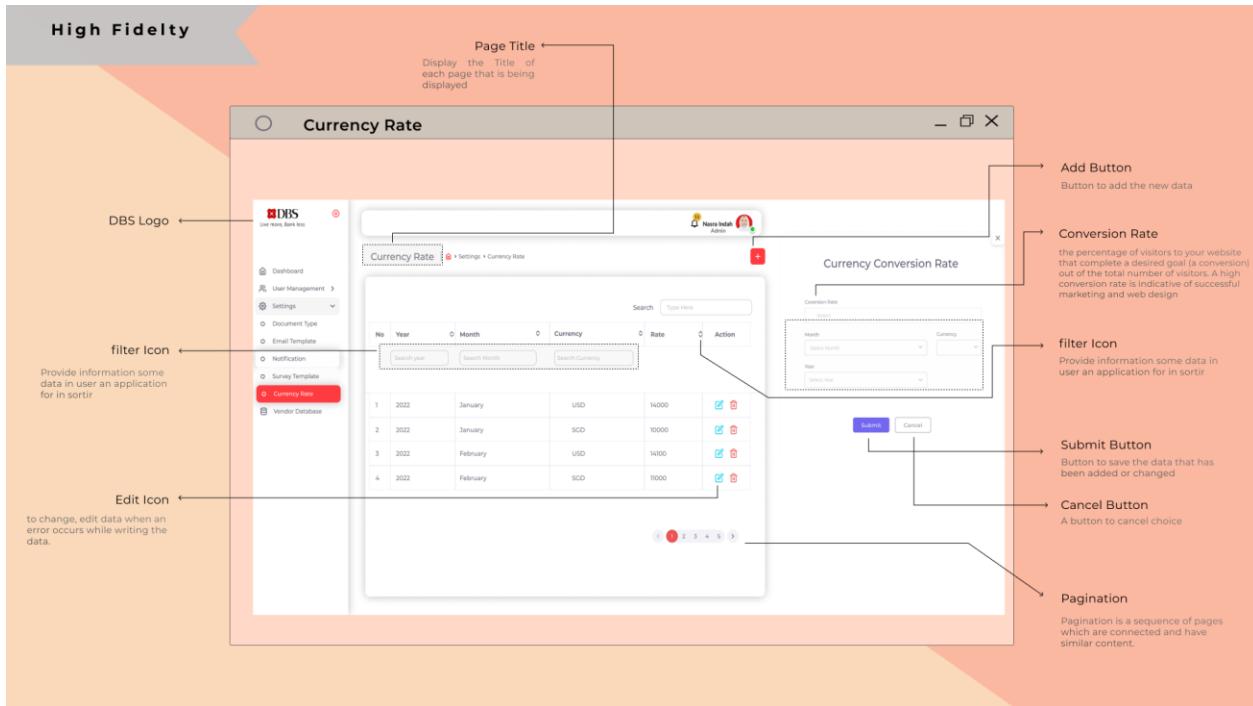


Figure 45. Setting – Currency Rate

#### 4.2.2.9. Vendor Database

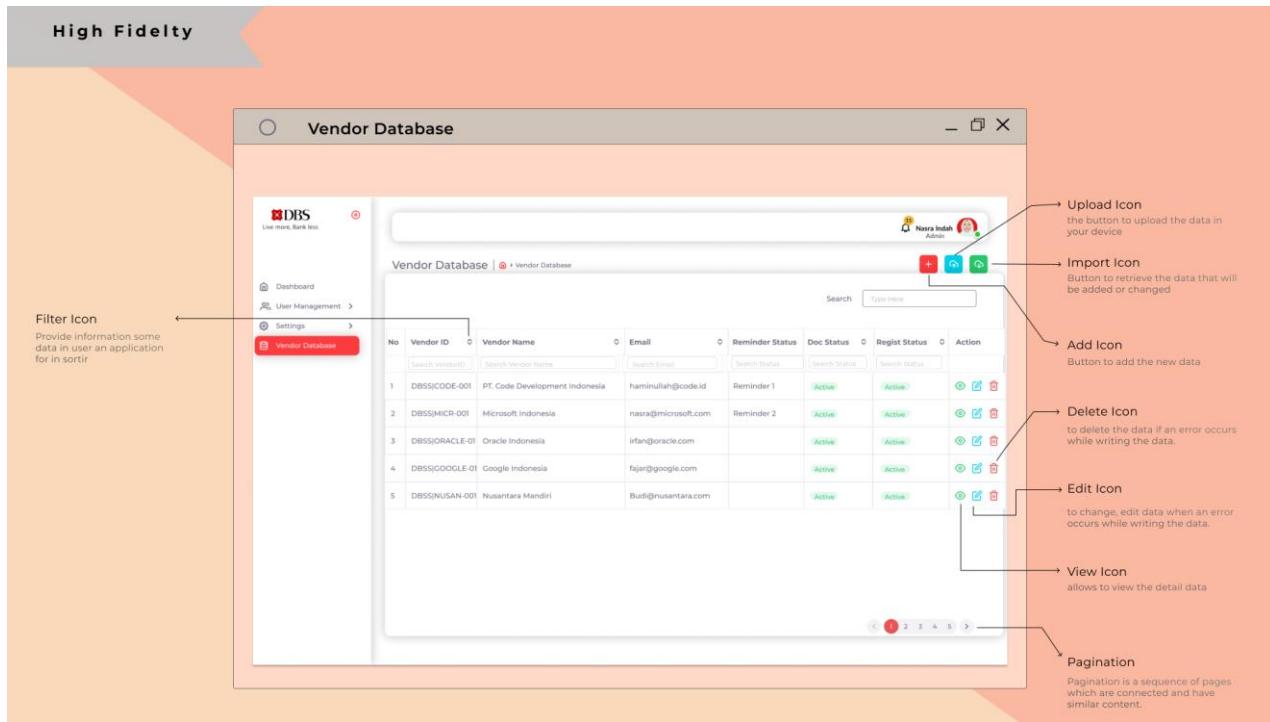


Figure 46. Vendor Database

#### 4.2.2.10. Vendor database – Dashboard

