Table of Contents

Introduction: Company is pleased to announce the release of a Request for Quotation (RFQ) for the development of a comprehensive RFQ management system for extension projects on the K2 platform. This project is crucial for enhancing our procurement process efficiency and transparency. The proposed system will consist of various modules, and we require detailed quotations for each module separately to facilitate the selection process for full or partial implementation

1 Scope of work:

The scope of work for this RFQ is to develop RFQ management system for extension project which consist of the following models:

- Vendor registration model
- Vendor portal
- Admin portal
- RFQ model
- Awarding model
- Cancellation model
- Finance portal
- Withdraw model
- Project execution model
- QS model

The detail of each model as follows:

Software Requirements Specification (SRS) vendor registration model

1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed specification for the Vendor Registration module of the RFQ system. This module will facilitate the registration, verification, and approval of vendors who wish to participate in the RFQ process.

1.2 Scope

This document covers the requirements for the Vendor Registration module, including user interface specifications, validation and verification processes, approval workflow, security measures, performance expectations, and user roles and permissions.

2. Overall Description

2.1 Product Perspective

The Vendor Registration module is a component of the RFQ system, designed to handle the registration, verification, and approval of vendors. This module will be integrated with other modules of the RFQ system but will not require any external integrations.

2.2 User Classes and Characteristics

- **Vendors**: Individuals or companies registering to participate in the RFQ process.
- **Vendor Management**: Internal team responsible for reviewing vendor documents.
- **Project Extension Team**: Internal team responsible for final approval of vendor registration.

2.3 Operating Environment

The system will be a web application running on the K2 platform and hosted on-premises

2.4 Design and Implementation Constraints

- The system must follow the best practices for web development and data security.
- The system must include OTP to prevent automated registrations.

3. Specific Requirements

3.1 User Interface and Experience

3.1.1 Registration Form

The registration form will include the following fields:

- Company Name
- Authorized Person Name
- Address
- City
- State
- Contact Person Name
- Contact Phone
- Contact Email
- Contractor Grade

3.1.2 Language Support

- The registration form and all related interfaces will support only English and Arabic.

3.2 Validation and Verification

3.2.1 Field Validation

- **Email Format**: The contact email must follow standard email format (e.g., user@example.com).
- **Phone Number Format**: The contact phone number must follow the standard phone number format (e.g., +1-800-555-5555).

3.2.2 Document Upload

Vendors must upload the following documents:

- Commercial Register
- Power of Attorney
- Tender Board Registration
- DCRP Registration

- Riyada Registration (if applicable)
- VAT Registration

3.2.3 OTP

- An OTP mechanism will be included in the registration form to prevent automated registrations. The OTP will come from internal SMS gateway.

3.3 Approval Workflow

3.3.1 Workflow Steps

1. Vendor submits registration form with required documents.
2. Vendor Management reviews the uploaded documents.
3. Project Extension team approves the registration.
4. The system automatically creates the vendor account upon approval.

3.3.2 Notifications

- Notifications for registration approval or rejection will be sent via email and SMS.

3.4 Security and Compliance

- The system will implement standard security practices for user authentication and data storage.

3.5 Performance and Scalability

- The system should handle up to 100 vendor registrations concurrent without performance degradation.

3.6 Reporting and Analytics

The system will support the following reports and analytics:

- **Registration Status Report**: Overview of pending, approved, and rejected registrations.
- **Document Verification Report:** Status of document verification for each vendor.
- **Vendor Activity Report:** Historical data on vendor registration activity over time. **3.7**

User Roles and Permissions

3.7.1 Roles

- **Vendor:** Can register and upload required documents.
- **Vendor Management:** Can review uploaded documents.
- **Project Extension:** Can approve or reject vendor registrations.

3.7.2 Permissions

- All roles will have specific permissions related to their responsibilities in the approval workflow.

4. Business Logic

4.1 Registration Logic

- Ensure all mandatory fields are filled before submission.
- Validate email and phone number formats.
- Validate company information to avoid creating doble account for same vendor
- Ensure all required documents are uploaded before submission.
- Include OTP verification.

4.2 Approval Logic

- Vendor Management can approve or reject the registration based on document verification.
- The Project Extension team can approve or reject the registration after Vendor Management's review.
- Upon approval by Project Extension, the system automatically creates a vendor account and sends notifications.

5. Testing Scenarios

5.1 Positive Test Cases

- **TC001**: Successful vendor registration with all required fields and documents.
- **TC002:** Successful approval workflow from Vendor Management to Project Extension.
- **TC003:** Successful notification via email and SMS upon registration approval.
- **TC004:** successful vendor registration if account does not exist.

5.2 Negative Test Cases

- **TC004:** Registration attempt with missing mandatory fields.
- **TC005:** Registration attempt with invalid email or phone number format.
- **TC006:** Registration attempt without uploading required documents.

- **TC007:** Excessive registration attempts triggering OTP.
- **TC008:** Registration attempt with exist same account.
- **TC009:** Registration attempt with exist CR

Integration:

- E-Tender
- SMS

Software Requirements Specification (SRS)

Vendor Portal Module

1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed specification for the Vendor Portal module of the RFQ system. This module will enable vendors to interact with the RFQ system, allowing them to view RFQs, submit quotations, track submission statuses, and receive notifications.

1.2 Scope

This document covers the requirements for the Vendor Portal module, including user interface specifications, vendor capabilities, access and authentication, notification and communication, integration, performance expectations, and user roles and permissions.

2. Overall Description

2.1 Product Perspective

The Vendor Portal module is a component of the RFQ system, designed to facilitate vendor interactions. It will integrate with the vendor registration module and the RFQ model and will utilize an internal SMS gateway for notifications.

2.2 User Classes and Characteristics

- **Vendors**: Users who have registered and are approved to access the RFQ system. They can view RFQs, submit quotations, and track submission statuses.
- **Vendor Admin:** Special vendor users with additional administrative capabilities within their organization.

2.3 Operating Environment

The system will be a web application running on the K2 platform and hosted on-premises. It will support only the English language.

2.4 Design and Implementation Constraints

- The system must follow the best practices for web development and data security.
- The system must handle concurrent access by up to 300 vendors.

3. Specific Requirements

3.1 User Interface and Experience

3.1.1 Features

- **View RFQ:** Vendors can view details of available RFQs.
- **Submit Quotation:** Vendors can submit their quotations in PDF format.
- **Track Submission Status:** Vendors can track the status of their submitted quotations.
- **Notifications:** Vendors receive notifications about new RFQs and submission statuses via email and SMS.

3.1.2 Language Support

- The portal will support only English.

3.2 Vendor Capabilities

3.2.1 Actions

- **View RFQs**: Access and read details of available RFQs.
- **Request for free issue material**: after awarding contractor request for free issue material (request material model)
- **Submit Quotations:** fill in the BOQ with price in the system, if required Upload supported document
- **Track Submission Status: Monitor** the status of their submitted quotations (e.g., pending, reviewed, approved, rejected).
- **Choose region:** vendor can choose which region to receive notification
- **Request for RFI:** once the project started the contractor can request for RFI
- **Request for partial energization** • **Request for full energization**
- **Request for variation order:** once the project started the contractor can request for VO
- **Request for QS:** once the project completed the contractor will request for QS and follow QS workflow
- **Print actual BOQ;** contractor can print actual BOQ
- **Dashboard:** show history of all activity

3.3 Access and Authentication

3.3.1 Authentication

- Vendors will authenticate using the username and password provided during the vendor registration process.
- Authentication will be managed through the vendor registration module.

3.4 Notification and Communication

3.4.1 Types of Notifications

- **New RFQ Notification:** Vendors will be notified of new RFQs.
- **Submission Status Notification:** Vendors will be notified of the status of their submissions.

3.4.2 Notification Methods

- **Email:** Notifications will be sent to the registered email addresses.
- **SMS:** Notifications will be sent via SMS using the internal SMS gateway.

3.5 Integration

3.5.1 Modules

- **Vendor Registration Module:** To authenticate and manage vendor accounts.
- **RFQ Model:** To retrieve and manage RFQ details.
- **Internal SMS Gateway:** To send SMS notifications.

3.6 Performance and Scalability

3.6.1 Requirements

- The system must handle up to 300 concurrent vendor users.
- No specific performance SLA is required.

3.7 Reporting and Analytics

3.7.1 Suggested Reports

- **RFQ Participation Report:** List of vendors who have viewed each RFQ.
- **Quotation Submission Report:** Details of submitted quotations including status and timestamps.
- **Notification Delivery Report:** Status of email and SMS notifications sent to vendors.

4. Business Logic

4.1 RFQ Viewing Logic

- Vendors can view RFQs only if they are logged in.
- Vendors can apply for RFQ only when they apply status is (Active)
- If apply status is in-active, then they can view but cannot apply new RFQ only.
- Vendors can only see RFQs that are open and applicable to their category.

4.2 Quotation Submission Logic

- Vendors must fill in the RFQ form and upload supporting document if required
- Upon submission, the system validates the format and size before accepting the document.
- System validates if same vendor already submitted even if they have different account
- The system sends a confirmation notification upon successful submission.

4.3 Submission Status Tracking Logic

- The system updates the submission status based on actions taken by the internal review team.
- Vendors receive notifications on status changes.

5. Admin portal

- Project extension will be able to active and deactivate the apply status for vendor.
- If the status of application is active, then vendor can apply (submit offers) and other actions.
- If the status of apply is deactivate, then vendor can only view and cannot perform any actions.
- Create, edit the Estimated cost Master Items list (Region Wise) + Remote Percentage.
- Change closing Date.
- Cancel the released RFQ before the closing deadline
- Create edit the Work Type list.
- Disable account based on region.

- Create edit the PR percentage limitation list.
- Edit the actual BOQ list
- Add or edit material list

6. Testing Scenarios

5.1 Positive Test Cases

- **TC001**: Successful login with valid credentials.
- **TC002**: Viewing available RFQs.
- **TC003**: Successful quotation submission in PDF format within size limits.
- **TC004**: Tracking submission status updates correctly.
- **TC005**: Receiving notifications for new RFQs and submission status changes.

5.2 Negative Test Cases

- **TC006**: Login attempt with invalid credentials.
- **TC007**: Quotation submission with unsupported file format.
- **TC008**: Quotation submission exceeding size limits.
- **TC009**: Submission attempt without being logged in.
- **TC010**: Submission attempt without being status active.
- **TC011**: Failure to receive notifications due to invalid email or phone number.

5.3 Complex Test Scenarios

- **CT001**: Multiple vendors submitting quotations simultaneously to test concurrent submission handling.
- **CT002**: Vendors tracking submission statuses with simultaneous updates by internal review team.
- **CT003**: Testing notification delivery to vendors with intermittent email/SMS service disruptions.
- **CT004**: Submitting a quotation, then modifying it before the RFQ deadline, ensuring only the latest submission is considered.
- **CT005**: Simulating vendor actions with slow internet connectivity to assess system performance and responsiveness.

Software Requirements Specification (SRS) for RFQ Model

1. Introduction

1.1 Purpose

The purpose of this document is to define the requirements for the RFQ (Request for Quotation) model of the RFQ system. This model will handle the creation, approval, release, and closure of RFQs.

1.2 Scope

The RFQ model includes functionalities for creating RFQs, approving them, releasing them to vendors, and closing them once submissions are complete.

2. Workflow and Process

2.1 RFQ Creation

- **Steps Involved:**
    1. Survey Project Engineer collect data from CRM and Issue the survey work order to survey consultants.
    2. Survey consultant receives work order for multiple applications to prepare the draft proposals (merge or cancel) and uploads the survey report and all related documents.
    3. Survey Project Engineer review the drafts from Consultant (Approve, Return, Cancel).
    4. Once approved, then generate RFQ for one or multiple CRM initial connections and Adding BOQ.
    5. Survey and design engineers review and approve the RFQ.

