## 📦 1. Tender Management

### Overview

## This section outlines the functional workflow for the Tender Management module within the LDV ERP system. It enables the Tender Officer to identify market opportunities, initiate tender drafts, prepare documents, and route them through a multi-step approval workflow involving the Tender Manager and Finance Manager. It also includes BOQ preparation for estimation and bidding.

## 

### 1.1 Roles & Key Activities

| Role | Key Activities |
| --- | --- |
| Tender Officer | Scans open tenders, filters opportunities, prepares tender drafts and BOQ |
| Tender Manager | Reviews tender documents, aligns with company capabilities, confirms scope |
| Finance Manager | Verifies financial feasibility and finalizes submission approval |

## 

### 1.2 Tender Workflow (Lifecycle Format)

#### ✅ Step 1: Tender Opportunity Sourcing

## Initiated By: Tender Officer

## Action: Browses tenders from market sources (external feeds, emails, portals) and logs relevant tenders to system.

## Form Fields Required:

## Tender Source

## Issuing Organization

## Tender Name

## Tender Deadline

## Estimated Project Value

## Location

## Industry Category

## Remarks / Scope Notes

## System Action: Tender is saved with status: Sourced

## 

#### 📤 Step 2: Tender Screening & Filtering

## Initiated By: Tender Officer

## Action: Reviews sourced tenders based on:

## Project Type match

## Project Size / Value

## Required Team Capacity

## Deadline proximity

## System Action: Officer marks tender as Filtered or Discarded

## Next Step: If filtered in → move to preparation

## 

#### 📝 Step 3: Tender Draft Preparation

## Initiated By: Tender Officer

## Action: Prepares tender response document and BOQ

## Tender Form Fields:

## Project Name

## Project Scope

## Project Location

## Tender Deadline

## BOQ Table with:

## Item Name

## Unit Cost

## Quantity

## Total Value (auto-calculated)

## Attachments:

## Draft Tender Document

## Supporting Documents (certificates, project history, etc.)

## Status: Draft Notifications: None yet

## 

#### 📤 Step 4: Submit Tender for Review

## Initiated By: Tender Officer

## Action: Submits draft tender to Tender Manager

## System Action:

## Status → Pending Manager Review

## Notification to: Tender Manager

## 

#### 🔍 Step 5: Review by Tender Manager

## Initiated By: Tender Manager

## Decision Options: ✅ Approve → Forwarded to Finance Manager ❌ Reject → Returned to Tender Officer with comments

## System Action:

## Status → Pending Finance Review or Rejected

## Notification to: Next approver or Tender Officer

## 

#### 💰 Step 6: Finance Approval

## Initiated By: Finance Manager

## Action: Reviews financial exposure, overhead recovery, submission cost

## Decision Options: ✅ Approve → Tender becomes Approved for Submission ❌ Reject → Returned to Tender Manager with reason

## System Action:

## Status: Approved or Rejected

## Notification sent accordingly

## 

#### 🔁 Step 7: Revision (if Rejected)

## Initiated By: Tender Officer

## Action: Updates the draft and re-submits for approval System Action: Re-enters the loop starting from Tender Manager

## 

### 1.3 Notification Summary by Step

| Step | Recipient | Reason |
| --- | --- | --- |
| Tender Submitted | Tender Manager | First-level approval required |
| Manager Approved | Finance Manager | Financial sign-off needed |
| Manager Rejected | Tender Officer | Corrections needed |
| Finance Approved | Tender Officer | Submission clearance granted |
| Finance Rejected | Tender Manager | Review comment passed down |
| Revised Tender Sent | Tender Manager | New draft submitted |

## 

### 1.4 Tender Form Fields

| Field Name | Description | Validation Rules | Field Type |
| --- | --- | --- | --- |
| Tender Name | Name or title of tender opportunity | Required | Text Input |
| Project Name | Internal project mapping name | Required | Text Input |
| Project Scope | High-level scope for the tendered project | Required | Text Area |
| Project Location | City or region where the work is based | Required | Text Input |
| Tender Deadline | Last submission date | Required, must be future | Date Picker |
| Issuing Organization | Who released the tender | Optional | Text Input |
| Tender Value Estimate | Approximate project value | Optional | Number Input |
| BOQ Table | Cost breakdown of materials/labor | At least 1 row required | Repeating Table |
| Attachments | Supporting documents | Optional | File Upload |

## 

### 📊 BOQ Table Fields

| Field | Description | Validation |
| --- | --- | --- |
| Item Name Unit | What the cost item is What unit is used | Required Required |
| Unit Cost | Cost per unit | Required |
| Quantity | Quantity of item/service | Required |
| Total Value | Auto-calculated (cost × quantity) | System-generated |

## 

### 1.5 Deliverables – Stage 2: Tender Management

| Category | Details |
| --- | --- |
| Modules Involved | Tenders, BOQ, Notifications |
| Trigger | Approved filtered tender opportunity |

## Deliverables

* Tender Draft
* Tender Approval Logs
* BOQ Table
* Final Submission-Ready Document

## 🔢 2. Project Setup & Planning

### Overview

This section outlines the functional specifications for the Project Setup & Planning module within the LDV ERP system. It includes role-based activities, dual project creation paths, approval workflows, field definitions, validations, and final outputs.

Projects can be created through:

* Manual creation (via Site Engineer, Project Admin, Tender Manager)
* Conversion from an approved Tender

### 2.1 Roles & Key Activities

| **Role** | **Key Activities** |
| --- | --- |
| Founder / Owner | Approves new project, assigns PM, reviews strategic goals |
| Project Manager | Configures project modules, sets execution plan |
| Planning Engineer | Prepares baseline schedule, float, milestones |
| Tender Manager | Reviews awarded BOQ, aligns with contract, defines scope |
| Tender Officer | Provides tender-to-execution handover inputs |

### 2.2 Project Setup & Planning Workflow (Lifecycle Format)

#### ✅ Step 1: Project Creation

**There are two options for project initiation:**

#### 🔹 Option A: Manual Project Creation

**Initiated By:** Tender Manager, Site Engineer, or Project Admin

* Enters project fields manually
* Status: Draft

#### 🔹 Option B: Create from Approved Tender

**Initiated By:** Tender Officer or Project Admin

* Chooses an approved tender from the list
* Project Name, Scope, Location, and BOQ auto-filled
* Fields remain editable
* Status: Draft

🧠 **System Behavior:** BOQ from the tender is attached and visible in project preview  
 Tender reference is linked to the project record

#### 📤 Step 2: Submit Project for Approval

**Initiated By:** Project Admin or Site Engineer

**System Action:**

* Status: Pending Approval
* Notification sent to: **Founder / Owner**

#### 🔍 Step 3: Review by Owner

**Initiated By:** Founder / Owner

* Approves or rejects the submitted project

| **Decision** | **Result** | **Notification Sent To** |
| --- | --- | --- |
| ✅ Approve | Status: Approved | PM, QS, Planner, Tender Officer |
| ❌ Reject | Status: Rejected | Site Engineer / Project Admin |