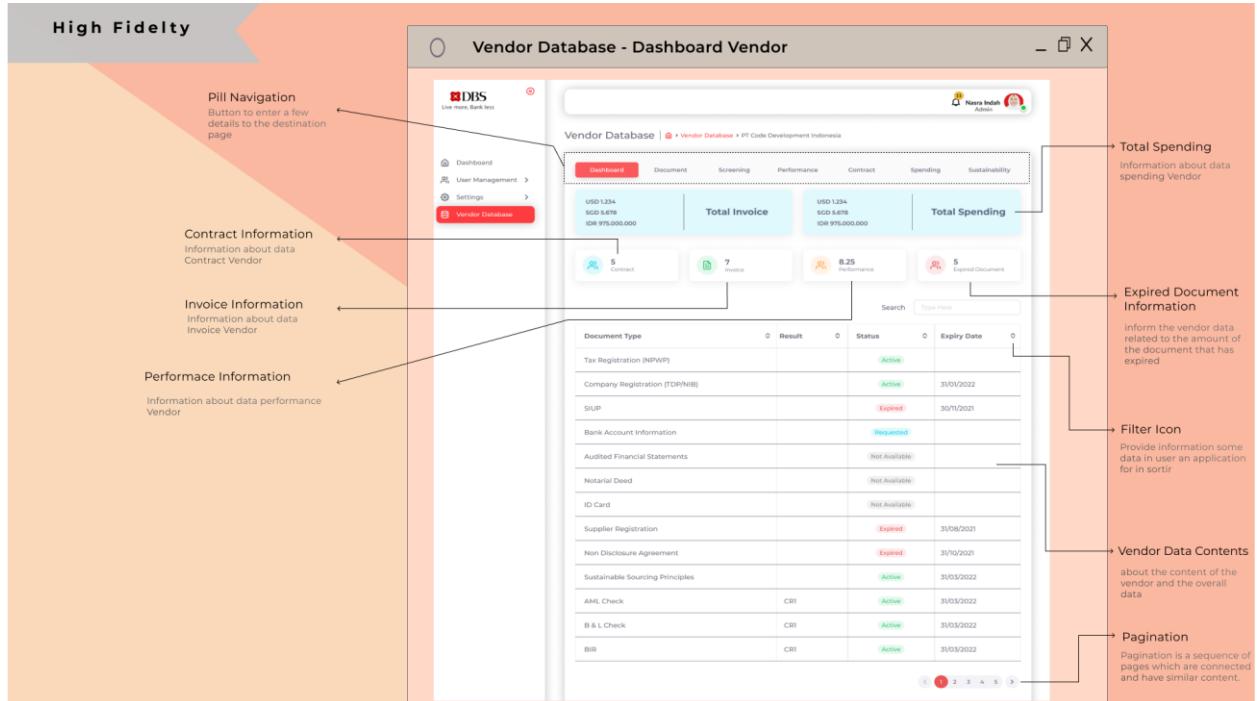


Figure 47. Vendor Database - Dashboard

#### 4.2.2.11. Vendor database – Document

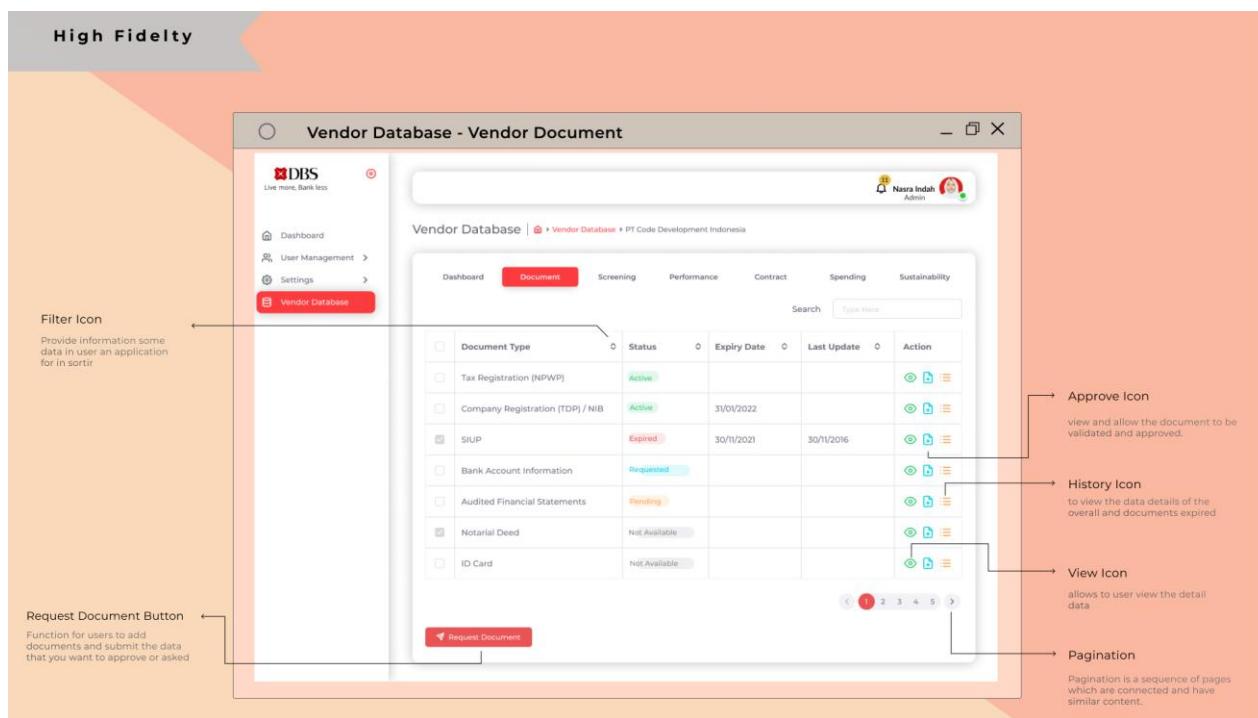


Figure 48. Vendor database – Document