6. Once approved, the RFQ is released and visible in the vendor portal where vendors can submit their offers.

- **Responsible Parties:**
- Survey consultant: Prepare the drafts, Creating RFQ with Approved BOQ.
- Survey and design engineer: Collect data from CRM, Reviewing and approving the drafts, Approving RFQ.

2.2 RFQ Approval

- **Approval Workflow:**
- The RFQ created by the survey consultant is sent to the survey and design engineer for approval.
- Once approved, the RFQ is released to the vendor portal.

2.3 RFQ Release

- **Release Mechanism:**
- After approval, the RFQ is automatically released to the vendor portal.
- Vendors can view and submit their offers through the vendor portal.

2.4 RFQ Closure

- **Closure Process:**
- Once the submission deadline is reached, the RFQ is closed.
- The closed RFQ is no longer visible in the vendor portal, and no further submissions can be made.

3. User Interface and Experience

3.1 UI Requirements

- **RFQ Creation and Management Interface Fields:** • RFQ Number
- PR Amount: should be validated with budget availability.
- RFQ Title
- RFQ Description

- Work Type
- Issue Date
- Submission Deadline Date.
- Attached Documents (Drawings, Specifications, etc.)
- Survey Consultant Name
- Survey and Design Engineer Name
- Vendor Submission Instructions
- BOQ
- Additional Notes
- **Design Guidelines:**
- No specific UI/UX guidelines have been provided.

4. Access and Authentication

4.1 Roles and Permissions

- **Authority:**
- Survey Consultant: Create and edit RFQs.
- Survey and Design Engineer: Approve and release RFQs.
- **Authentication Mechanisms:**
- Standard authentication mechanisms (username and password) used in the vendor registration model.

5. Notification and Communication

5.1 Notification Types

- **Notification Events:**
- When an RFQ is released.
- **Recipients:**
- Vendors
- **Methods:**
- SMS

- Email

6. Integration

6.1 Integration Requirements

- **Internal Integration:**
- Vendor Portal
- Vendor Registration
- Awarding Model
- **External Systems:**
- CRM

- GIS
- Internal SMS
- Oracle PR (Sending PR to Oracle)
- Oracle Inventory (Sending BOQ to inventory system)

8. Reporting and Analytics

8.1 Reports and Analytics

- **Required Reports:**
- Summary of all RFQs created, approved, and released.
- Status of each RFQ (e.g., created, pending approval, released, closed).
- Vendor participation and submission rates.
- **Metrics to Track:**
- Number of RFQs created, approved, and released.
- Average time taken to approve and release an RFQ.
- Vendor response rates.

9. Business Logic

9.1 RFQ Logic

- **Rules and Logic:**
- RFQs can only be created by survey consultants.
- RFQ can’t be approved without PR.
- RFQs must be approved by survey and design engineers before being released.
- Once released, RFQs are visible to vendors until the submission deadline.
- **Validation Rules:**
- Ensure all mandatory fields are filled before RFQ submission.
- Ensure Budget Availability.
- Validate file formats and sizes for attached documents.

10. Testing Scenarios

10.1 Test Cases

10.1 Positive Test Cases

- **TC001:** Successful creation of an RFQ with all required fields.
- **TC002:** Submission of an RFQ for approval.
- **TC003:** Successful approval of an RFQ by all designated approvers.
- **TC004:** Successful release of an approved RFQ to the vendor portal.
- **TC005:** Tracking the status of an RFQ through creation, approval, and release.

10.2 Negative Test Cases

- **TC006:** Attempt to create an RFQ without required fields.
- **TC007:** Submission of an RFQ with invalid data.
- **TC008:** Approval attempt by a non-designated user.
- **TC009:** Attempt to release an RFQ that has not been approved.
- **TC010:** Failure to receive notifications due to invalid email or phone number.

5.3 Complex Test Scenarios

- **CT001:** Multiple RFQs submitted for approval simultaneously to test workflow handling.
- **CT002:** Simulating an approver rejecting an RFQ, editing by the creator, and resubmission for approval.
- **CT003:** Releasing multiple RFQs to the vendor portal and monitoring vendor responses.
- **CT004:** Testing notification delivery with intermittent email/SMS service disruptions.
- **CT005:** Simulating workflow with delayed approvals to assess notification and tracking functionality.
- **CT006:** Create more than two RFQs simultaneously to test the creation of a unique RFQ number.

software Requirements Specification (SRS)

RFQ Model

1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed specification for the RFQ (Request for Quotation) model of the RFQ system. This model will facilitate the creation, management, and release of RFQs, allowing vendors to view and respond to RFQs effectively.

1.2 Scope

This document covers the requirements for the RFQ model, including user interface specifications, RFQ creation and management capabilities, access and authentication, notification and communication, integration, performance expectations, and user roles and permissions.

2. Overall Description

2.1 Product Perspective

The RFQ model is a core component of the RFQ system, designed to manage the lifecycle of RFQs from creation to release and response evaluation. It will integrate with the vendor registration and vendor portal modules and will utilize internal communication systems for notifications.

2.2 User Classes and Characteristics

- **Extension Team**: Users who create and manage RFQs.
- **Extension Manager:** Users who approve RFQs created by the extension team.
- **Procurement Team:** Users who review and approve RFQs before release.
- **Procurement Head:** Users with the final approval authority for RFQs.

2.3 Operating Environment

The system will be a web application running on the K2 platform and hosted on-premises. It will support only the English language.

2.4 Design and Implementation Constraints

- The system must follow best practices for web development and data security.
- The system must support a structured approval workflow for RFQ release.

3. Specific Requirements

3.1 User Interface and Experience

3.1.1 Features

- **Create RFQ:** Allows users to create new RFQs with all necessary details.
- **Approve RFQ:** Facilitates the approval process involving multiple levels of authorization.
- **Release RFQ:** Enables the final release of approved RFQs to the vendor portal.
- **Track RFQ Status:** Allows users to track the status of RFQs through the approval and release process.
- **Notifications:** Sends notifications to relevant users at each stage of the RFQ lifecycle.

3.1.2 Language Support

- The portal will support only English.

3.2 RFQ Capabilities

3.2.1 Actions

- **Create RFQ:** Users can create new RFQs with fields for title, description, specifications, deadline, and required documentation.
- **Edit RFQ:** Users can edit draft RFQs before submission for approval.
- **Submit RFQ for Approval:** Users can submit RFQs for approval, triggering the approval workflow.
- **Approve RFQ:** Designated approvers can review and approve RFQs.
- **Release RFQ:** Approved RFQs can be released to the vendor portal for vendor response.

3.2.2 Fields

- Title
- Description
- Specifications
- Deadline
- Required Documentation (attachments)

3.3 Access and Authentication

3.3.1 Authentication

- Users will authenticate using their corporate credentials.
- Authentication will be managed through the enterprise identity management system.

3.4 Notification and Communication

3.4.1 Types of Notifications

- **RFQ Submission Notification:** Sent to approvers when a new RFQ is submitted for approval.
- **RFQ Approval Notification:** Sent to the creator and next approver when an RFQ is approved or rejected.
- **RFQ Release Notification:** Sent to vendors when an RFQ is released.

3.4.2 Notification Methods

- **Email:** Notifications will be sent to the registered email addresses of users and vendors.
- **SMS:** Notifications will be sent via SMS using the internal SMS gateway.

3.5 Integration

3.5.1 Modules

- **Vendor Registration Module:** To manage vendor accounts and authentication.
- **Vendor Portal Module:** To display RFQs to vendors and accept quotations.
- **Internal SMS Gateway:** To send SMS notifications.

3.6 Performance and Scalability

3.6.1 Requirements

- The system must handle the creation and management of multiple RFQs concurrently.
- No specific performance SLA is required.

3.7 Reporting and Analytics

3.7.1 Suggested Reports

- **RFQ Creation Report:** List of RFQs created, including status and timestamps.
- **RFQ Approval Report:** Details of the approval process, including approvers and timestamps.
- **RFQ Release Report:** Status of released RFQs and vendor responses.
- **Notification Delivery Report:** Status of email and SMS notifications sent to users and vendors.

4. Business Logic

4.1 RFQ Creation Logic

- Users can create new RFQs with all required fields.

- RFQs can be saved as drafts and edited before submission for approval.

4.2 RFQ Approval Logic

- RFQs submitted for approval trigger notifications to the next approver in the workflow.
- Approvers can approve or reject RFQs, with comments for feedback.
- Rejected RFQs can be edited and resubmitted for approval.

4.3 RFQ Release Logic

- Approved RFQs are released to the vendor portal.
- Vendors receive notifications of new RFQs and can view details and submit quotations.

5. Testing Scenarios

5.1 Positive Test Cases

- **TC001:** Successful creation of an RFQ with all required fields.
- **TC002:** Submission of an RFQ for approval.
- **TC003:** Successful approval of an RFQ by all designated approvers.
- **TC004:** Successful release of an approved RFQ to the vendor portal.
- **TC005:** Tracking the status of an RFQ through creation, approval, and release.

5.2 Negative Test Cases

- **TC006:** Attempt to create an RFQ without required fields.
- **TC007:** Submission of an RFQ with invalid data.
- **TC008:** Approval attempt by a non-designated user.
- **TC009:** Attempt to release an RFQ that has not been approved.
- **TC010:** Failure to receive notifications due to invalid email or phone number.

5.3 Complex Test Scenarios

- **CT001:** Multiple RFQs submitted for approval simultaneously to test workflow handling.
- **CT002:** Simulating an approver rejecting an RFQ, editing by the creator, and resubmission for approval.
- **CT003:** Releasing multiple RFQs to the vendor portal and monitoring vendor responses.

- **CT004:** Testing notification delivery with intermittent email/SMS service disruptions.
- **CT005:** Simulating workflow with delayed approvals to assess notification and tracking functionality.
- **CT006:** Create more than two RFQs simultaneously to test the creation of a unique RFQ number.

Software Requirements Specification (SRS) for Awarding Model

1. Introduction

1.1 Purpose

The purpose of this document is to define the requirements for the awarding model of the RFQ system. This model will handle the process of evaluating and awarding RFQs based on predefined criteria.

1.2 Scope

The awarding model includes functionalities for evaluating vendor submissions, automatically awarding RFQs, and notifying stakeholders.

2. Workflow and Process

2.1 Awarding Process

- **Steps Involved:**
    1. Vendors submit their offers based on Grade (Compare Contractor grade with Work Type Ex: Grade A and B can quote for all work types, Grade C can quote only 11 KV and LT Works, Grade D can quote only LT).
    2. System evaluates prices.
    3. System evaluates based on predefined criteria (lowest price + highest performance).
    4. System automatically awards the RFQ.
    5. Company can override the automatically awarding.
    6. Notifications are sent to relevant parties.

7. System not accepting offers exceeds the PR percentage limit based on admin defined percentages table.

- **Responsible Parties:**

- Vendors: Submit offers.
- System: Performs evaluation and awarding.
- company can override automatically awarding.

2.2 Criteria for Awarding

- **Evaluation Criteria:**
- Lowest price combined with highest performance.
- The vendor performance is updated each only for the 4 month.(configurable)
- If two vendors have equal scores, the award goes to the vendor with fewer ongoing projects.
- If system received one offer then notification sent to portal admin to increase submission deadline and to extend submission date. Auto extend for 1 week (configurable)
- If system received all offers exceed the PR percentage limit then notification sent to portal admin to take decision. 10 % max for auto decision
- If time extension date increase RFQ status will change to refloat.
- If after increase date still one offer then system automatically awarding.
- System will check the vendor cape limit, once the cape is limit 100% system should not awarding to vendor
- **Scoring Mechanism:**
- Lowest price with high performance ranking.
- **Compliance Checks:**
- No mandatory compliance checks or validations.

3. User Interface and Experience

3.1 UI Requirements

- **Fields and Information:**
- BOQ (Bill of Quantities)
- Vendor information

-
- RFQ number
- RFQ description

  Check box (whether system should awarding automatically or send it to committee)
- **Design Guidelines:**
- No specific UI/UX guidelines.