#### 🔁 Step 4: Revise and Resubmit (if Rejected)

**Initiated By:** Site Engineer

* Status: Revised
* Sent back to Owner for re-approval

#### ✅ Step 5: Final Approval Outcome

If approved:

* Project Code manually entered
* Access provisioned to PM, QS, Planner, Tender Manager
* Status: Ready for Budgeting
* Notifications: All core team roles

**✅ Step 6: Baseline Schedule Upload (Post-Approval)**

* **Initiated By**: Planning Engineer
* **System Action**: Status → Schedule Uploaded
* **Notification**: Sent to PM, Site Engineer, Project Admin
* **Triggers**: Weekly Progress Update feature

### 2.3 Notification Summary by Step

| **Step** | **Recipient** | **Reason for Notification** |
| --- | --- | --- |
| Project Submission | Founder / Owner | Approval required |
| Project Approved | PM, QS, Planner, TO | Project ready to initiate planning/budgeting |
| Project Rejected | Site Engineer / Admin | Rework needed |
| Project Resubmitted | Founder / Owner | Revised version submitted |

### 2.4 Project Setup Form Fields

| **Field Name** | **Description** | **Validation Rules** | **Field Type** |
| --- | --- | --- | --- |
| Project Name | Unique name for the project | Required, max 100 characters | Text Input |
| Project Code | Auto-generated code | System-generated | Read-Only Text |
| Project Type | E.g., Commercial, Residential | Required | Dropdown |
| Start Date | Expected start | Required, future | Date Picker |
| End Date | Expected completion | After Start Date | Date Picker |
| Assigned PM | Assigned internal project manager | Required | Dropdown |
| Project Location | Site address | Required | Text Input |
| Client Name | Name of client | Optional | Text Input |
| Project Description | Short description of scope | Max 500 characters | Text Area |
| Strategic Goals  BOQ fields manual entry (if project started from scratch) | Strategic alignment input  Fields same as BOQ form  of tender | Optional  Required if  manually project created | Text Area  Similar format as line items |
| BOQ Attachment (if tender) | Auto-filled from tender | Read-only unless unlocked | Table/Linked File |

### 2.4.1 Baseline Schedule Upload Fields

### 🆕 Structured Schedule Rows (One per Task)

| **Field Name** | **Description** | **Validation** | **Type** |
| --- | --- | --- | --- |
| Task ID | Unique identifier for the task | Required | Text Input |
| Task Name | Name of the scheduled task | Required | Text Input |
| Planned Start Date | Scheduled task start date | Required | Date Picker |
| Planned End Date | Scheduled task end date | Required | Date Picker |
| Responsible Person/Role | Assigned team member or role | Optional | Dropdown (users/roles) |
| Planned Quantity | Quantity of measurable output (e.g., 100 m³ concrete) | Optional but ideal | Number + UOM |
| Unit of Measure (UOM) | e.g., m³, tons, sq.ft., hours | Optional (linked to above) | Dropdown |
| Linked BOQ Item ID | Link to a BOQ item (if tracked for cost/procurement) | Optional | Autocomplete |
| % Planned Weight (WBS) | Weight of this task in overall plan (for weighted % progress) | Optional | Percentage |
| Milestone Flag | Is this task a milestone? | Optional | Checkbox |
| Notes / Remarks | Notes from planner | Optional | Text Area |

### 🧠 System Behavior (Extended for Tender Projects)

* If project is created via an approved tender:  
  + Fields auto-filled from tender record: Project Name, Scope, Location, BOQ
  + Status → Draft
  + Still goes through full approval workflow
  + Link back to original tender is stored in system for traceability

### 2.5 Deliverables – Stage 1: Project Initialization

| **Category** | **Details** |
| --- | --- |
| Modules Involved | Projects, Settings & Permissions, Tender Linkage (if applicable) |
| Trigger | Project creation submitted and approved |

**Deliverables**

* **Project Code**
* Team Assignment
* Access Rights Provisioned
* Project Status set to Ready for Budgeting
* if from Tender) Linked BOQ + Tender Reference

## 📈 3. Budgeting, Cost & Contracts

### 3.1 Overview

This section defines the functional requirements for the *Budgeting, Cost & Contracts* module. It governs the preparation and approval of BOQs (Bills of Quantities), budgeting alignment, contract drafting, and financial review processes.

( Notes on budgeting:1) you don't have to be very specific for the budget, as I said, think of it as open table, which QS will fill and customize in the way they want 2\_ tp emable tracking based on the allocated amount for a particular BOQ head, we need a way to link the project BOQ item to the line items in budgeting. )

### 3.2 Roles & Key Activities

| **Role** | **Key Activities** |
| --- | --- |
| Quantity Surveyor (QS) | BOQ breakdown, quantity tracking, change orders |
| Contracts Manager | Drafts client contracts, manages variations |
| Finance Manager | Aligns budget plan with finance strategy and approvals |

### 3.3 Budgeting Workflow (Lifecycle Format)

#### ✅ Step 1: BOQ Preparation

* **Initiated By**: Quantity Surveyor (QS)
* **Action**: Uploads and breaks down the Bill of Quantities (BOQ) for the approved project

**Required Fields: (** refer to form fields section later in the document)

* BOQ File Upload

**System Action**:

* Status: Draft BOQ
* No notifications yet (internal draft)

#### 📤 Step 2: Submit BOQ for Review

* **Initiated By**: QS
* **Action**: Marks BOQ as ready for review

**System Action**:

* Status: Pending Review
* Notification to: **Contracts Manager**

#### 🔍 Step 3: Review by Contracts Manager

* **Initiated By**: Contracts Manager
* **Action**: Reviews BOQ structure, aligns with contract terms and scope

**Decision Options:**

* ✅ **Forward for Finance Review**
  + Status: Ready for Finance Approval
  + Notification to: **Finance Manager**
* ❌ **Send Back to QS**
  + Status: Needs Revision
  + Must include feedback
  + Notification to: **QS**

#### 🧾 Step 4: Review & Final Approval by Finance Manager

* **Initiated By**: Finance Manager
* **Action**: Reviews financial impact, budget alignment

**Decision Options:**

* ✅ **Approve BOQ**
  + Status: BOQ Approved
  + Notification to: **QS, Contracts Manager**
* ❌ **Reject**
  + Status: Rejected by Finance
  + Rejection reason mandatory
  + Notification to: **Contracts Manager, QS**

#### 🔁 Step 5: Revise & Resubmit (if Rejected)

* **Initiated By**: QS
* **Action**: Revises BOQ based on feedback

**System Action**:

* Status: Revised
* Notification to: **Contracts Manager → Finance Manager**
* Re-enters Step 3