#### 4.2.2.12. Vendor database – Vendor Screening

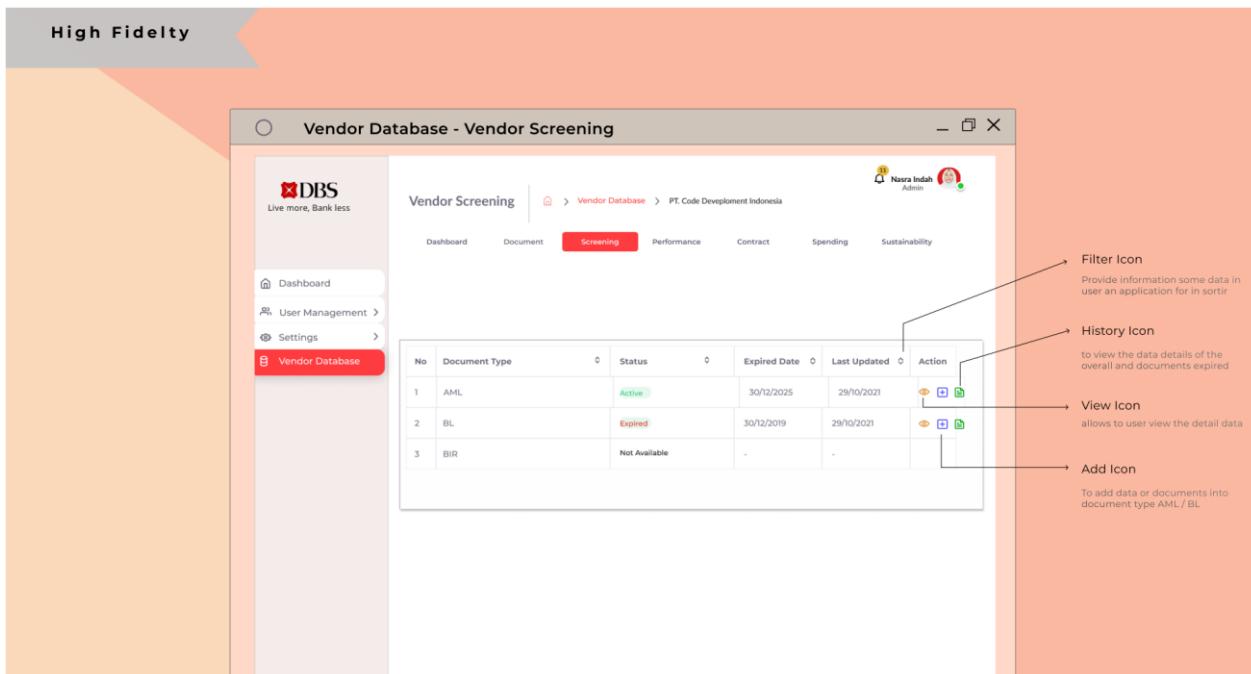


Figure 49. Vendor database – Vendor Screening

#### 4.2.2.13. Vendor database – Vendor Performance

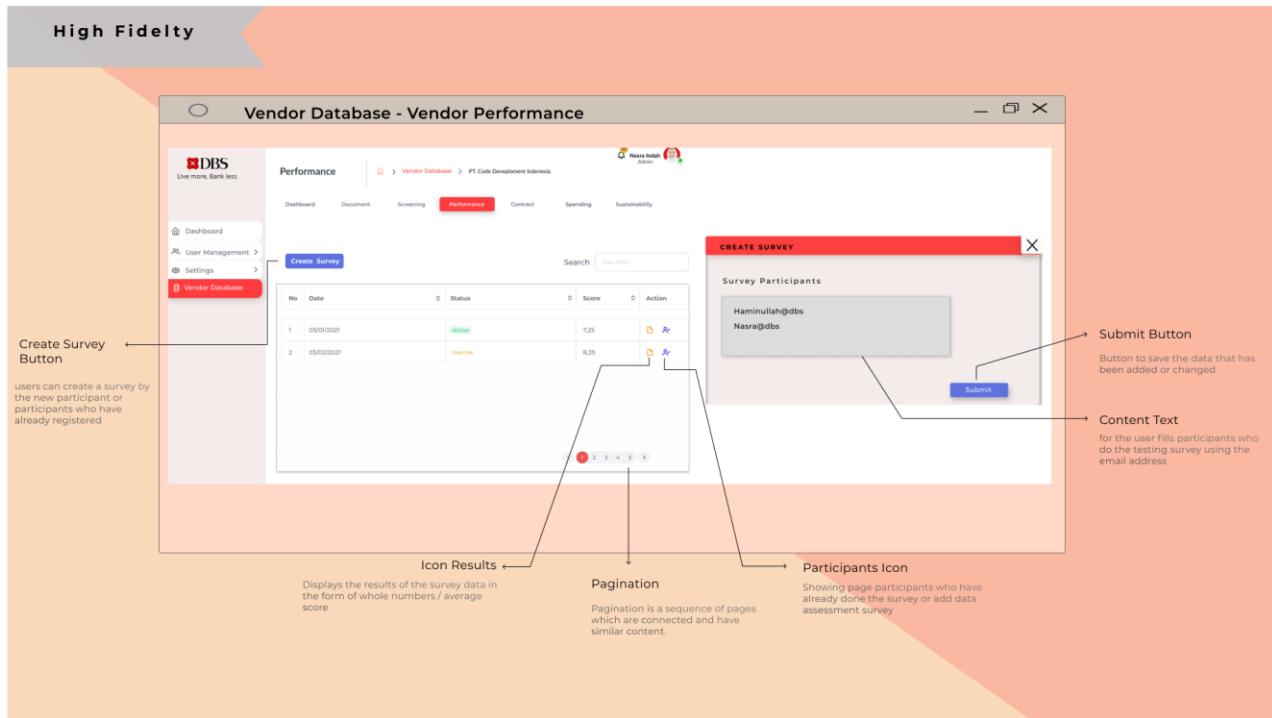