4. Access and Authentication

4.1 Roles and Permissions

- **Authority:**
- The system has the authority to perform evaluations and final awards.
- The survey team can override automatic awarding and send the task to a committee.
- **Authentication:**
- Standard authentication mechanisms as used in the vendor registration model.

5. Notification and Communication

5.1 Notification Types

- **Notification Methods:**
- SMS • Email
- **Recipients:**
- Vendors
- Survey and design team.

6. Integration

6.1 Integration Requirements

- **Internal Integration:**
- Vendor registration model

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- RFQ model
- **External Systems:**

    No external systems or databases need integration.

7. Performance and Scalability

7.1 Performance Expectations

- **Requirements:**
- The system should handle up to 300 vendor submissions concurrently.
- **Scalability Concerns:**
- No specific scalability concerns noted.

8. Reporting and Analytics

8.1 Reports and Analytics

- **Required Reports:**
- Summary of awarded RFQs
- Vendor performance metrics
- Awarding process efficiency
- **Metrics to Track:**
- Number of RFQs awarded
- Number of participation for each RFQ
- Average time taken to award
- Vendor participation rates

9. Business Logic

9.1 Awarding Logic

- **Rules and Logic:**
- Automatic awarding based on lowest price and highest performance.

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- If no offer received or only one offer received, admin portal received notification and should be able to extend the deadline and keep record of the olds dates of each deadline
- The survey team can choose to send the task to a committee for manual awarding.

- **Validation Rules:**
- Ensure that all necessary fields are filled before submission.
- Validate the ranking criteria.

10. Testing Scenarios

10.1 Test Cases

- **Positive Scenarios:**
- Vendor submits an offer; system evaluates and awards correctly.
- Notification sent successfully upon awarding.
- **Negative Scenarios:**
- Vendor submits an offer with missing fields, system rejects the submission.
- System fails to evaluate correctly due to data inconsistency.
- **Complex Scenarios:**
- Multiple vendors with the same score, system awards based on the vendor with fewer ongoing projects. Than value of work done
- Survey team overrides automatic awarding, sends task to committee.

Software Requirements Specification (SRS) for Vendor Performance Model

1. Introduction

The Vendor Performance Model is a critical component of the RFQ system designed to evaluate and track vendor performance throughout the project lifecycle. This model ensures vendors meet compliance and performance standards.

2. Workflow and Process

Performance Evaluation:

1. **Criteria for Evaluating Vendor Performance:**
    - Fatality during the project
    - Compliance with Health, Safety, and Environment (HSE) standards
    - Zero non-conformities
    - Compliance with approval timeframes

- Project progress

2. **Frequency:**
    - All value should be full mark by default and project and JCC get from RFI model

3. **Responsible Parties:**
    - Project Engineer is responsible for evaluating vendor performance.

Scoring and Metrics:

1. **Metrics and KPIs:**
    - Compliance with HSE
    - Number of non-conformities
    - Adherence to approval timeframes
    - Progress of the project
2. **Scoring System:**
    - Full marks for compliance and zero for non-compliance.
    - Results are accumulated over time.
    - Contractor performance only for 3 month

Reporting and Feedback:

1. **Automatic Report Generation:**
    - Performance reports should be available on a dashboard.
2. **Feedback Communication:**
    - Feedback communicated to vendors via email notifications.

Performance Improvement:

1. **Improvement Processes:**
    - Vendors will receive feedback and suggestions for improvement.
2. **Monitoring and Tracking:**
    - Vendors receive performance notifications via email.
    - Management will have access to dashboard to see the performance of each vendor

3. User Interface and Experience **UI**

Requirements:

1. **Fields and Information:**
    - Project name
    - Project description
    - Vendor information
    - Criteria table for performance evaluation
2. **Design Requirements:**
    - No specific UI/UX guidelines.

4. Access and Authentication

Roles and Permissions:

1. **Authority:**
    - Project Engineers can evaluate performance.
    - Project Managers receive notifications of evaluations.
2. **Authentication Mechanisms:**
    - Active Directory (AD) authentication.

5. Notification and Communication

Notification Types:

1. **Notification During Evaluation:**
    - Performance result notifications.
2. **Recipients:**
    - Vendors and managers.
3. **Methods:**
    - Email.

6. Integration

Integration Requirements:

1. **Modules:**
    - Integration with RFQ model, RFQ awarding model and vendor portal.
2. **External Systems:**
    - No external systems or databases need to be integrated.

7. Performance and Scalability

Performance Expectations:

1. **Requirements:**

- The system should handle evaluations efficiently without performance degradation.

2. **Scalability Concerns:**
    - Not specified.

8. Reporting and Analytics

Reports and Analytics:

1. **Required Features:**
    - Performance trend analysis over time.
    - Compliance rate reports.
    - Non-conformity incident reports.
2. **Metrics and Data Points:**
    - Number of compliant and non-compliant criteria.
    - Frequency of non-conformities.
    - Timeframes adherence rate.
    - Overall performance scores.

9. Business Logic

Evaluation Logic:

1. **Rules and Logic:**
    - Evaluate based on predefined criteria.
    - At less one evaluation per project
    - Full marks for compliance; zero for non-compliance.
    - Results should accumulate over time.
    - the contractor who scores 50% or greater shall remain active in the system for receiving the RFQ.
    - the contractor who scores less than 50% his status will be in-active and cannot submit new offer till admin activate his account in admin portal.
2. **Validation Rules:**
    - Ensure criteria are appropriately marked and scored.

10. Testing Scenarios **Test Cases:**

1. **Positive Test Cases:**
    - Evaluate a vendor meeting all criteria.
    - Generate performance reports accurately.

- Send notifications correctly to vendors and managers.

2. **Negative Test Cases:**
    - Evaluate a vendor failing to meet multiple criteria.
    - Ensure system handles missing or incorrect data.
    - Check notification failures (e.g., invalid email addresses).
3. **Complex Scenarios:**
    - Evaluate multiple vendors simultaneously.
    - Handle large datasets for performance evaluations.
    - Test system performance under peak load conditions.

SRS for Request for Inspection (RFI) Model

1. Workflow and Process

1.1 RFI Creation:

- **Responsible Party:** Contractor
- **Required Fields and Information:**
    - Project Name
    - RFQ Number
    - Project Description
    - Project Start Date
    - Contractor Details
    - Inspection Type
    - Requested Inspection Date
    - Additional Notes/Comments
    - **Predefined Templates:** Yes, use standard templates for RFI creation

1.2 RFI Submission:

- **Steps Involved:**
    1. Contractor raises RFI through vendor portal.
    2. Internal engineer schedules the inspection.
    3. Internal engineer conducts the site visit.
    4. Engineer updates the status of RFI (approve, reject, return to contractor with comments).
    5. If approved, the project progress is updated manually.

6. Contractor can request partial or full energization and commissioning based on project completion status through vendor portal

- **Recipients:** Contractor and internal team

1.3 RFI Review and Approval:

- **Responsible Party:** Internal Project Engineer
- **Stages of Review and Approval:** Single stage
- **Approval Criteria:** Based on site visit report

1.4 RFI Response:

- **Handling and Recording:** Responses are handled through site visits, and reports are attached to the RFI.
- **Responsible Party:** Internal Project Engineer • **Specified Timeframe:** No specified timeframe

1.5 RFI Closure:

- **Closure Criteria:** Based on site visit report and action completion by Project Engineer
- **Archiving Steps:** None specified

2. User Interface and Experience

2.1 UI Requirements:

- **Fields and Information:**
- All project information from the awarded RFQ
- Inspection Type
- Requested Inspection Date
- Additional Notes/Comments
- **Design Requirements:** None specified

2.2 Language Support:

- **Multilingual Support:** Not required

3. Access and Authentication

3.1 Roles and Permissions:

- **Authorities:**
- Contractor: Create and edit RFIs
- Project Engineer: Review, approve, and respond to RFIs
- **Authentication Mechanisms:** AD Authentication for internal users, vendor portal login for

contractors

4. Notification and Communication

4.1 Notification Types:

- **Types:**
- RFI Submission

- Inspection Scheduled
- RFI Status Updates (Approved, Rejected, Returned with Comments)
- **Recipients:** Contractor, Project Engineer, Management
- **Methods:** Email and SMS

5. Integration

5.1 Integration Requirements:

- **Modules:**
- Vendor Portal
- RFQ Model
- Vendor Performance Model (to update the project progress in performance model) and JCC part in performance model
- RFQ awarding model
- **External Systems:** None

7. Reporting and Analytics 7.1

Reports and Analytics:

- **Required Features:**
- Monthly RFI submission count
- RFI approval rate
- Average time to process RFIs
- Number of RFIs per project
- RFI rejection reasons

7.2 Metrics and Data Points:

- **Metrics to Track:**
- Submission date
- Approval date
- Rejection date and reasons
- Time taken to close RFIs

8. Business Logic

8.1 RFI Logic:

- **Rules and Logic:**
- Contractors can only raise RFIs for active projects.
- Only one open RFI per project at a time.
- RFIs cannot be raised for closed projects.
- **Validation Rules:**

- Ensure project is active and not closed.
- Validate unique open RFI per project.

9. Testing Scenarios

9.1 Test Cases:

Positive Test Cases:

1. **Valid RFI Submission:** Contractor submits a valid RFI, and the engineer approves it.
2. **RFI Approval:** Engineer reviews and approves an RFI after a site visit.
3. **RFI Rejection:** Engineer rejects an RFI with valid reasons.
4. **RFI Returned with Comments:** Engineer returns an RFI to the contractor with comments for correction.
5. **Partial Energization Request:** Contractor requests partial energization after RFI approval and the project progress is less than 100%.

Negative Test Cases:

1. **Duplicate RFI Submission:** Contractor attempts to submit an RFI for a project with an existing open RFI.
2. **Invalid Project RFI:** Contractor attempts to submit an RFI for a closed project.
3. **Missing Required Fields:** Contractor submits an RFI with missing mandatory information.
4. **Unauthorized Access:** Unauthorized user attempts to create or approve an RFI.
5. **Exceeding File Size:** Contractor tries to upload documents exceeding the size limit.

9.2 Complex Scenarios:

1. **Simultaneous Submissions:** Multiple contractors submit RFIs simultaneously to test concurrency handling.
2. **Performance Under Load:** System handles 300 concurrent RFI submissions to test performance.
3. **RFI Escalation:** Contractor disputes a rejected RFI, and the system handles the escalation process.
4. **RFI History Tracking:** Ensure the system logs all changes and updates to an RFI for auditing purposes.
5. **Integration Testing:** Ensure RFIs integrate correctly with the vendor portal and performance model.