**Status Tracking:**

* Draft → Under Review → Finalized → Signed

### 3.4 Notification Summary

| **Step** | **Recipient** | **Reason for Notification** |
| --- | --- | --- |
| BOQ Submitted | Contracts Manager | BOQ submitted for review |
| BOQ Forwarded | Finance Manager | Contracts Manager validated BOQ |
| BOQ Approved | QS, Contracts Manager | Finance approved the budget |
| BOQ Rejected | QS, Contracts Manager | Feedback provided, needs revision |
| BOQ Resubmitted | Contracts Manager | Revised BOQ submitted for review |
| Contract Ready | Project Manager (opt.) | Contract drafting/changes initiated |

### 3.5 Budgeting & Contracts Form Fields

| **Field Name** | **Description** | **Validation Rules** | **Field Type** |
| --- | --- | --- | --- |
| BOQ File Upload | Upload final BOQ Excel/PDF | Required | File Upload |
| Item Descriptions | BOQ line item description | Required | Text Area |
| Unit of Measure  LinkedBOQItemId | Unit of measurement (e.g., m², ton, piece)  the BOQ item in project that has been allocated the budget in project/tender | Required  Required | Dropdown  Dropdown |
| Estimated Quantity | Quantity for the BOQ item | Required, numeric | Number Input |
| Unit Rate | Rate per unit | Required, decimal | Number Input |
| Total Cost | Auto-calculated field (Qty x Rate) | Read-only | System Field |

### 3.6 Deliverables – Stage 2: Budgeting & Cost Control

| **Category** | **Details** |
| --- | --- |
| **Modules Involved** | Budget & Cost Control, Contracts |
| **Trigger** | Initiated after project approval by **Founder / Owner** |
|  |  |

| **Deliverables** |
| --- |
| • Master Budget |
| • BOQ Upload |
| • Budget Approval Status (Approved / Needs Revision) |
|  |

## 

## 

## 4.x Warehouse Requests (Pre-Procurement Control)

## 

### 4.x.1 Overview

## The Warehouse Request (WR) module is used to initiate internal requisitions for materials and tools needed on-site. It serves as the first gate in the procurement cycle and helps determine whether the material is available in inventory or needs to be procured externally via a Purchase Request (PR). It ensures inventory optimization, prevents duplication, and enforces material accountability.

## 

### 4.x.2 Lifecycle of a Warehouse Request

## 

#### ✅ Step 1: Warehouse Request Creation

## Initiated By: Site Engineer, Site Supervisor, Store Keeper

## When: A need arises on-site for stocked materials, tools, or consumables

## System Tool: + Create Warehouse Request

## System Behavior:

## A unique WR# is auto-generated upon submission (e.g., WR-2024-00125)

## Staff selects items from a searchable inventory catalog (similar to Precoro)

## Quantities and UOMs are specified

## Drafts are editable until submitted

## Form Fields:

| Field | Description | Type | Validation |
| --- | --- | --- | --- |
| Project Code | Project site requesting materials | Dropdown | Required |
| Requesting Department | Site, division, or team | Dropdown | Required |
| Item(s) Requested | Selected from inventory catalog | Table Input | At least 1 item |
| Quantity / UOM | Quantity and unit of measure | Numeric/Input | Required |
| Needed By Date | Required delivery date | Date Picker | Required |
| Purpose / Justification | Reason for request | Text Area | Required |
| Attachments | Optional photos, drawings, documents | File Upload | Optional |

## System Status: Draft WR → Submitted Notification Sent To: Warehouse Manager / Material Control Engineer

## 

#### 📤 Step 2: Warehouse Review & Approval

## Reviewed & Approved By: Warehouse Manager / Material Control Engineer

## Action:

## Reviews item availability in stock

## Confirms quantities requested

## Approves or rejects items individually or in bulk

## Optional Workflow (Configurable):

## After submission, Project Manager approval may be required before Warehouse review.

## Use case: Budget-sensitive or high-value materials

## Flow: Site Team → PM Approval → Warehouse Review

## Decision Paths:

| Decision | Action Taken | System Status |
| --- | --- | --- |
| ✅ Stock Available | Proceed to Stock Transfer | Ready for Transfer |
| ❌ Stock Not Available | Forward to Procurement | Forwarded for PR |
| ⛔ Rejected | WR marked as rejected with comments | Rejected |

## Notification:

## Procurement Officer notified if forwarded

## Requester notified of approval/rejection

## 

#### 🔄 Step 3: Create Stock Transfer (Inventory Adjustment)

## Initiated By: Warehouse Manager / Material Control Engineer

## Action: Confirms that materials have been physically delivered to site

## System Behavior:

## Opens a Stock Transfer form for each approved WR

## Deducts quantity from warehouse inventory

## Records delivery details

## Marks WR as Completed from Stock

## Required Fields for Stock Transfer:

| Field Name | Description | Validation | Type |
| --- | --- | --- | --- |
| Linked WR Number | Reference to original Warehouse Request | System Auto-link | Read-only |
| Items Transferred | Item name, quantity, UOM | Required | Table Input |
| Transfer Date | Date of actual delivery to site | Required | Date Picker |
| Receiver Name | Site personnel who received goods | Optional | Text Input |
| Notes / Remarks | Delivery condition, discrepancy, etc. | Optional | Text Area |

## System Status: Completed from Stock Notification Sent To: Site Engineer / Requester

## 

#### 🔁 Step 4: Forward to Procurement (If Out of Stock)

## Initiated By: Procurement Officer

## Action: Clicks + Create from Warehouse Request

## System Behavior:

## Auto-fills a Purchase Requisition (PR) with data from WR

## Procurement process begins

## 

### 4.x.3 How the Creator Decides: WR vs PR

| Scenario | Recommended Action | Rationale |
| --- | --- | --- |
| Needs stocked material (cables, PPE) | ✅ Create Warehouse Request | Likely available in internal inventory |
| Needs unique, specialized item | ✅ Create Manual Purchase Request | Custom or new material; not stored in warehouse |
| Emergency requirement | ✅ Create Warehouse Request | Internal priority with urgent flag |
| Long-term or strategic procurement | ✅ Create Manual Purchase Request | Planned material needed later |

## 

### 📩 Warehouse Request Notification Summary

| Step | Who is Notified | Trigger |
| --- | --- | --- |
| WR Submitted | Warehouse Manager / Material Controller | New WR needs approval |
| WR Rejected | Site Engineer / Originator | Rejected with feedback |
| WR Approved | Site Engineer | Proceed to delivery |
| WR Forwarded to PR | Procurement Officer | Stock not available |
| Stock Transfer Completed | Site Engineer | Materials delivered |
| PR Created from WR | Project Manager | Procurement triggered from WR |