Figure 50. Vendor database – Vendor Performance

#### 4.2.2.14. Vendor database – Contract

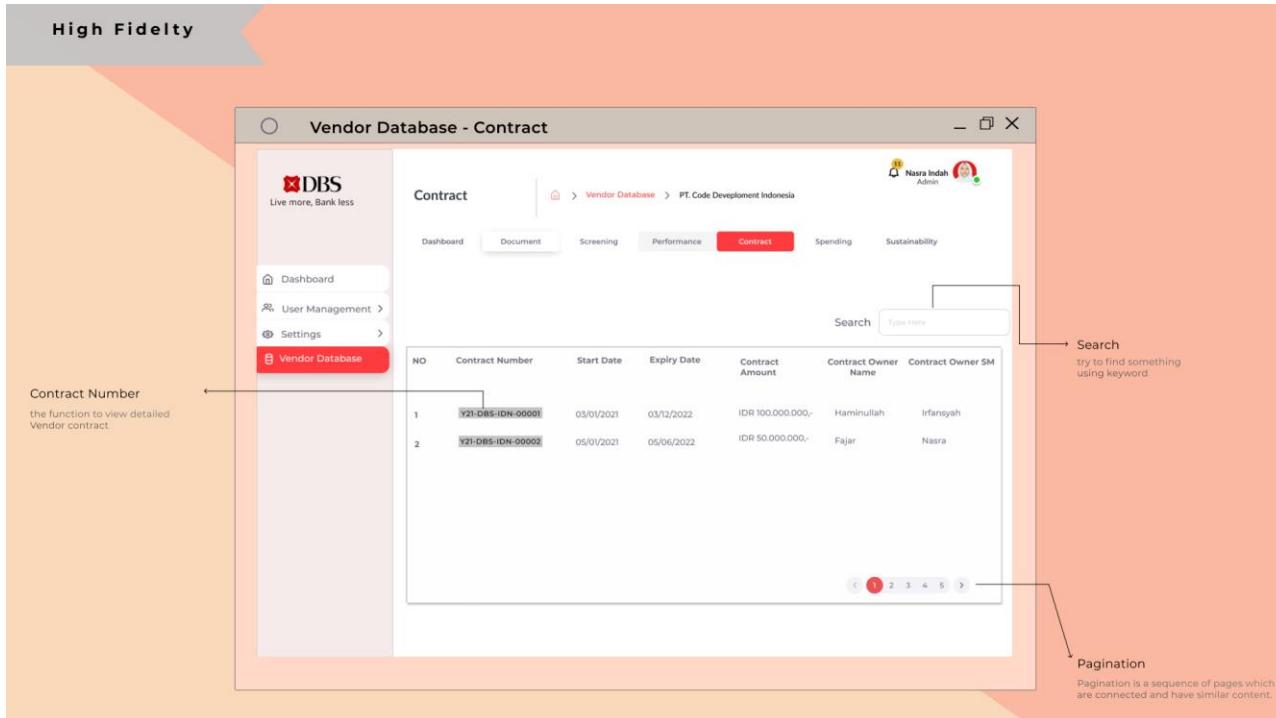


Figure 51. Vendor database – Contract

#### 4.2.2.15. Vendor Database – Spending