SRS for Request for Inspection (QS) Model

1. Workflow and Process

1.1 QS Creation:

- **Responsible Party:** Contractor
- **Required Fields and Information:**

  Project Name

  - RFQ Number
  - Project Description
  - Project Start Date
  - Contractor Details
  - Inspection Type
  - Requested Inspection Date
  - Additional Notes/Comments
  - **Predefined Templates:** Yes, use standard templates for RFI creation
  - **Recipients:** Contractor and internal team

1.3 RFI Review and Approval:

- **Responsible Party:** Internal Project Engineer
- **Stages of Review and Approval:** Single stage
- **Approval Criteria:** Based on site visit report

1.4 RFI Response:

- **Handling and Recording:** Responses are handled through site visits, and reports are attached to the RFI.
- **Responsible Party:** Internal Project Engineer • **Specified Timeframe:** No specified timeframe

1.5 RFI Closure:

- **Closure Criteria:** Based on site visit report and action completion by Project Engineer
- **Archiving Steps:** None specified

2. User Interface and Experience

2.1 UI Requirements:

- **Fields and Information:**
  - All project information from the awarded RFQ
  - Inspection Type
  - Requested Inspection Date
  - Additional Notes/Comments
  - **Design Requirements:** None specified

2.2 Language Support:

- **Multilingual Support:** Not required

3. Access and Authentication

3.1 Roles and Permissions:

- **Authorities:**
- Contractor: Create and edit RFIs
- Project Engineer: Review, approve, and respond to RFIs
- **Authentication Mechanisms:** AD Authentication for internal users, vendor portal login for

contractors

4. Notification and Communication

4.1 Notification Types:

- **Types:**
- QS Submission
- QS Status Updates (Approved, Rejected, Returned with Comments)
- **Recipients:** Contractor, Project Engineer, Management
- **Methods:** Email and SMS

5. Integration

5.1 Integration Requirements:

- **Modules:**
- Vendor Portal
- RFQ Model
- Vendor Performance Model (to update the project progress in performance model) and JCC part in performance model
- RFQ awarding model
- **External Systems:** None

7. Reporting and Analytics 7.1

Reports and Analytics:

- **Required Features:**
- Monthly QS submission count
- QS approval rate
- Average time to process QS
- Number of QS per project
- QS rejection reasons

7.2 Metrics and Data Points:

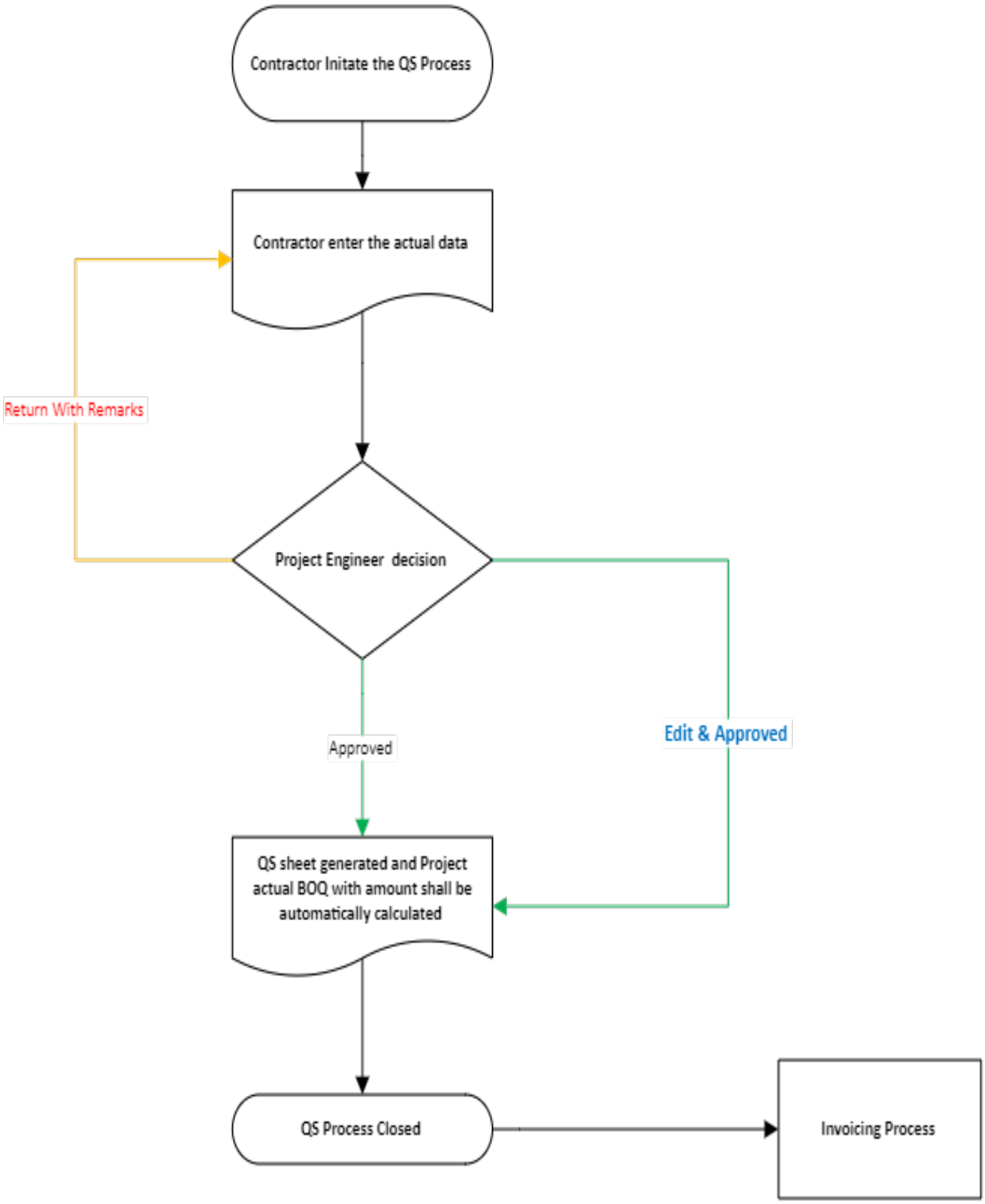
- **Metrics to Track:**
- Submission date
- Approval date
- Rejection date and reasons

- Time taken to close QS

8. Business Logic

8.1 RFI Logic:

- **Rules and Logic:**
- Contractors can only raise QS for active projects.
- Only one open QS per project at a time. • QS cannot be raised for closed projects.
- **Validation Rules:**
- Ensure project is active and not closed.
- Validate unique open QS per project.



Software Requirements Specification (SRS) for Variation Order Model

1. Introduction

The Variation Order model is a component of the RFQ system that allows contractors to request changes to existing projects. This document details the requirements and functionalities for creating, submitting, reviewing, approving, implementing, and closing variation orders.

2. Workflow and Process

2.1 Variation Order Creation

- **Responsible Party:** Contractor
- **Required Fields:** All RFQ information, old start date, old end date, new variation date, new variation cost
- **Templates and Formats:** Yes, predefined templates are available

2.2 Variation Order Submission

- **Steps Involved:**
    1. Contractor raises the variation order through the vendor portal
    2. Project engineer reviews and approves
    3. Head of section approves
    4. If variation for time, the final approval is from the extension manager
    5. If variation for cost or add additional materials, the final approval involves the extension manager and MITC committee
- **Recipients:** Contractor, project engineer, extension manager

2.3 Variation Order Review and Approval

- **Responsible Party:** Extension manager for time variation, extension manager and MITC committee for cost variation
- **Stages of Review:**
    1. Project engineer review
    2. Head of section review
    3. Extension manager review (time variation)
    4. MITC committee review (cost variation)
- **Approval Criteria:** Based on the reason provided by the contractor and the assessment of the project progress

2.4 Variation Order Implementation

- **Implementation Steps:** Contractor raises variation for projects already started; approval based on technical reasons
- **Tracking and Monitoring:** Notifications at each stage

2.5 Variation Order Closure

- **Closure Criteria:** Final approval by extension manager (time) or MITC committee (cost)
- **Archiving and Logging:** No specific steps

3. User Interface and Experience

3.1 UI Requirements

- **Fields and Information:** All project information and the new variation details
- **Design Requirements:** No specific UI/UX guidelines

3.2 Language Support

- **Multilingual Support:** Not required

4. Access and Authentication

4.1 Roles and Permissions

- **Authorities:** Contractor (create request), internal team (review and approve)
- **Authentication Mechanisms:** Contractors use the vendor portal, internal users use AD authentication

5. Notification and Communication

5.1 Notification Types

- **Types:** Status updates at each stage
- **Recipients:** Contractor, engineer, management
- **Methods:** Email and SMS

6. Integration

6.1 Integration Requirements

- **Modules:** RFQ, awarding, vendor portal, performance
- **External Systems:** Not applicable

7. Reporting and Analytics

7.1 Reports and Analytics

- **Required Features:** Suggest reports on:
- Number of variation orders submitted, approved, and rejected
- Time taken for each stage of approval
- Cost implications of variations
- Historical performance of contractors in variation orders
- **Metrics and Data Points:** Suggest metrics on:
- Approval times
- Frequency of variations per project
- Reasons for variations
- Cost and time impacts

8. Business Logic 8.1 Variation Order Logic

- **Rules and Logic:**
- Contractor can raise requests only for projects that have started
- New Variation number for each request

- Contractor cannot raise requests for closed projects
- Variation orders must be based on legitimate technical reasons
- All fields must be validated against the predefined templates
- **Validation Rules:**
- Ensure all required fields are completed
- Validate date fields to ensure new dates are after old dates
- Validate cost changes against project budgets

9. Testing Scenarios

9.1 Test Cases

- **Positive Test Cases:**
    1. Contractor successfully creates and submits a variation order
    2. Project engineer reviews and approves the variation order
    3. Head of section reviews and approves the variation order
    4. Variation order for time approved by extension manager
    5. Variation order for cost approved by MITC committee
- **Negative Test Cases:**
    1. Contractor tries to submit incomplete variation order
    2. Variation order submitted for a project that has not started
    3. Variation order submitted for a closed project
    4. Invalid dates entered in variation order 5. Cost changes exceeding project budget
- **Complex Scenarios:**
    1. Multiple variation orders submitted for the same project simultaneously
    2. Variation order requiring both time and cost approvals
    3. Variation order with conflicting dates (e.g., new end date before new start date)
    4. Contractor tries to raise a variation order while another is pending
    5. System performance with multiple concurrent submissions and approvals

Software Requirements Specification (SRS) for Project Cancellation Model

1. Introduction

This project cancellation model is a component of the RFQ system that allows contractor to request a project cancellation.

2. Workflow and Process 2.1

Project Cancellation Initiation

Responsible Party:

- The Project Engineer is responsible for initiating the project cancellation process.

Required Fields:

- All RFQ awarded information from the awarding model
- Reason for cancellation **Templates and Formats:**

- There are predefined templates and formats for project cancellation requests. 2.2

Project Cancellation Submission **Steps Involved:**

1. The Project Engineer initiates the cancellation request.
2. The Head of Section reviews and approves the request.
3. The Extension Manager reviews and approves the request.
4. Head Section confirm the return materials

Recipients:

- Internal team members involved in the project. 2.3 Project Cancellation Review

and Approval **Responsible Party:**

- The Head of Section and the Extension Manager are responsible for reviewing and approving project cancellation requests.

Stages of Review:

- There are multiple stages of review:
  1. Initial review by the Head of Section
  2. Final review by the Extension Manager

Approval Criteria:

- Approval or rejection is based on the technical reason provided in the cancellation form. 2.4 Project Cancellation Implementation **Implementation Steps:**

- After approval, the project status is updated to reflect the cancellation. Resources are reallocated, and stakeholders are notified.

Tracking and Monitoring:

- The implementation is tracked and monitored through notifications and a dashboard showing the status of the request. 2.5 Project Cancellation Closure **Closure Criteria:**

- The project cancellation is closed once the Extension Head Section update material status, and the materials list is updated.

Archiving and Logging:

- There are no specific steps involved in archiving or logging closed project cancellations.

3. User Interface and Experience

3.1 UI Requirements

Fields and Information:

- The interface should include all project information from the awarding model, including:
  - Project name
  - RFQ details
  - BOQ
  - Reason for cancellation
  - Dates and status updates

Design Requirements:

- There are no specific design requirements or UI/UX guidelines.

3.2 Language Support

Multilingual Support:

- The model should support both Arabic and English.

4. Access and Authentication

4.1 Roles and Permissions **Authorities:**

- Project Engineers can create cancellation requests.
- The Head of Section and the Extension Manager can review and approve requests.

Authentication Mechanisms:

- Users will authenticate via Active Directory (AD).

5. Notification and Communication

5.1 Notification Types **Types:**

- Notifications regarding the status of the request at each stage of the process.

Recipients:

- Contractors, project engineers, and other relevant internal team members.

Methods:

- Notifications will be sent via email.

6. Integration

6.1 Integration Requirements **Modules:**

- The project cancellation model needs to integrate with the Awarding model and the Material model.

External Systems:

- There are no external systems or databases that need to be integrated.

8. Reporting and Analytics

8.1 Reports and Analytics **Required**

Features:

- Reports tracking the number of cancellations, reasons for cancellations, and time taken to process cancellations.
- Print Project Cancellation letter.