## 

### 🔐 Warehouse Approval Workflow (Optional Configuration)

## Flow (if enabled): Site Request → PM Approval → Warehouse Manager Review → Stock Transfer / PR

## Use Case:

## For high-value items

## To enforce early budget visibility

## To prevent misuse of WR function

## 

### 📦 Final Output of Warehouse Request Lifecycle

## ✅ If approved and available: • Warehouse Stock Transfer created • Inventory updated • Request closed

## ❌ If unavailable in stock: • PR created by Procurement Officer • WR linked to PR record for traceability

## 

### 🗂 Deliverables – Warehouse Request Module

## Deliverables • Auto-generated Warehouse Request Numbers (WR#) • Submitted and Approved WR Logs • Inventory Check Status per Item • Warehouse Stock Transfer Records • Forwarded WRs to Procurement (PR Tracking) • Warehouse Fulfillment Reports

## 

## 

## 🛒 5. Procurement & Supply Chain

### 5.1 Overview

This section outlines the functional workflow for the *Procurement & Supply Chain* module. It handles all activities from purchase request (PR) creation (manual or from warehouse needs), multi-level approvals, purchase order (PO) generation, delivery logging, and invoice handling, ensuring structured control over procurement operations.

### 5.2 Roles & Key Activities

| **Role** | **Key Activities** |
| --- | --- |
| Procurement Manager | Approves PRs/POs, handles vendor negotiations |
| Procurement Officer | Creates PRs/POs, coordinates with site and vendors |
| Store Keeper / Logistics Coordinator | Tracks deliveries, updates inventory log |

### 5.3 PR Entry Options (Pre-Workflow)

At the start of the PR workflow, users are presented with **two options to initiate a Purchase Requisition**, each serving a distinct purpose:

#### Option 1: + Create Purchase Requisition

* **Used When**: A procurement need arises independently (not from existing warehouse request), such as a one-off site requirement, service, or bulk material for a project.
* **Initiated By**: Procurement Officer or Site Engineer
* **System Behavior**: Opens a blank PR form for manual entry

**Form Fields Required (Manual PR):**

| **Field Name** | **Description** | **Validation** | **Field Type** |
| --- | --- | --- | --- |
| Project Code ( Single per form)  BudgetSpend  Category | Linked project  Selected from one of the pre specified budget spend category for the project | Required  Required | Dropdown  Dropdown |
| Item Description | Name/description of requested item | Required | Text Input |
| Quantity Required | Required quantity | Required, numeric | Number Input |
| Required Delivery Date | Deadline for item delivery | Must be future date | Date Picker |
| Justification / Remarks | Reason for purchase | Optional | Text Area |

#### Option 2: + Create from Warehouse Requests

* **Used When**: Materials have already been requested internally by a Store Keeper or Site Supervisor (e.g., site raises a material issue slip or warehouse request).
* **Initiated By**: Procurement Officer
* **System Behavior**:  
  + Displays a list of approved/pending warehouse requests
  + User selects a request
  + System auto-populates PR form with relevant data
  + Allows for review/edit before submission

**Form Fields Required (Warehouse PR):**

| **Field Name** | **Description** | **Validation** | **Field Type** |
| --- | --- | --- | --- |
| Project Code  BudgetSpend  Category | Pulled from linked request  Selected from one of the pre specified budget spend category for the project | Read-only  Required | System Field  Dropdown |
|  |  |  |  |
| Item(s) & Quantity | Auto-filled from warehouse request | Editable if needed | Table View |
| Required Delivery Date | Estimated delivery timeline | Required | Date Picker |
| Comments / Notes | Remarks from warehouse or site | Optional | Text Area |

### 5.4 Procurement Workflow (Lifecycle Format)

#### ✅ Step 1: Purchase Request (PR) Creation

* **Initiated By**: Procurement Officer or Site Engineer
* **Action**: Select either:  
  + **+ Create Purchase Requisition** *(manual entry)*
  + **+ Create from Warehouse Requests** *(auto-filled from warehouse issue slip)*

**System Action:**

* PR status: Draft
* Not routed for approval yet

**Notification:**

* None during draft stage

*(The rest of the steps remain unchanged and follow your original Step 2 to Step 5 flow...)*

### 5.5 Notification Summary

*(... remains as already documented ...)*

### 5.6 Purchase Requisition Form Fields

Updated based on dual-entry options:

| **Scenario**  Manual PR | **Field Name**  Request Type | **Description**  based on the type is determines whether after approval it goes to contract manager or procurement manager | **Validation**  One of materials, equipment rentals, subcontractor | **Field Type** |
| --- | --- | --- | --- | --- |
| Manual PR | Project Code | Linked project for which PR is created | Required | Dropdown |
| Manual PR | Item Description | Item/service name | Required | Text Input |
| Manual PR | Quantity Required | Number of units needed | Required, numeric | Number Input |
| Manual PR | Required Delivery Date | When the item is expected | Must be future date | Date Picker |
| Manual PR | Justification / Remarks | Reason for request | Optional | Text Area |
| From Warehouse Request | Linked Warehouse Request | Reference to internal stock request | Required | Search & Select |
| From Warehouse Request | Auto-filled Item Details | Item name, quantity, UOM | Pulled from request | Table View |
| From Warehouse Request | Delivery Date | Desired delivery date | Required | Date Picker |
| From Warehouse Request | Notes / Comments | Context or additional info | Optional | Text Area |

### 5.7 : Purchase Order (PO)

| Field Name | Description | Validation | Field Type |
| --- | --- | --- | --- |
| Linked PR ID | Reference to approved PR | Required / Optional if not linked to PR | Dropdown / Auto-fill |
| Vendor Name | Selected supplier | Required | Dropdown |
| PO Amount | Total amount of the order | Required, numeric | Number Input |
| Delivery Address | Final delivery location | Required | Text Input |
| Delivery Date | Expected delivery timeline | Required | Date Picker |
| Payment Terms | Agreed payment schedule or conditions | Required | Dropdown |
| PO Line Items | Item name, quantity, unit rate, total | Required | Table Input |
| Special Instructions | Notes related to shipping, handling, etc. | Optional | Text Area |
| Attached Documents | Contract, quotation, or supporting files | Optional | File Upload |

### 5.8: Delivery Tracker Log

| Field Name | Description | Validation | Field Type |
| --- | --- | --- | --- |
| PO Number | PO reference being fulfilled | Required | Dropdown |
| Delivery Date | Date items were received | Required | Date Picker |
| Item Received | Name of item delivered | Required | Text Input |
| Quantity Received | Actual quantity delivered | Required, numeric | Number Input |
| Unit of Measure | Measurement unit (e.g., kg, pcs, m²) | Required | Dropdown |
| GRN (Goods Receipt Note) | Official receipt document | Required | File Upload |
| Quality Comments | Notes on any quality issues | Optional | Text Area |
| Delivery Condition | Acceptable, Partial, Damaged | Required | Dropdown |
| Receiver Signature | Acknowledgment of goods received | Optional | Digital Signature |