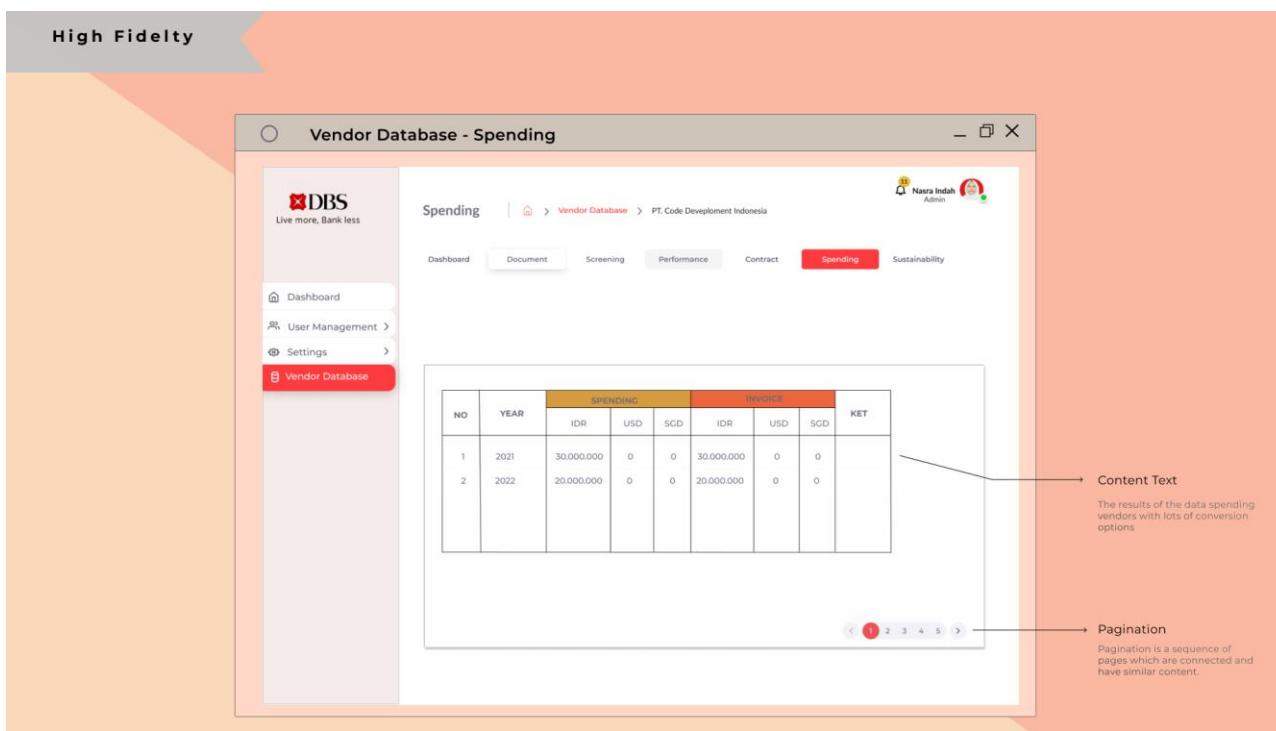


Figure 52. Vendor database – Contract

## 4.2.3. Wireframe

### 4.2.3.1. Main Page

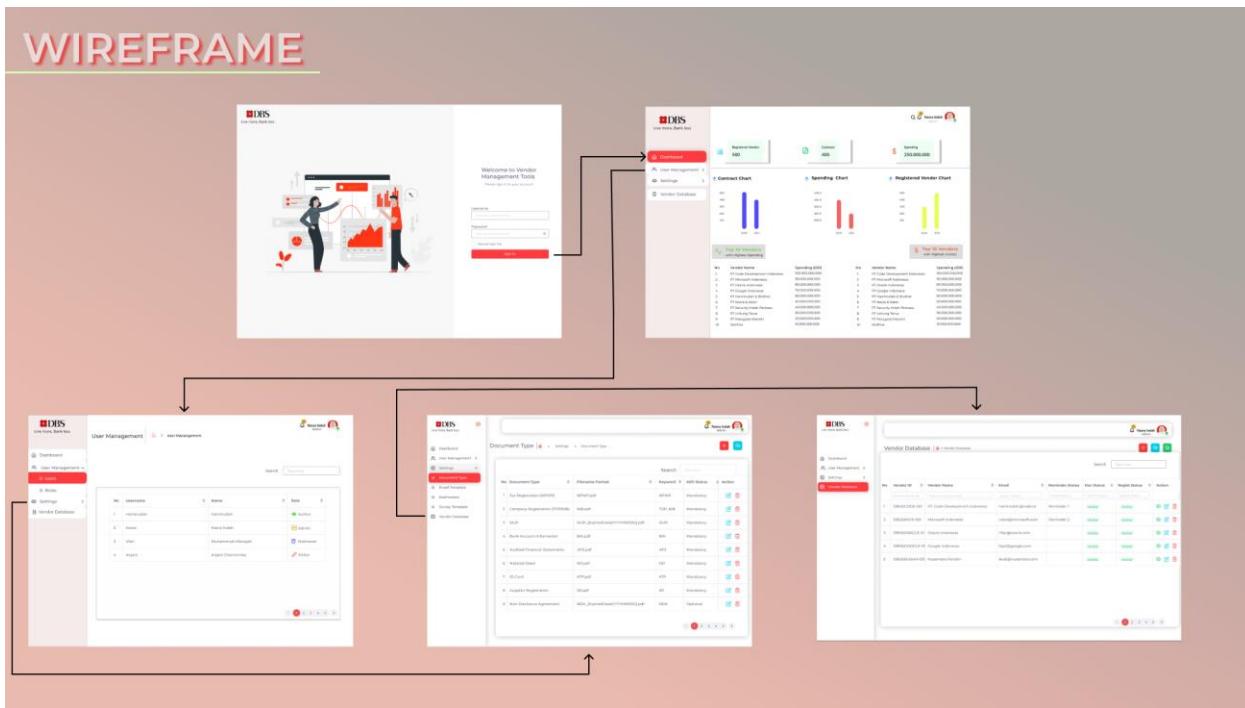


Figure 53. Main Page

### 4.2.3.2. Wireframe – Setting