Metrics and Data Points:

- Metrics to track include:
    - Number of cancellation requests ○ Reasons for cancellations ○ Approval times
    - Impact on project timelines and resources

9. Business Logic

9.1 Cancellation Logic **Rules**

and Logic:

- Project engineers can only raise a request for projects that have already started.
- Project engineers cannot raise a request if the project is closed.
- Additional rules might include validation of reasons and approval hierarchy.

Validation Rules:

- The project must be in progress to initiate the request.
- Ensuring all necessary fields are filled out and reasons are documented.

10. Testing Scenarios

10.1 Test Cases

Positive and Negative Test Cases:

- Positive Test Cases:
    1. Initiating a cancellation request
    2. Approving a cancellation request
    3. Rejecting a cancellation request
    4. Tracking status updates
    5. Receiving notifications at each stage
- Negative Test Cases:
    1. Initiating a request for a closed project
    2. Missing required fields in the request
    3. Unauthorized user trying to cancel a project
    4. Incorrect data format
    5. Duplicate cancellation requests

Complex Scenarios:

- Complex Scenarios to be tested:
    1. Multiple concurrent cancellation requests
    2. Requests with complex approval hierarchies

3. Integration with other modules causing conflicts
4. Cancellation of high-value or high-impact projects
5. Handling incomplete or incorrect project data

Software Requirements Specification (SRS) for Project Withdraw Model

1. Workflow and Process 1.1 Project Withdraw Initiation

1. **Responsible Party:** ○ **Initiation:** The project engineer is responsible for initiating a project withdrawal.
2. **Required Fields:**
    - **Information Required:** All project field information from the awarded model, including project details and the reason for withdrawal.
3. **Templates and Formats:**
    - **Predefined Templates:** Yes, there are predefined templates for project withdrawal requests.

1.2 Project Withdraw Submission

4. **Steps Involved:**
    - **Submission Steps:**
        1. The project engineer initiates the withdrawal request.
        2. The head section reviews, return and approves the request.
        3. The extension manager reviews, returns and approves the request.
        4. The system automatically retrieves the previous RFQ and releases it on the vendor portal for vendors to submit offers with a ability to create new deadline date and new RFQ.
        5. **Recipients:**
    - **Intended Recipients:** Vendor, project team, extension team.

1.3 Project Withdraw Review and Approval

6. **Responsible Party:** ○ **Review and Approval:** Project head section and extension manager.
7. **Stages of Review:**
    - **Review Stages:** There are two stages of review and approval - head section and extension manager.
8. **Approval Criteria:**
    - **Criteria:** Based on technical documentation and the reason for withdrawal provided by the project engineer.

1.4 Project Withdraw Implementation

9. **Implementation Steps:**
    - **Steps for Implementation:** The project engineer raises the request based on technical reasons.
10. **Tracking and Monitoring:**
    - **Monitoring:** Through vendor dashboards showing the status and internal team dashboards.

1.5 Project Withdraw Closure

11. **Closure Criteria:**
    - **Criteria for Closure:** The RFQ is released for vendors to submit offers.
12. **Archiving and Logging:**
    - **Archiving:** There are no specific steps mentioned for archiving or logging closed project withdrawals.

2. User Interface and Experience

2.1 UI Requirements

1. **Fields and Information:**
    - **Included Information:** All previous RFQ related to the project.
2. **Design Requirements:**
    - **UI/UX Guidelines:** No specific design requirements or UI/UX guidelines are mentioned.

2.2 Language Support

3. **Multilingual Support:**
    - **Language Requirements:** The model should support Arabic and English.

3. Access and Authentication

3.1 Roles and Permissions

1. **Authorities:**
    - **Authority Levels:** The project engineer has the authority to create, edit, review, approve, and implement project withdrawals.
2. **Authentication Mechanisms:**
    - **Mechanisms Required:** Active Directory (AD) for internal users and vendor portal authentication for vendors.

4. Notification and Communication

4.1 Notification Types

1. **Types:**
    - **Notification Types:** Status updates for each stage of the project withdrawal process.
2. **Recipients:**
    - **Notification Recipients:** Vendors and the internal project team.
3. **Methods:**
    - **Methods for Sending Notifications:** Emails and SMS.

5. Integration

5.1 Integration Requirements

1. **Modules:**
    - **Integration with Modules:** The project withdrawal model needs to integrate with the vendor portal, RFQ model, and awarding model.
2. **External Systems:**
    - **External Systems:** Internal SMS system for notifications.

7. Reporting and Analytics

7.1 Reports and Analytics

1. **Required Features:**
    - **Reports and Analytics:** Best practices suggest including detailed status reports, reasons for withdrawal, and metrics on the frequency and impact of withdrawals.
2. **Metrics and Data Points:**

- **Tracking Metrics:** Suggested metrics include the number of withdrawal requests, approval/rejection rates, time taken for each approval stage, and reasons for withdrawals.

8. Business Logic

8.1 Withdrawal Logic

1. **Rules and Logic:**
   - **Governing Rules:** The project withdrawal process can only be initiated if the project is still in progress and not yet closed.
   - Previous RFQ awarding information should be recorded
2. **Validation Rules:**
   - **Validation Constraints:** The project should not be closed, and all required fields must be filled out correctly.

9. Testing Scenarios

9.1 Test Cases

1. **Positive and Negative Test Cases:**
   - **Test Cases:**
     - Positive: Successfully initiating and processing a project withdrawal.
     - Negative: Attempting to withdraw a closed project, missing required fields, unauthorized user trying to initiate a withdrawal.
2. **Complex Scenarios:**
   - **Complex Scenarios:**
     - Withdrawal of a large project with multiple dependencies.
     - Simultaneous withdrawal requests for multiple projects.
     - Handling withdrawal requests during high-traffic periods on the vendor portal.

Business Report: Material Requisition and Return Model

Introduction

This report outlines the requirements, workflows, and processes for the Material Requisition and Return Model as part of E-xRFQ system. The aim is to streamline material management for contractors and internal teams, ensuring efficient material requisition and return processes.

1. Workflow and Process 1.1 Material Requisition Initiation

1. **Responsible Party:**
    - **Contractor**: The contractor is responsible for initiating a material requisition.
2. **Required Fields:**
    - **Project Details**: Including project name, ID, and description. ○ **Material Details**: Including material name, ID, specifications, and quantity. ○ **Reason for Requisition**: A brief explanation of why the material is needed.
    - **List of Running Projects**: Include a list of all projects awarded to the contractor that are currently running.
3. **Templates and Formats:**
    - **Predefined Templates**: Standardized templates for material requisition requests will be provided to ensure consistency and completeness of information.

1.2 Material Requisition Submission

4. **Steps Involved:**
    - **Initiation**: Contractor initiates the material requisition request.
    - **BOQ Check**: If the material requested matches the Bill of Quantities (BOQ) or less, it moves to the inventory team. If, Project engineer reject the task it ,moves to Inventory team to issue material equal to the BOQ. ○ **If the Project Engineer accept it goes to Head section and manger for approval follow the** request for variation process in separate task in variation model
    - **Inventory Team**: Approved requests are sent to the inventory team for processing.
5. **Recipients:**
    - **Internal Team**: Including the project engineer, survey and design team. ○ **Contractor**: To keep them informed of the status of their request.

1.3 Material Requisition Review and Approval

6. **Responsible Party:**
    - As shown in the workflow diagram (e.g., project manager, procurement manager).
7. **Stages of Review:**
    - **Initial Review**: By the project engineer.
    - **Secondary Review**: By the inventory team.
    - **Final Approval**: By the manager.
8. **Approval Criteria:**
    - Based on project needs and alignment with the BOQ.

1.4 Material Requisition Fulfillment

9. **Fulfillment Steps:**

- **Inventory Approval**: Inventory team approves the requisition.
- **Scheduling**: Schedule the date and time for the delivery appointment.

10. **Tracking and Monitoring:**
    - **Email Notifications**: Sent at each stage of the process.
    - **Dashboards**: Real-time status of the requisition request visible on internal dashboards.

1.5 Material Requisition Closure

11. **Closure Criteria:**
    - **Delivery**: Material is delivered.
    - **Inventory Update**: Inventory is updated to reflect the material requisition.
12. **Archiving and Logging:**
    - Steps involved in archiving or logging closed material requisitions will be defined to maintain records.

1 Requisition Logic

1. **Rules and Logic:**
    - Contractors can request materials for ongoing projects and combine materials for all projects under their management in one request. Unlimited requisition applications are allowed.

The following showing more details

1- FIRST STAGE OF WORKFLOW:

The entire workflow is divided into three main workflow and sub-workflow. Once the customer submits the application and same received by survey & design Engineer. The task in the workflow to issue the

assignment to the consultant for survey. The system gives online access to survey & design consultants to submit their proposal including looping if the process is not closed.

Once the design submitted by the consultants are approved by the Survey & Design Engineer (SDE) then again return back to them for authority approval. The system will indicate the pending task with survey & design team till they upload the approved drawing & other related documents. After uploading the system shall generate the Workorder for the project and then its enable the submittal button.

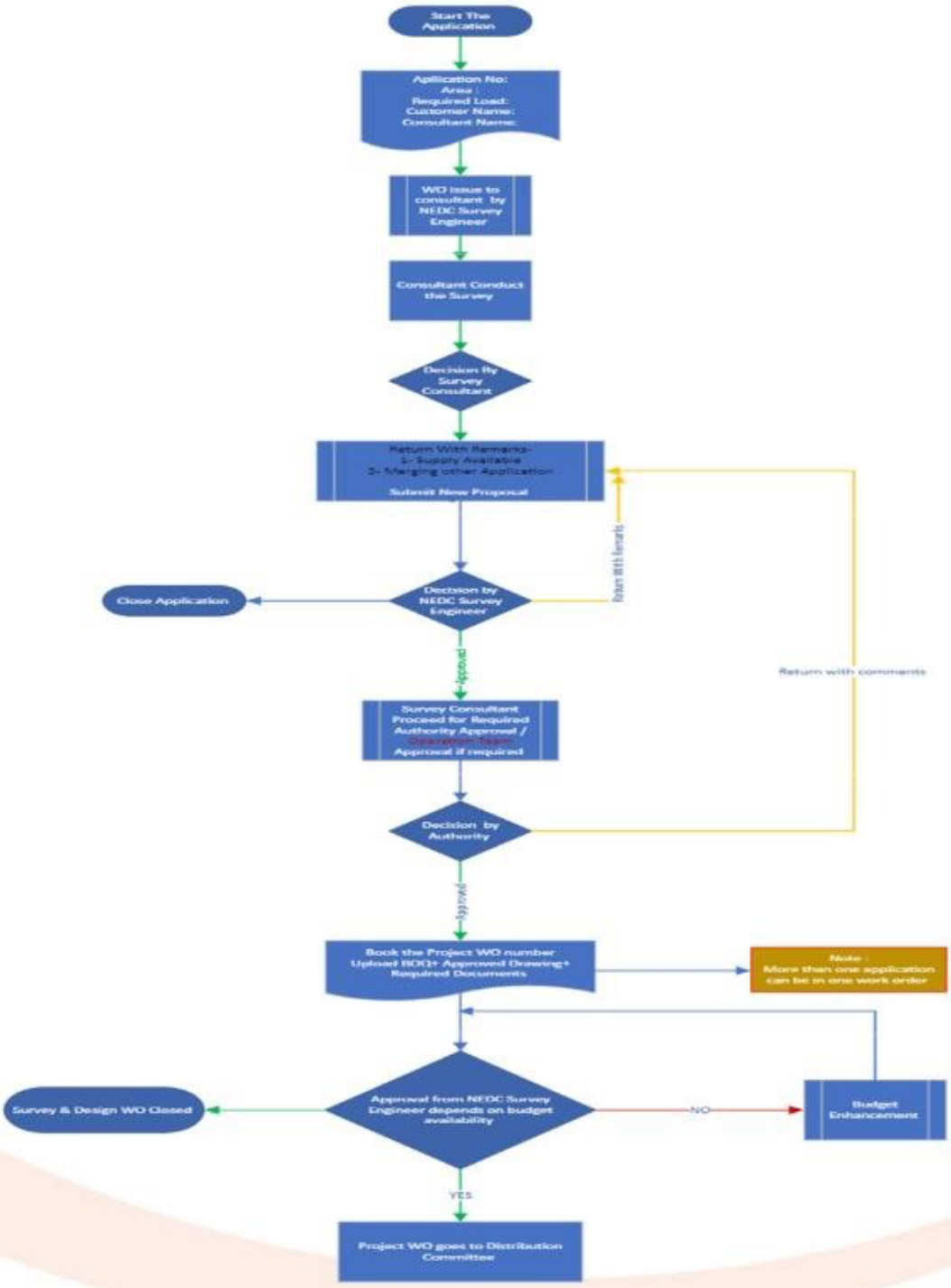


Figure 1:Unit Rate Work flow for Survey & Design

2- SECOND STAGE OF WORKFLOW:

The second stage include Project distribution, execution, Monitoring ,contractor performance evaluation, energization and various subprocess including Inventory requisition and variation request. In the workflow once all the workorders uploaded in the system , the project distribution committee secretary shall receive the notification from the system to calloff the meeting for the distribution of work orders. After the distribution by the committee the TASK goes to extension manager for issuing the WO among the contractors.