### 5.9 Invoice Log (Vendor Payment Record)

| Field Name | Description | Validation | Field Type |
| --- | --- | --- | --- |
| Invoice Number | Invoice reference provided by vendor | Required | Text Input |
| Linked PO Number | Corresponding PO this invoice is tied to | Required | Dropdown |
| Invoice Date | Date of invoice issuance | Required | Date Picker |
| Amount | Total invoice value | Required, numeric | Number Input |
| Payment Terms | Payment conditions stated in invoice | Required | Dropdown |
| GRN Reference | Goods Receipt Note confirming delivery | Required | File Upload / Link |
| Status | Invoice status (Pending, Verified, Paid, Rejected) | Auto-tracked | System Status Field |
| Rejection Comments | Comments if invoice is rejected | Conditional (if rejected) | Text Area |
| Payment Reference No. | Bank transfer reference (UTR/Transaction ID) | Required when paid | Text Input |
| Payment Date | Date when payment was made | Required when paid | Date Picker |

### 

### 5.10 Deliverables – Stage 3: Procurement Lifecycle

| **Category** | **Details** |
| --- | --- |
| **Modules Involved** | Procurement, Subcontractors |
| **Trigger** | Approved budget line items from BOQ or Material Requests |

**Deliverables:**

* Purchase Requisition (PR – Manual or from Warehouse)
* Request for quotes
* Approved Purchase Orders (PO)
* Delivery Tracker Logs with GRNs
* Vendor Invoice Logs with Status
* Linked Payment References for Audit Trail

## 🤝 6. Subcontractor & Vendor Management

### 6.1 Overview

This section outlines the functional specifications for managing subcontractor work orders, tracking execution, applying penalties for delays, and evaluating vendor performance. It ensures operational transparency, accountability, and continuous quality improvement in subcontractor and vendor relationships.

### 6.2 Roles & Key Activities

| **Role** | **Key Activities** |
| --- | --- |
| Contract Manager / Subcontract Coordinator | Manages work orders, subcontractor updates, penalties |
| Vendor Performance Analyst | Monitors KPIs, flags delays or quality issues |

### 6.3 Subcontractor & Vendor Workflow (Lifecycle Format)

#### ✅ Step 1: Subcontractor Work Order Creation

* **Initiated By**: Contract Manager / Subcontract Coordinator
* **Action**: Creates a work order for a subcontractor

**Required Fields:**

* Project Code
* Subcontractor Name
* Work Description
* BOQ Item Reference
* Agreed Quantity and Rate
* Start and End Dates
* Retention %
* Special Clauses / Notes

**System Action:**

* Status set to Draft Work Order
* Saved in subcontractor records

**Notification:**

* None at draft stage

#### 📤 Step 2: Submit Work Order for Approval

**Approval Flow:**

1. Project Manager – Verifies scope and budget
2. Finance Manager – Checks financial exposure and terms

**Rejection Flow:**

* Status: Rejected
* Mandatory rejection reason required
* Returned to Contract Manager for revision → Revised
* Re-enters approval workflow

**Final Status:** Approved Work Order

**Notifications:**

* Project Manager receives approval request
* Contract Manager notified on approval or rejection
* Subcontractor optionally receives approved WO as PDF

#### 📅 Step 3: Progress Updates & Penalty Monitoring

* **Initiated By**: Contract Manager / Site Engineer
* **Action**: Logs subcontractor progress and tracks delays

**Fields for Progress Entry:**

* Subcontractor Name
* Work Order Reference
* Date
* % of Work Completed
* Comments / Issues

**Penalty Tracker Fields:**

* Delay Start Date
* Delay Reason
* Penalty Rate (%)
* Calculated Penalty
* Deduction Approval (Yes/No)

**System Action:**

* Work progress and penalties logged
* Delay alerts pushed to PM and Contracts team

**Notifications:**

* Project Manager and Contract Manager (on delay)
* Finance (when penalty is approved)

#### 📊 Step 4: Vendor Performance Evaluation

* **Initiated By**: Vendor Performance Analyst
* **Action**: Evaluates subcontractor or vendor based on KPIs

**Evaluation Fields:**

* Vendor Name
* Rating Period
* KPI Scores (Timeliness, Quality, Responsiveness, Safety)
* Flags (Delay, Defect, Unresponsiveness, Dispute)
* Comments
* Performance Status (Normal, Under Observation, Blacklisted)

**System Action:**

* Evaluation stored in vendor profile
* Status affects future procurement eligibility

**Notifications:**

* Procurement Manager, Project Manager, and Contracts notified when vendors are flagged

#### 🔁 Resubmission / Reinstatement Flow (Flagged Vendors)

* **Flagged Vendor**: Must submit explanation and corrective plan
* **Blacklisted Vendor**: Cannot receive new POs/WOs until status is changed

**Status Change Request Flow:**

* Submitted by: Contract Manager with supporting documents
* Reviewed by: Procurement Manager → Project Director

**Notifications:**

* Contracts and Procurement Managers notified on vendor flagging
* Requester notified when reinstatement is approved/rejected

### 6.4 Notification Summary

| **Step** | **Who is Notified** | **Reason for Notification** |
| --- | --- | --- |
| Work Order Submitted | Project Manager | Needs approval |
| Work Order Rejected | Contract Manager | Revision needed |
| Work Order Approved | Contract Manager, Subcontractor | Approval confirmed; subcontractor receives PDF |
| Delay Logged / Penalty Applied | Project Manager, Finance | Delay or deduction registered |
| Vendor Evaluation Complete | Procurement Manager | KPIs and performance record updated |
| Vendor Flagged / Blacklisted | Procurement Manager, Project Manager | Risk alert for future procurement |
| Vendor Reinstatement Submitted | Project Director | Reactivation request submitted |

### 6.5 Work Order & Vendor Form Fields

| **Field Name** | **Description** | **Validation Rules** | **Field Type** |
| --- | --- | --- | --- |
| Project Code | Linked project for work order | Required | Dropdown |
| Subcontractor Name | Assigned subcontractor | Required | Dropdown |
| BOQ Item Reference | Related BOQ item for task scope | Required | Text Input |
| Agreed Quantity & Rate | Quantity and price agreed per unit | Required, numeric | Number Input |
| Start and End Dates | Work order period | Required, logical date range | Date Picker |
| Retention % | Retention percentage to apply on payment | Optional | Number Input |
| Special Clauses | Additional contract-specific terms | Optional | Text Area |

### 6.6 Deliverables – Subcontractor & Vendor Management

**Deliverables** • Draft and Approved Work Orders  
 • Subcontractor Progress Logs  
 • Delay Logs & Penalty Records  
 • Vendor Performance Evaluations  
 • Vendor Status Tags (Normal, Flagged, Blacklisted)  
 • Reinstatement Requests and Decisions

## 🏗️ 7. Site Execution & Monitoring

### 7.1 Overview

This module manages daily on-site activities including progress logging, site documentation, drawing revisions, and delay/variation tracking. It ensures real-time field reporting, traceable site decisions, and structured construction oversight.