Function

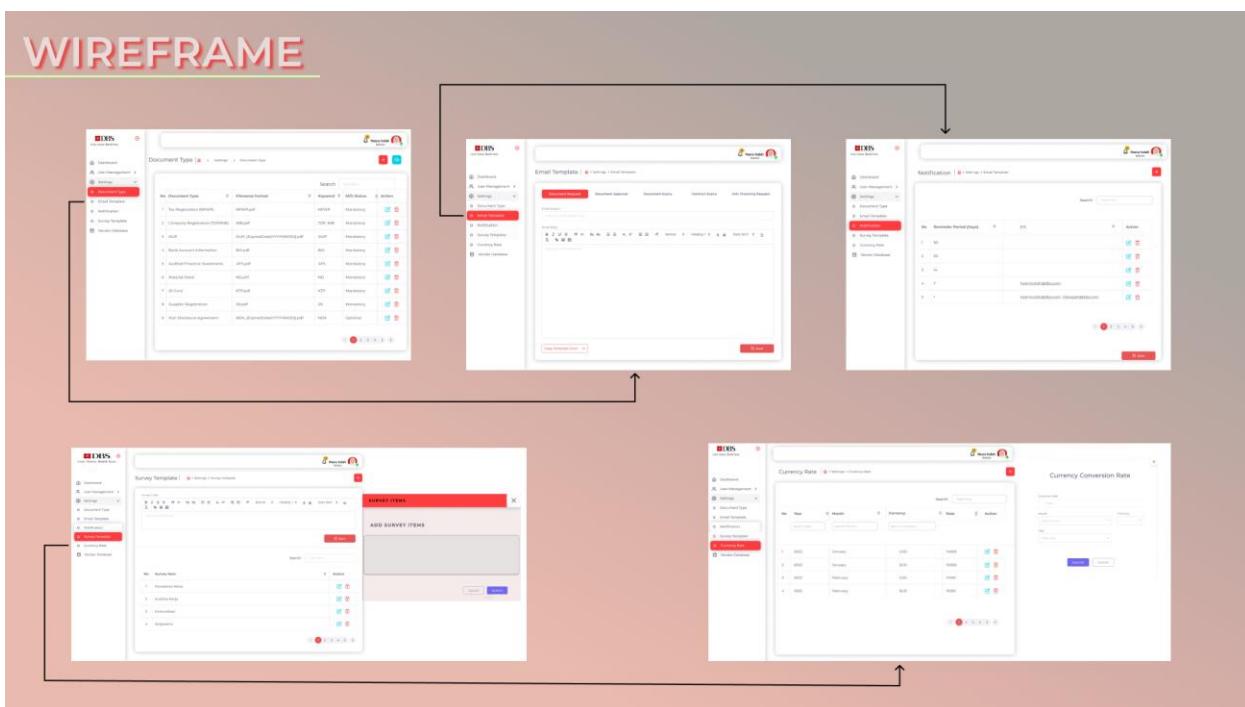


Figure 54. Wireframe – Setting Function

#### 4.2.3.3. Wireframe – Vendor database Function

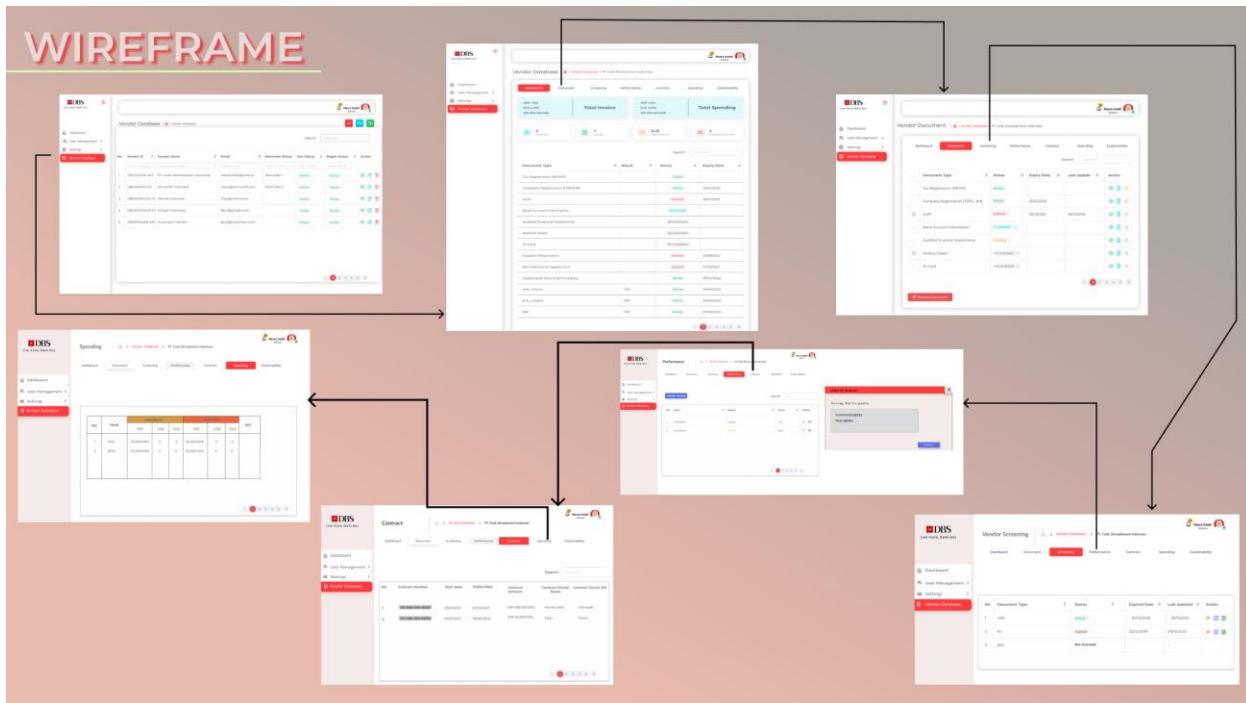


Figure 55. Wireframe – Vendor database Function