TASK ASSIGNMENT DURING WORKFLOW AFTER -ISSUING WORK ORDERS			
WORKFLOW	AUTHORITY	ACTION FOR	INFORMATION FOR
TASK :1	Head Section	Allocation of Workorder to Project Engineer	- Contractor will be notified by system - Extension manager received task completion detail.
TASK :2	Survey & Design Consultant	Peg Marking to be given to the contractors	- PE will get notification for peg marking completion
TASK :3	Contractor	Request for free issue materials	- PE will get notification for material requisition
TASK:4	Inventory	Subprocess : The team shall receive	- PE will get notification for material received by contractor

Table 1: Task Assignment after Issuing Work Order

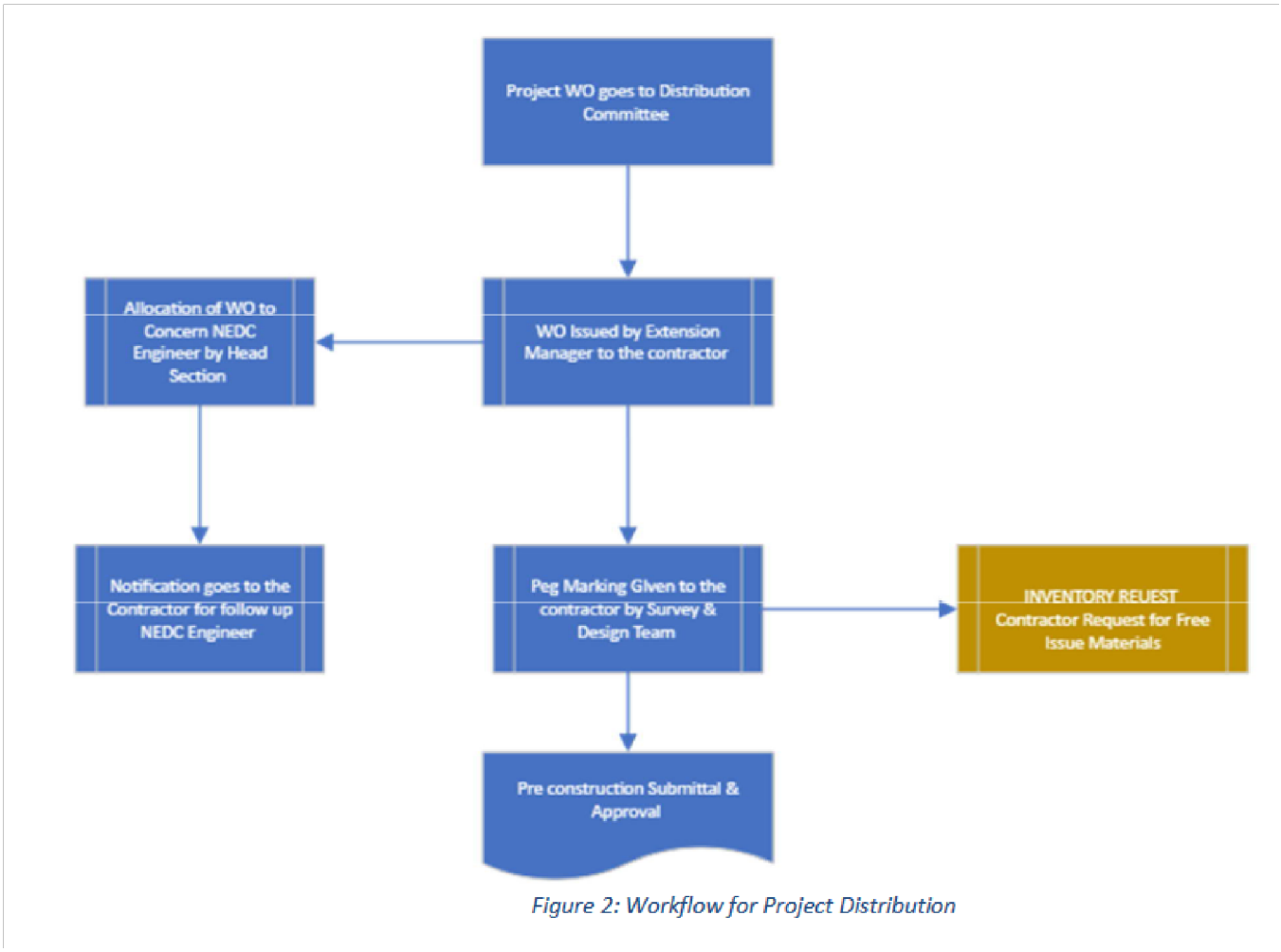


Figure 2: Workflow for Project Distribution

3- EXECUTION PROCESS:

The contractor shall complete the pre-construction approval from the concern authority, and once received all the materials from the inventory team they moves to the next stage of workflow. There shall be system of interface between contractor and Project team for raising the Request for Inspection (RFI). The system will have two option of the RFI : - activities RFI and final inspection RFI

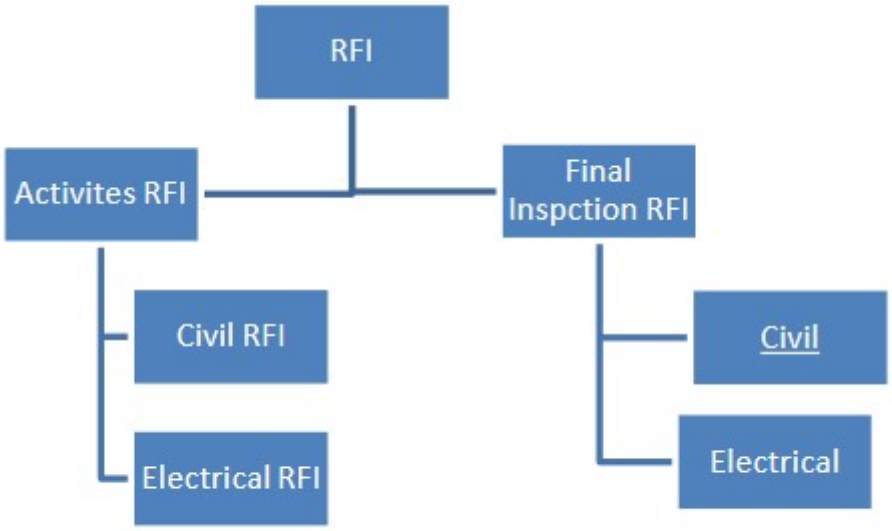


Figure 3: Workflow for Request for Inspection (RFI)

The loop of the RFI activities shall continue till they raise the final inspection. All the RFI activities raised through the system will comes to the Project Engineer (PE) for action. The PE can schedule the date and time and submit then it goes contractors for information. While the execution workflow of system as below:

TASK ASSIGNMENT DURING WORKFLOW OF EXECUTION PROCESS				
WORKFLOW	AUTHORITY	ACTIVITIES	ACTION BY	INFORMATION FOR
TASK :5	Contractors	Raising the RFI	Project Engineer	PE-Civil /Electrical
TASK :6	Project Engineer	Scheduling date & time for Inspection	Contractor	PE-Civil /Electrical
TASK 7	Project Engineer	RFI : Return / Approved with comments / Approved	Contractor	PE-Civil /Electrical
TASK 8	Contractors	Raising the final inspection request-RFI	Project Engineer and follow the task 7 loop.	Head Section PE-Civil /Electrical
TASK 9	Contractor	Request for partial Energization / Energization	Operation Engineer	PE-Civil /Electrical Head Section
TASK 10:	Operation Engineer	Scheduling date & time for charging	Contractor Condition – in case of any issues return to TASK:9	PE-Civil /Electrical Head Section

Table 2:Task assignment during Project Execution

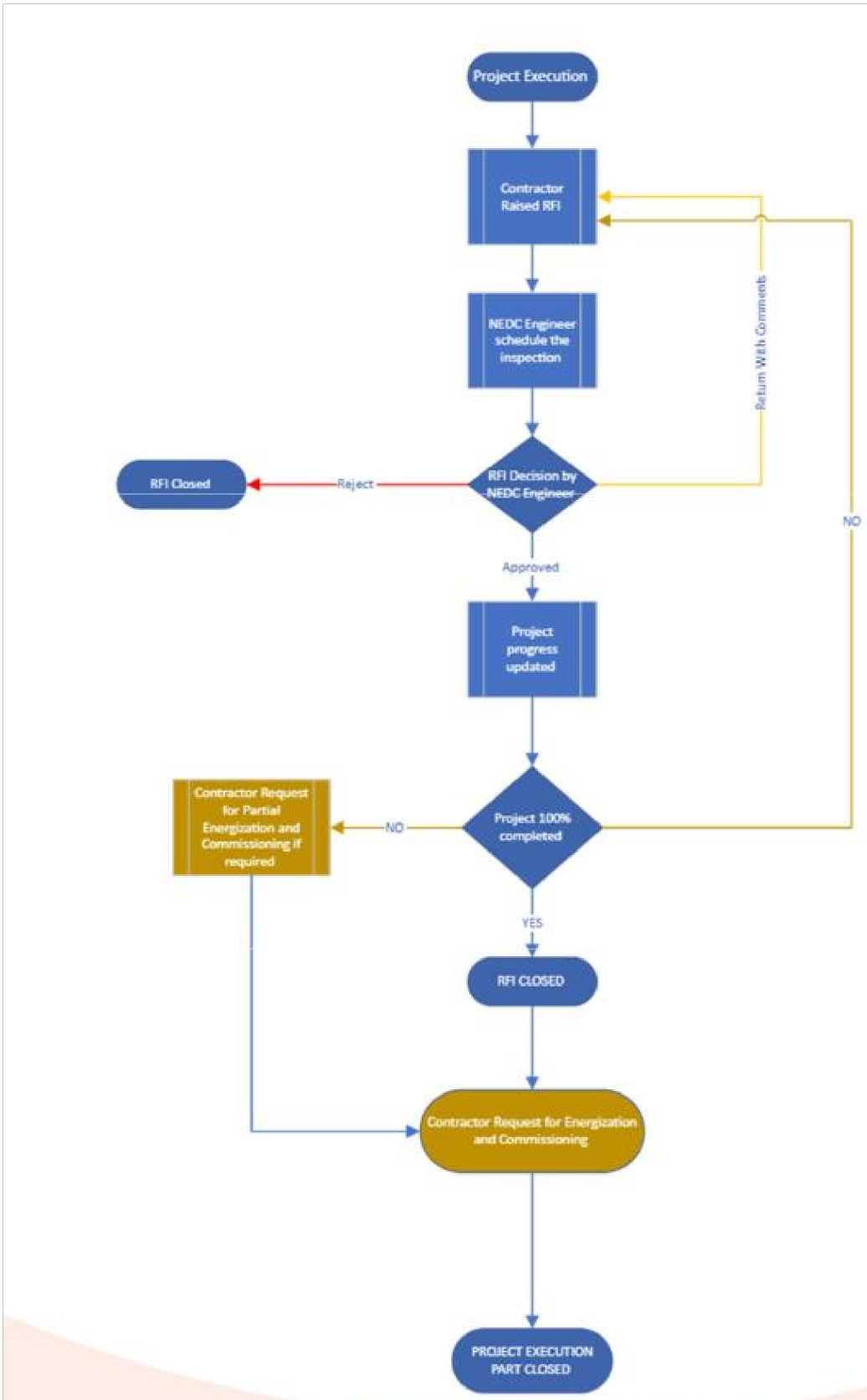


Table 3: Workflow for Project Execution

3.1 VARIATION REQUEST SUBPROCESS:

This is the subprocess of the execution process which shall be initiated by the contractors. Once the contractor raises the request -through the system it comes to the Project Engineer and the subsequently goes to head section and extension manager for final approval. The new system of unit rate can adopt the existing unit rate system with minor recommendation of change, that is the