### 7.2 Roles & Key Activities

| **Role** | **Key Activities** |
| --- | --- |
| Project Manager | Oversees daily execution, coordinates with site team, reviews delays and reports |
| Site Engineer | Updates daily progress, validates quantities |
| Project Admin | Manages logs, document uploads, correspondence |
| Document Controller | Uploads/organizes drawings, approvals, logs |

### 7.3 Site Execution Workflow (Lifecycle Format)

#### ✅ Step 1: Daily Progress Logging

* **Initiated By**: Site Engineer
* **Action**: Enters daily execution log for the site

**Required Fields:**

* Date
* Project Code
* Work Completed (Narrative + Dropdown)
* Quantities Executed (UOM, Qty)
* Workforce Count
* hour per person
* Equipment Used (optional)
* Delay Observations (if any)

**System Action:**

* Status: Draft Daily Log
* Editable until submitted

**Notification:**

* None until submission

#### 📤 Step 2: Submit Daily Log

* **Initiated By**: Site Engineer
* **Action**: Submits daily log for review

**Approval Flow:**

* Project Manager – Validates quantities, schedule alignment
* (Optional) QS / Planning Engineer if delay is flagged

**Rejection Flow:**

* Status: Rejected
* Rejection reason required
* Notification to Site Engineer
* Resubmission changes status to Revised Log → Re-reviewed by PM

**Final Status:** Approved Log

**Notifications:**

* PM notified on submission
* Site Engineer notified on approval/rejection

#### 🧾 Step 3: Upload Daily Reports & Supporting Docs

* **Initiated By**: Project Admin
* **Action**: Uploads inspection reports, labor logs, and briefings

**Required Fields:**

* Report Type (Inspection / Safety / Daily Briefing)
* Date
* Attached File(s)
* Description / Notes

**System Action:**

* Documents linked to daily log
* Visible to PM, Planning Engineer, Head Office roles

**Notifications:**

* PM alerted for Safety or Inspection uploads

#### 🗂️ Step 4: Drawing & Document Management

* **Initiated By**: Document Controller
* **Action**: Uploads and updates project drawings

**Required Fields:**

* Drawing No.
* Drawing Title
* Revision No.
* Date
* Approval Status
* Attached File

**System Action:**

* Drawing history tracked
* Older versions archived, not deleted
* Linked to relevant work packages

**Notifications:**

* Site Engineer, PM notified on new uploads
* PM approves urgent/critical drawings

#### 🔍 Step 5: Monitoring Delays & Variations

* **Initiated By**: Site Engineer / Project Manager
* **Action**: Flags delay or variation in site activity

**Required Fields:**

* Delay Category (Weather, Design, Manpower, Material)
* Duration Estimate
* Impact Description
* Required Action / Decision

**System Action:**

* Delay log recorded
* PM required to take action (approve, reassign, comment)
* Delays appear in monthly reports

**Notifications:**

* Planning Engineer (optional)
* Contracts / QS (if variation results)

### 7.4 Notification Summary

| **Step** | **Who is Notified** | **Trigger** |
| --- | --- | --- |
| Daily Log Submitted | Project Manager | Log ready for review |
| Daily Log Rejected | Site Engineer | Feedback and revision required |
| Daily Log Approved | Site Engineer | Final approval confirmation |
| Report Uploaded | Project Manager | Safety or Inspection report uploaded |
| Drawing Uploaded/Revised | Site Engineer, Project Manager | New drawings or versions added |
| Delay Flagged | Project Manager, Planning Engr | Delay reported with impact |
| Variation Flagged | QS / Contracts Manager | Change that affects time or cost |

### 7.5 Site Execution Form Fields

| **Field Name** | **Description** | **Validation Rules** | **Field Type** |
| --- | --- | --- | --- |
| Date | Date of site activity | Required | Date Picker |
| Project Code | Linked project code | Required | Dropdown |
| Work Completed | Description of completed work | Required | Text Area + Select |
| Quantities Executed | Unit and quantity completed | Required, numeric | Number Input |
| Workforce Count | Total active labor on site | Optional | Number Input |
| Equipment Used | Tools/machinery used on site | Optional | Multi-select |
| Delay Observations | Notes on any delay | Optional | Text Area |

### 7.6 Deliverables – Site Execution & Monitoring

**Deliverables** • Daily Progress Logs  
 • Approved Daily Work Entries  
 • Linked Inspection / Safety Reports  
 • Drawing & Revision Logs  
 • Delay Logs and Acknowledgements  
 • Variation Alerts Logged to QS/Contracts

## 💰 8. Payments, Accounting & Finance

### 8.1 Overview

This module manages the full financial workflow from vendor invoice upload and verification, to payment processing and ledger reconciliation. It ensures compliance, auditability, and financial integrity across project and company-level accounting.

### 8.2 Roles & Key Activities

| **Role** | **Key Activities** |
| --- | --- |
| Accounts Payable Accountant | Handles bills, subcontractor and supplier payments |
| General Accountant | Maintains journal entries, reconciliations |
| Finance Manager | Oversees project-level and company-level disbursements |

### 8.3 Finance Workflow (Lifecycle Format)

#### ✅ Step 1: Invoice Upload (Vendor/Subcontractor)

* **Initiated By**: Procurement Officer / Subcontract Coordinator
* **Action**: Uploads invoice for received goods/services

**Required Fields:**

* Project Code
* Vendor/Subcontractor Name
* Invoice Number
* Invoice Date
* Amount
* Linked PO / Work Order
* GRN / Completion Evidence
* Attached Invoice File

**System Action:**

* Status: Invoice Pending Verification

**Notification:**

* Quantity Surveyor (QS) notified to begin validation

#### 📤 Step 2: Invoice Verification & Approval

**Approval Flow:**

1. **Quantity Surveyor** – Verifies quantities and services
2. **Project Manager** – Approves payment liability
3. **Finance Manager** – Final fund approval
4. **Accounts Payable Accountant** – Executes payment

**Rejection Flow:**

* Status: Invoice Rejected
* Rejection reason mandatory
* Returned to Procurement Officer → Status: Invoice Revised
* Re-enters verification and approval loop

**Final Status:** Invoice Approved → Payment Scheduled

**Notifications:**

* QS on invoice upload
* PM, Finance as invoice progresses
* Procurement Officer & Vendor (on rejection or final approval)

#### 🧾 Step 3: Payment Processing

* **Initiated By**: Accounts Payable Accountant
* **Action**: Executes payment based on approved invoice