#### 4.2.3.4. Wireframe – Vendor Document Function

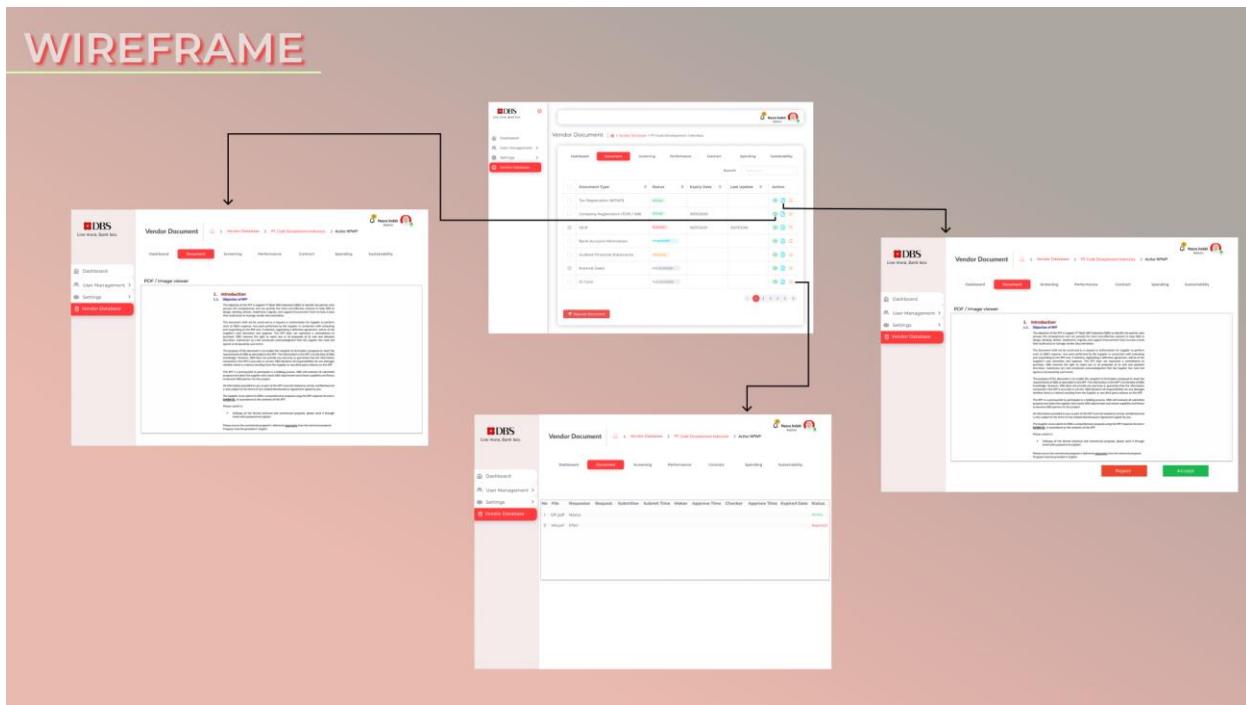


Figure 56. Wireframe – Vendor Document Function

#### 4.2.3.5. Wireframe – Vendor Screening Function

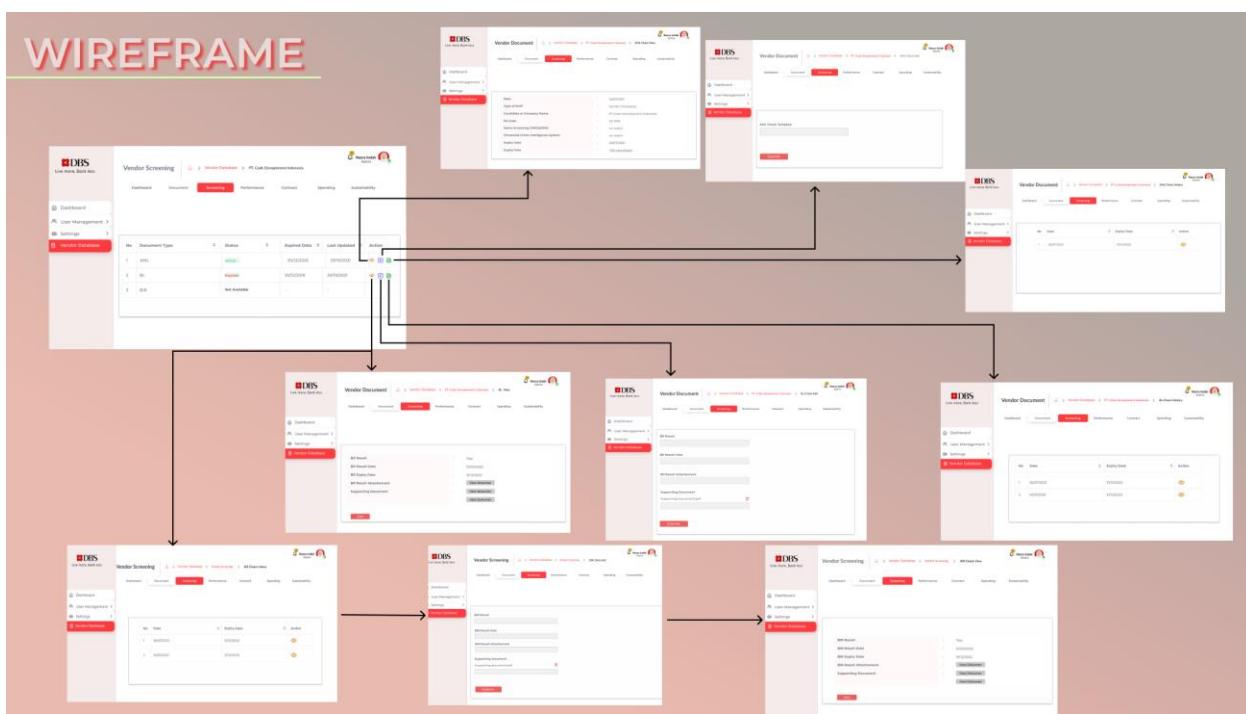