TASK ASSIGNMENT DURING WORKFLOW FOR VARIATION REQUEST				
WORKFLOW	**AUTHORITY**	**ACTIVITIES**	**ACTION BY**	**INFORMATION FOR**
TASK :11	Contractors	Initiate the VO for Time Extension	Project Engineer	Nil
TASK :12	Project Engineer	Return / Approve / reject	***If Return/reject*** - Contractor If Approved -Head Section	If Approved contractor
TASK : 13	Head Section	Return / Approve / reject	***If Return/reject*** - Contractor If Approved -Extension Manager	***If Return/reject*** - PE
TASK 14 If Time Variation	Extension Manager	Return / Approve / reject	***If Return/reject*** – Contractor If Approve-VO for time generated by the system and goes to contractors.	PE & Head Section
TASK 15 If Cost Variation	Extension Manager	Return / Approve / reject	***If Return/reject*** – Contractor If Approve-the request goes to MITC	PE & Head Section
TASK 16 If Cost Variation	MITC	Return / Approve / reject	***If Return/reject*** – Extension Manager If Approve-VO for cost generated by the system and goes to Contractor	PE & Head Section & Extension Manager

Table 4:Task Assignment during the Variation request

–" the access of raising the VO shall be from the contractors side.

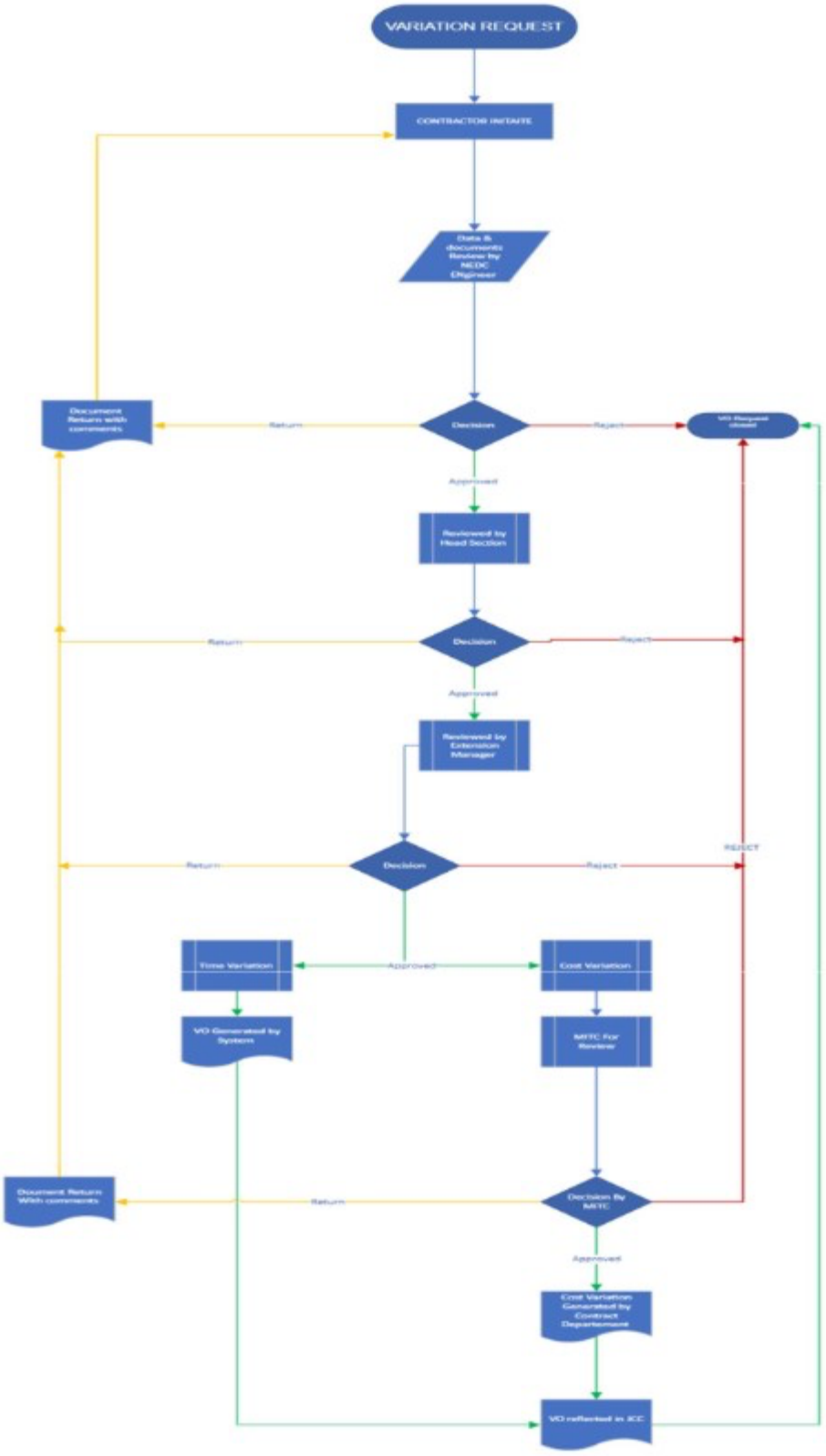


Table 5: Workflow during the Variation request

3.2 PROJECT CANCELLATION SUBPROCESS:

This is the subprocess of the execution process initiated by Project Engineer. It involves the authority level of action from Head Section and Extension Manager including the interface with the survey &

TASK ASSIGNMENT DURING THE WORKFLOW FOR PROJECT CANCELLATION				
WORKFLOW	**AUTHORITY**	**ACTIVITIES**	**ACTION BY**	**INFORMATION FOR**
TASK :17	Project Engineer	Initiate the Cancellation	Head Section	Contractor
TASK : 18	Head Section	Return / Approve / reject	***If Return/reject*** - PE If Approved -Extension Manager	Contractor
TASK 19	Extension Manager	Return / Approve / reject	***If Return/reject*** – Head Section and follow the loop task 18 If Approve- and material received by the contractor then TASK 21 to be followed as it goes to Inventory team to schedule the Material return appointment. Contractor shall follow TASK 22 Auto awarding amount return to contractor CAP limit and zone budget.	Head Section Project Engineer

Table 6:Task Assignment for Project Cancellation

design team and inventory team. Once the awarded project is cancelled, the budget for the project return to the contractor CAP Limit as well to the governorate/ zone budget.

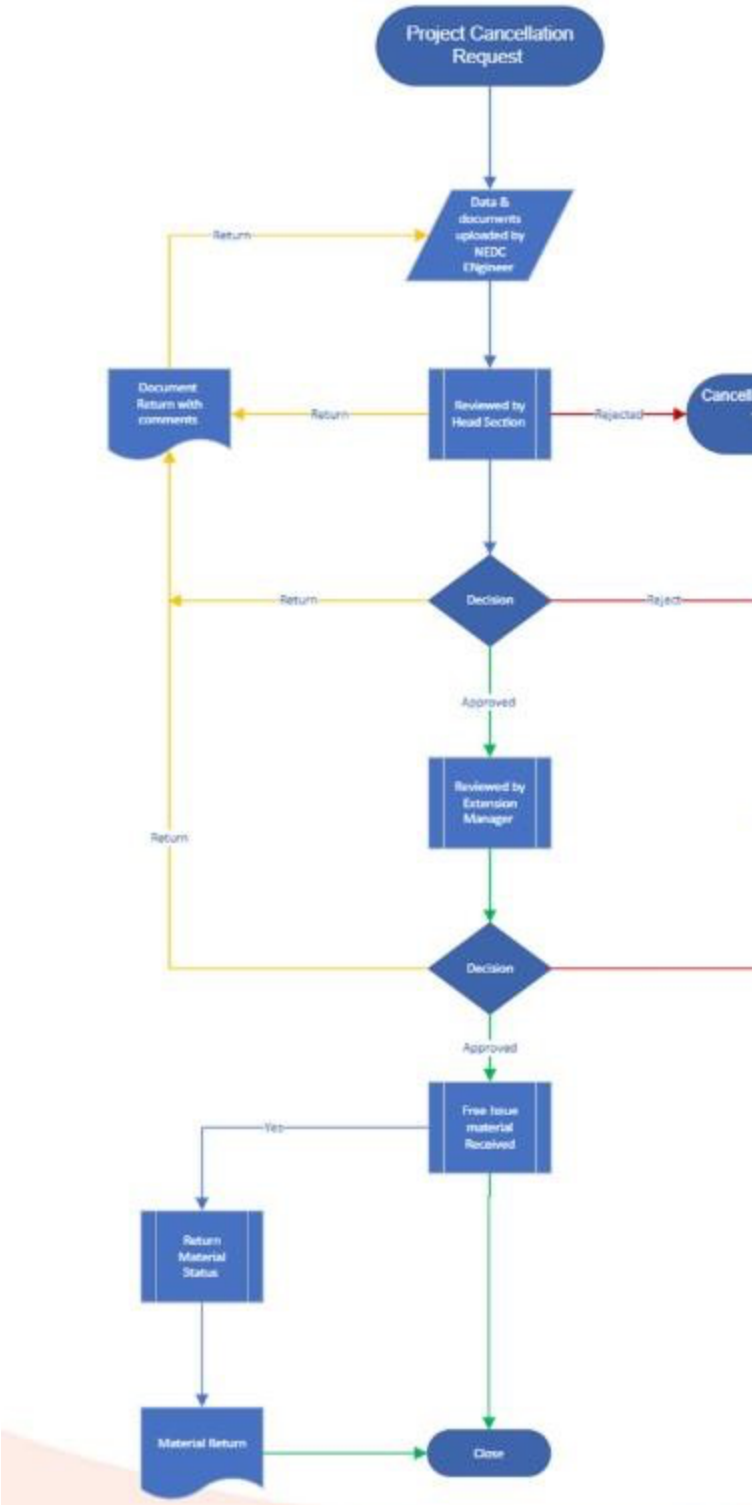


Table 7:Workflow for Project Cancellation

3.3 PROJECT CANCELLATION & REDISTRIBUTION SUBPROCESS

This is the subprocess of the execution process initiated by Project Engineer. It involves the authority level of action by Head Section and Extension Manager including the interface with inventory team. Once the awarded project is requested for cancellation & redistribution it follows the same sequence of approval as below. The only condition is that after the redistribution- if the contractor have collected the materials it shall be transferred from the previous contractor to the new contractor with the approval of the of the head section. Once the head section approved the same, the information shall be automatically updated in the system and inventory team shall complete the return material sub-process

TASK ASSIGNMENT DURING THE WORKFLOW FOR PROJEC			
WORKFLOW	**AUTHORITY**	**ACTIVITIES**	
TASK :20	Project Engineer	Initiate the Cancellation & Redistribution	Head S
TASK: 21	Head Section	Return / Approve / reject	***If Retu*** If Appr
TASK 22	Extension Manager	Return / Approve / reject	***If Retu*** and fo If Appr Distrib
TASK 23	Distribution Committee	Awarding the WO to the contractor	***Extens WO***
TASK 24	Head Section	Approved the Material Transfer	New C Previou