**Required Fields:**

* Vendor Bank Details
* Payment Mode (e.g., Bank Transfer, Cheque)
* Disbursement Date
* Reference ID
* Payment Status (Processed, Failed, Partial)

**System Action:**

* Payment posted to ledger
* Invoice marked as Paid / Partial / Failed

**Notifications:**

* Vendor and Procurement Officer notified upon completion
* Project Manager notified for milestone-related payments

#### 📊 Step 4: Accounting Reconciliation & Ledger Management

* **Initiated By**: General Accountant
* **Action**: Performs financial reconciliation

**Key Activities:**

* Journal entry creation (debit/credit)
* Reconciliation with bank statements
* Posting to correct cost centers
* Flagging mismatches

**System Action:**

* Journal stored with references
* Reconciliation marked as Matched or Unmatched

**Notifications:**

* Finance Manager notified of discrepancies
* Audit logs generated

### 8.4 Notification Summary

| **Step** | **Who is Notified** | **Trigger** |
| --- | --- | --- |
| Invoice Uploaded | Quantity Surveyor | Invoice ready for verification |
| Invoice Verified | Project Manager | Cleared for project-side approval |
| Invoice Approved | Finance Manager, Accounts Payable | Funds ready to be disbursed |
| Invoice Rejected | Procurement Officer / Vendor | Correction needed |
| Payment Processed | Vendor / Procurement Officer | Payment confirmation |
| Ledger Mismatch | Finance Manager | Alert on unreconciled or unmatched ledger transaction |

### 8.5 Finance Form Fields

| **Field Name** | **Description** | **Validation Rules** | **Field Type** |
| --- | --- | --- | --- |
| Invoice Number | Vendor’s invoice reference | Required, unique | Text Input |
| Linked PO / WO | Purchase order or work order reference | Required | Dropdown / Search |
| GRN / Completion Doc | Evidence of goods received/work done | Required | File Upload |
| Payment Mode | How payment will be made | Required | Dropdown |
| Payment Reference ID | Bank transaction reference | Optional (auto-logged from bank) | Text Input |
| Vendor Bank Details | Recipient account information | Required | Text Area |
| Reconciliation Status | Whether payment was matched to accounting logs | System-calculated | Read-only Dropdown |

### 8.6 Deliverables – Payments, Accounting & Finance

**Deliverables** • Uploaded and Verified Invoices  
 • Approved Payment Instructions  
 • Processed Disbursement Logs  
 • Bank Reconciliation Records  
 • Project-Level Ledger Entries  
 • Audit Trail of Rejected or Revised Invoices

* **P/L Expense Entries:** Each approved and paid vendor/subcontractor invoice shall be logged as an expense entry under the respective project cost center. These entries will contribute to the expense side of the P/L statement.
* **Monthly P/L Snapshot:** At the end of each month, an automated summary of total paid expenses by project (from supplier and subcontractor payments, payroll, and other logged costs) will be prepared as part of the P/L draft.

## 📤 9. Client Billing & Collections

### 9.1 Overview

This module governs the generation, approval, and tracking of client invoices based on achieved project milestones. It supports structured financial interaction with clients and ensures billing transparency and timely collections.

### 9.2 Roles & Key Activities

| **Role** | **Key Activities** |
| --- | --- |
| Accounts Receivable Accountant | Prepares invoices to clients, tracks receipts |
| Project Manager | Coordinates milestone billing confirmations and approvals |

### 9.3 Billing & Collections Workflow (Lifecycle Format)

#### ✅ Step 1: Milestone Achievement Confirmation

* **Initiated By**: Project Manager
* **Action**: Confirms that a milestone is complete and billing can begin

**Required Fields:**

* Project Code
* Milestone Description
* Completion Date
* Completion %
* Linked Contract Reference
* Attached Evidence (e.g., photos, site logs)

**System Action:**

* Status: Milestone Verified
* Triggers billing readiness

**Notification:**

* **Accounts Receivable (AR) Accountant** notified to raise invoice

#### 📤 Step 2: Client Invoice Generation

* **Initiated By**: Accounts Receivable Accountant
* **Action**: Creates and submits invoice for client approval

**Required Fields:**

* Invoice Number (Auto-generated)
* Client Name
* Invoice Date
* Milestone Description
* Amount (calculated based on milestone %)
* Payment Terms
* Tax / VAT %
* Attached Invoice (PDF)

**System Action:**

* Status: Draft Invoice → Submitted for Approval

#### 🧾 Step 3: Invoice Approval Flow

**Approval Flow:**

1. **Project Manager** – Confirms invoice accuracy and scope
2. **Finance Manager** – Validates terms and financial accuracy
3. **Owner / Founder** – Final approval if invoice exceeds threshold

**Rejection Flow:**

* Status: Invoice Rejected
* Reason is mandatory
* Returned to AR Accountant → Invoice Revised
* Re-enters approval loop

**Final Status:** Invoice Approved

**Notifications:**

* PM notified on submission
* AR Accountant notified on rejection/approval
* Finance notified during their review
* Owner notified for high-value invoices

#### 💳 Step 4: Client Payment Tracking

* **Initiated By**: AR Accountant
* **Action**: Logs client payments

**Required Fields:**

* Invoice Number
* Payment Amount
* Date Received
* Mode of Payment (Bank, Cheque, etc.)
* Reference / UTR No.

**System Action:**

* Updates invoice status: Paid, Partially Paid, Overdue
* Details added to client collections report

**Overdue Handling:**

* Payment reminders can be configured
* Auto-notifications based on due dates

**Notifications:**

* PM notified on overdue or delayed payments
* Finance notified of partial receipts

### 9.4 Notification Summary

| **Step** | **Who is Notified** | **Trigger** |
| --- | --- | --- |
| Milestone Confirmed | Accounts Receivable Accountant | Invoice preparation begins |
| Invoice Submitted | Project Manager | Needs review |
| Invoice Rejected | AR Accountant | Correction required |
| Invoice Approved | AR Accountant, Finance | Cleared for client delivery |
| High-Value Invoice Approval | Owner / Founder | Final tier sign-off |
| Payment Received | Project Manager, Finance | Project funding updated |
| Invoice Overdue | Project Manager, Finance | Payment not received by due date |

### 9.5 Client Billing Form Fields

| **Field Name** | **Description** | **Validation Rules** | **Field Type** |
| --- | --- | --- | --- |
| Invoice Number | Unique ID auto-generated | System Generated | Read-only Field |
| Client Name | Name of billed organization | Required | Dropdown |
| Milestone Description | Purpose for billing | Required | Text Area |
| Invoice Date | Date of invoice generation | Required | Date Picker |
| Amount | Billed amount based on milestone completion | Auto-calculated or Manual Entry | Number Input |
| Payment Terms | Net 15 / Net 30 / Custom | Required | Dropdown |
| Tax / VAT % | Percentage applied | Optional | Number Input |
| Attached File | Invoice document | Required | File Upload |

### 9.6 Deliverables – Client Billing & Collections

**Deliverables** • Verified Milestone Records  
 • Draft and Approved Client Invoices  
 • Payment Receipts & Logs  
 • Overdue Alerts & Reminders  
 • High-Value Invoice Approvals  
 • Collection Reports for Finance

* **P/L Income Entries:** Every confirmed client payment will be recorded as income in the associated project ledger and contribute to the revenue side of the P/L statement.
* **Monthly Revenue Recognition:** The system shall support monthly revenue logs based on client payments received, aligned with the invoice amounts and milestone completion.