Figure 57.Wireframe – Vendor Screening Function

#### 4.2.3.6. Wireframe – Vendor performance Function

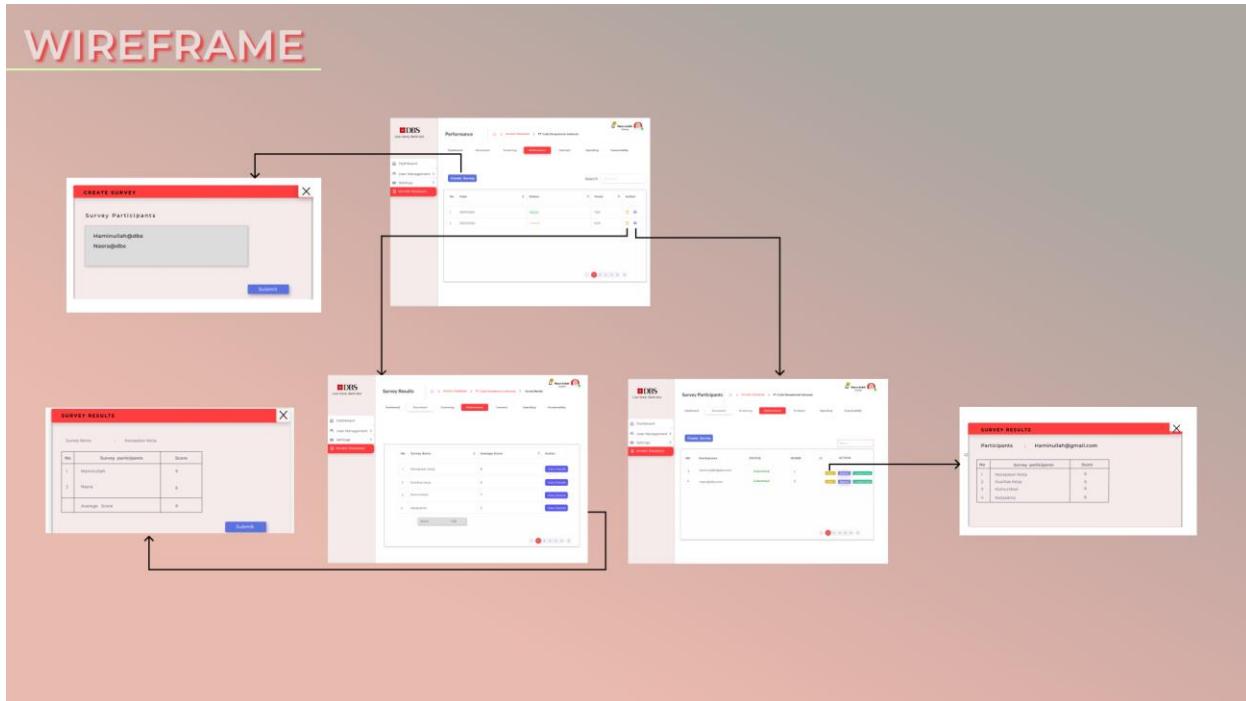


Figure 58. Wireframe – Vendor performance Function