Table 8:PROJECT CANCELLATION & REDI

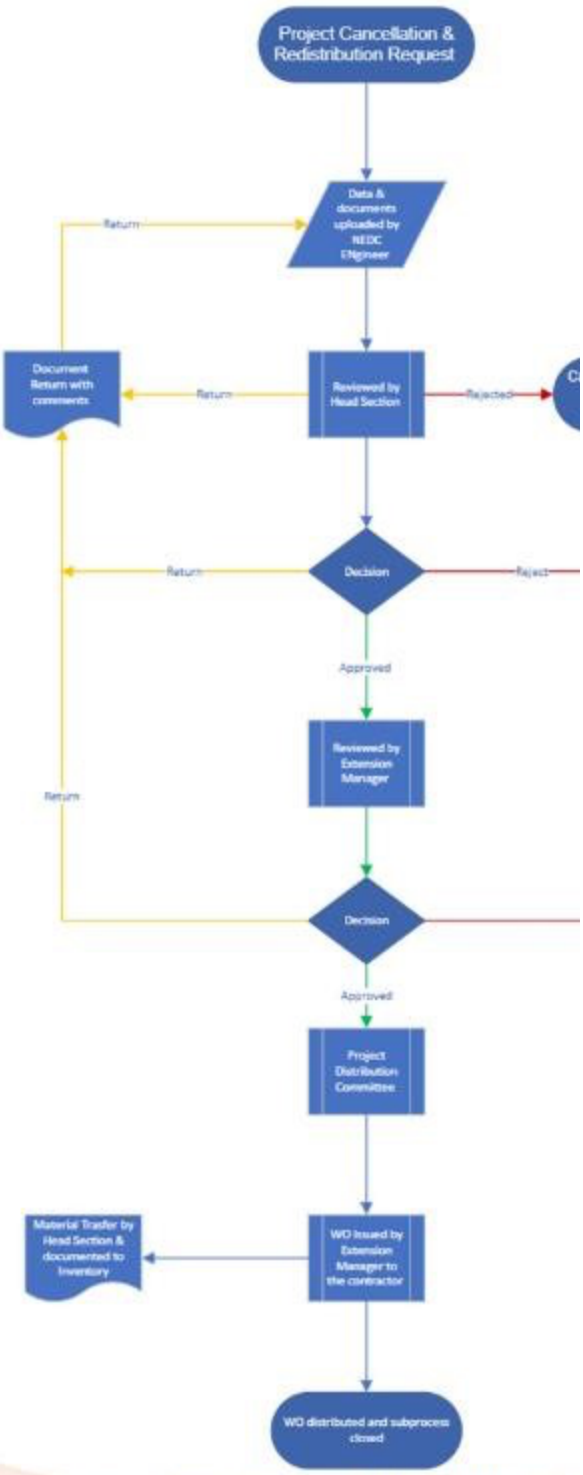


Table 9: PROJECT CANCELLATION & REDIST

3.4 PROJECT MATERIAL REQUISITION & MATERIAL RETURN SUBPROCESS:

This is the third subprocess of the execution process initiated by contractor and interlink with the defined TASK:4. Once the contractor initiate for material requisition, the information goes to Project Engineer at the same time ,task goes to inventory team. The inventory team schedules the appointments in the calendar along with date & time. The task remains pending till the materials are issued by them.

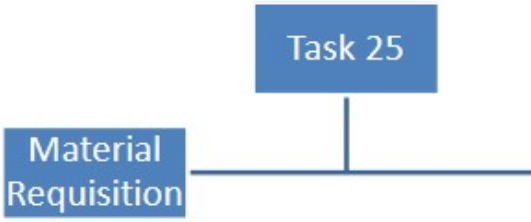


Table 10:Task assignment for Mater

TASK ASSIGNMENT DURING WORKFLOW FOR MA		
WORKFLOW	**AUTHORITY**	**ACTIVITIES**
TASK :25	Contractor	Material requisition. Material Return
TASK :26	Inventory team	Return / Approve / reject
TASK 27	Contractor	Collect/ return the Material

Table 11::Task assignment for Mate

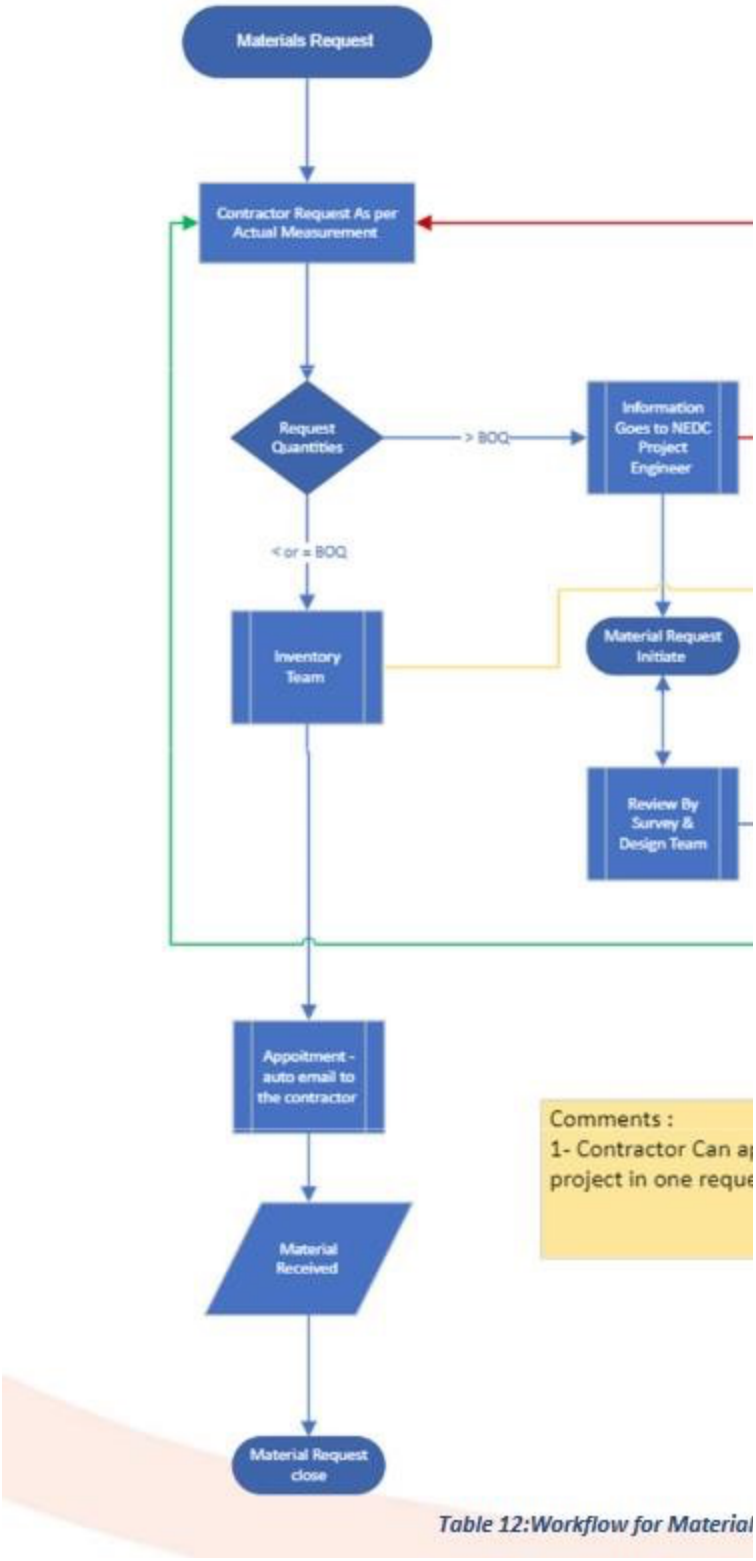


Table 12:Workflow for Materia

Proof of Concept (POC) Requirements

As part of your submission, please provide a Proof of Concept (POC) for the RFQ and Awarding Module. The POC should demonstrate the following:

1. **RFQ Creation and Release:**
   - Ability to create an RFQ and release it, assuming the vendor is already registered in the system.
2. **Vendor Submission:** ○ Vendors should be able to submit their offers in response to the RFQ.
3. **Automated Awarding:**
   - The system should automatically award the RFQ based on provided scenarios. The successful criteria of the POC are to demonstrate the system's capability to automatically award the RFQ under different scenarios.

3 Deliverables:

Sr	Description
1	To develop Vendor registration model
2	To develop Vendor portal
3	To develop Admin portal
4	To develop RFQ model
5	To develop Awarding model

6	To develop Cancellation model
7	To develop Finance portal
8	To develop Withdraw model
9	To develop Project execution model
10	To develop QS model

4 Location and place of delivery

The custom developed application will be deployed in Company K2 environments in HQ

5 Delivery /execution period

The execution period should not exceed 6 months

6 Timescales:

The execution period should not exceed 6 months

7 Warranties

3 years SLA support

8 Schedule of Rate:

Bidder shall quote as per the following schedule:

Sr	Description	Unit of Measurer (Qty)
1	To develop Vendor registration model	
2	To develop Vendor portal	
3	To develop Admin portal	
4	To develop RFQ model	
5	To develop Awarding model	
6	To develop Cancellation model	
7	To develop Finance portal	
8	To develop Withdraw model	
9	To develop Project execution model	
10	To develop QS model	
Total Amount Excluding 5% VAT		
5% VAT		

9 Payment Term:

The payments percentage will be divided into phases from total models, each payment phase will be after completing the model.

10 Penalty

(Contract) A penalty at the rate of 0.15% per day shall be applicable

per day of delay with a maximum limit of 10% of the contract value.

2	Matched with warranty and support services and term & conditions	96-100% match with scope of warrant term & conditions
		91-95% match with scope of warranty & conditions
		86-90% match with scope of warranty & conditions
		81-85% match with scope of warranty & conditions
		76-80% match with scope of warranty, & conditions
		Less than 75% match with Scope of Wo
3	Provide POC (as mentioned on this RFQ)	Included in proposal
		Not included

11 Evaluation Criteria:

Bidder offer will be Evaluated as per the Following:

A) Technical (40%)

B) Financial (60%)

Bidders who score 25% out of 40% or more in technical will be evaluated in Financial.

S.N	Criteria	Sub Criteria (break down of main Criteria)	Score	MAX Score
1	Match with mandatory Criteria (Match with Nintex K2 platform)	96-100 % match with mandatory criterial	5%	5%
		91-95 % match with mandatory criterial	4%	
		86-90 % match with mandatory criterial	3%	
		81-85 % match with mandatory criterial	2%	
		76-80 % match with mandatory criterial	1%	

14 Appendix A Performance Evaluation Certificate:

Performance Period: Final ☐ Quarterly ☐	**Date Prepared:**
Contract Name:	**Prepared By:**
Contract # / P.O/ #:	**Contract Title:**
Contract Amount:	
Purpose of Contract (Brief Description):	

Performance Ratings:
In applying Performance Ratings, comments should summarize the vendor's performance, and the rating circled should best describe performance in that category. See Tracking Vendor Performance Guidance for explanations of categories and Ratings (Above Standard, Standard, Below Standard*)
* Note that these Ratings have been developed for use in the Statewide Contract Management System and for use with any type of contract and project specific Scope of Work.

Category

Performance Metrics & SLA Adherence	Rating	Comments (Brief)
application Availability	**Above Standard** **Standard** **Below Standard**	Ensure that the application meets or exceeds the agreed uptime percentage (99.9% uptime).. not including environment errors
Response Time	**Above Standard** **Standard** **Below Standard**	time taken to respond to support tickets or issues reported by end-users (the time should be 4hr from issues reported)
Resolution Time	**Above Standard** **Standard** **Below Standard**	average time taken to resolve issues within the application based on severity levels (critical, high, medium, low).

- **Assessment result (below standard) will consider as poor performance**