## 🏭 10. HR, Labor & Salary

### 10.1 Overview

This module covers all HR-related operational processes such as attendance tracking, payroll preparation and approval, salary disbursement, and labor cost analysis. It ensures timely payments, compliance, and visibility of manpower resources across all sites.

### 10.2 Roles & Key Activities

| **Role** | **Key Activities** |
| --- | --- |
| HR Officer | Tracks attendance, prepares payroll input |
| HR Manager | Reviews and approves payroll, plans manpower strategy |

### 10.3 HR & Payroll Workflow (Lifecycle Format)

#### ✅ Step 1: Attendance Tracking

* **Initiated By**: HR Officer or Site Supervisor
* **Action**: Daily or weekly attendance logs are updated

**Required Fields:**

* Date
* Employee Name / ID
* Site / Department
* Check-in & Check-out Time
* Attendance Type (Present / Absent / Leave / Holiday / Overtime)
* Remarks (optional)

**System Action:**

* Attendance records stored
* Hours and OT auto-calculated

**Notification:**

* None unless anomalies detected (e.g., frequent absences)

#### 📤 Step 2: Payroll Input Preparation

* **Initiated By**: HR Officer
* **Action**: Generates payroll draft based on attendance

**Auto-Pulled Data:**

* Employee ID
* Basic Salary
* Days Present
* Overtime Hours
* Approved Leave
* Deductions

**Editable Fields:**

* Bonus / Incentives
* Advance Deductions
* Remarks

**System Action:**

* Status: Payroll Draft
* Sent for approval

**Notification:**

* HR Manager receives approval request

#### 🧾 Step 3: Payroll Review & Approval

* **Initiated By**: HR Manager
* **Action**: Reviews and approves or rejects payroll

**Decision Options:**

* ✅ Approve → Approved for Payout
* ❌ Reject → Rejected (comments required) → Sent back as Revised

**Resubmission Flow:**

* Revised draft re-enters approval workflow

**Notifications:**

* HR Officer (on approval/rejection)
* Finance Team (optional) on approval

#### 💳 Step 4: Payroll Payout & Salary Disbursement

* **Initiated By**: Finance Department
* **Action**: Processes salary based on approved payroll

**Required Fields:**

* Payroll Batch Reference
* Employee Bank Details
* Mode of Payment
* Date of Payment
* Amount Paid

**System Action:**

* Payroll marked as Paid, Partial, or Failed
* Salary slips auto-generated (if enabled)

**Notifications:**

* HR Officer and Employees (if system notifications enabled)

#### 🧮 Step 5: Manpower Analytics & Reports

* **Initiated By**: HR Manager
* **Action**: Generates reports such as:  
  + Attendance Trends
  + Manpower Deployment by Site
  + Overtime Analysis
  + Payroll Cost per Project

**System Action:**

* Reports shown on dashboard or downloadable

**Notifications:**

* Project Managers and Directors (if subscribed)

### 10.4 Notification Summary

| **Step** | **Who is Notified** | **Trigger** |
| --- | --- | --- |
| Payroll Draft Submitted | HR Manager | For review and approval |
| Payroll Rejected | HR Officer | Feedback provided, revision needed |
| Payroll Approved | HR Officer, Finance | Payroll cleared for disbursement |
| Salary Paid | HR Officer, Employees | Payment confirmation (via email/SMS if configured) |
| Attendance Anomaly Detected | HR Manager (optional) | Alert on repeated or abnormal absence patterns |
| Monthly HR Report Generated | Project Manager, Directors | Shared HR analytics and deployment data |

### 10.5 HR & Payroll Form Fields

| **Field Name** | **Description** | **Validation Rules** | **Field Type** |
| --- | --- | --- | --- |
| Date | Attendance or payroll date | Required | Date Picker |
| Employee Name / ID | Staff identity | Required | Dropdown / Search |
| Site / Department | Location or division of employee | Required | Dropdown |
| Check-in / Check-out | Time logs | Required | Time Picker |
| Payroll Deductions | Late marks, loans, other deductions | Optional | Number Input |
| Bonus / Incentives | Additional pay | Optional | Number Input |
| Remarks | Notes or comments | Optional | Text Area |

### 10.6 Deliverables – HR, Labor & Salary

**Deliverables** • Daily and Weekly Attendance Logs  
 • Draft and Approved Payroll Records  
 • Salary Disbursement Reports  
 • Salary Slips (auto-generated, if enabled)  
 • Manpower Cost Distribution Reports  
 • Site-Wise Labor Deployment Reports

#### 📌 New Subsection Proposal: 9.0 Financial Reporting & P/L Statement Generation

**11.1 Overview:** This module enables the generation of structured Profit & Loss statements by consolidating income and expense data across modules such as Client Billing, Procurement, Subcontractor Management, HR & Payroll, and Accounting.

the projects will have different packages like (previously referred to as phases)

Enabling package

civil package

MEP Package

Interior Fit out ..

Landscape

Swimming Pool

Joinery

Specialized works

so for this packages, we also need to see, how much we have spent on

Materials

Subcontractors

Equipment Rentals

**11.2 Features:**

* Automatic revenue aggregation from client payments (Section 7).
* Automatic expense aggregation from:  
  + Vendor/Subcontractor payments (Section 6)
  + Payroll disbursements (Section 8)
  + Other indirect costs via manual entry or GL allocation.
* Budget vs Actual comparison view.
* Project-wise, monthly, and overall P/L generation.
  + Project package wise, expense categorised by materials, equipment rentals and subcontractors
* Export as PDF, Excel, and shareable links.

**11.3 Trigger Points:**

* Monthly cutoff (e.g., last day of each month at midnight).
* Project Completion status change.

**11.4 Output Fields (P/L Report):**

* Total Revenue
* Total Direct Costs (Materials, Labor, Subcontractors)
* Indirect Allocations (if applicable)
* Net Profit / Loss
* Budget vs Actual Deviation %

**11.5 User Roles Involved:**

* Finance Manager (Owner of monthly review)
* Project Manager (Reviewer per project)
* Owner / Founder (Final recipient)