Ebttikar Operations Intelligence Platform (OIP)

Scope of Work (SOW)

Ebttikar-OIP
Operational & Intelligence Platform

Table of Contents

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1. Executive Summary

The **Ebttikar Operations Intelligence Platform (OIP)** is a centralized, **web-based application platform** designed to manage operational workflows across Ebttikar's Managed Services and Physical Security divisions. It serves as a unified hub to **monitor daily engineer activity, individual productivity, ticket creation, and overall project progress** in real time.

Replacing fragmented reporting methods, **OIP** enforces **structured approval chains** for both daily engineer logs and ticket closure requests to ensure data integrity and accountability. To streamline user adoption and efficiency, the system supports engineers through an intuitive **spreadsheet-type interface**, allowing them to enter daily logs directly into the web application with the familiarity of Excel rows and columns.

The platform offers flexible data management capabilities, maintaining **standardized templates** to facilitate **bulk ticket uploads** and **resource (engineer) data imports** from Excel as an additional option. Furthermore, the system is architected to handle diverse operational needs, supporting **ticket creation from the client side** as well as internal **ticket generation for new installations**.

Core Objectives:

- **Web-Based Monitoring:** Centralize operations to monitor daily engineer activity, productivity, and ticket progress.
- **Spreadsheet-Style Entry:** Provide a spreadsheet-type interface for engineers to input daily logs directly, ensuring ease of use and immediate data validation.
- **Structured Approvals:** Enforce strict validation and approval workflows for daily engineer logs and ticket closure requests.
- **Flexible Data Ingestion:** Support **import from Excel** for tickets and resources using standardized templates as an additional data entry option.
- **Comprehensive Ticket Generation:** Manage ticket creation workflows originating from both client requests and internal requirements for new installations.

2. Phased Implementation Overview

2.1. System Architecture Overview

The following diagrams illustrate the key operational workflows within the Ebttikar OIP, covering ticket generation for new installations, daily activity approval chains, ticket closure procedures, performance monitoring, and SLA compliance tracking.

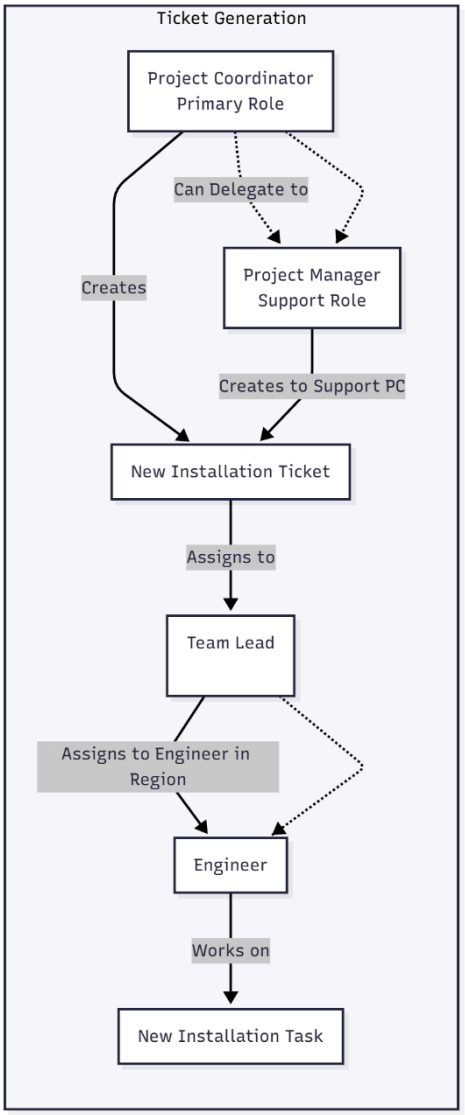
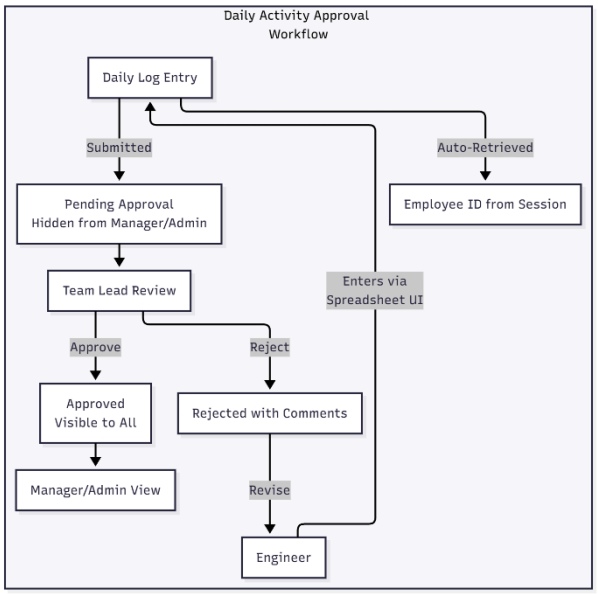


Fig 2.1 - New Installation Ticket Generation Workflow



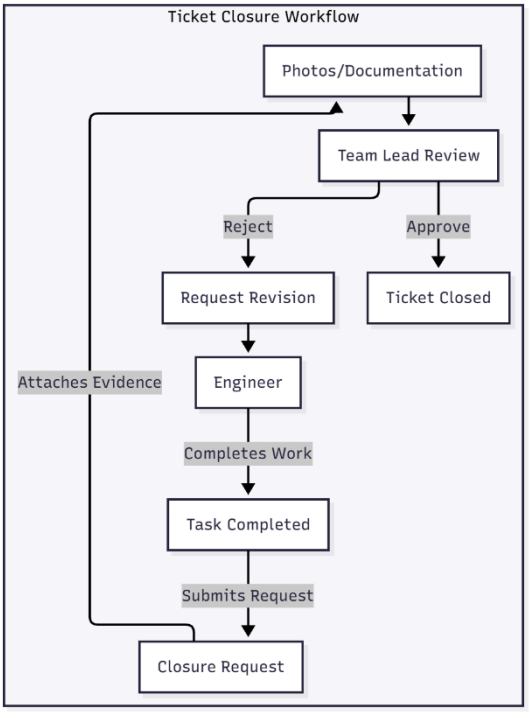
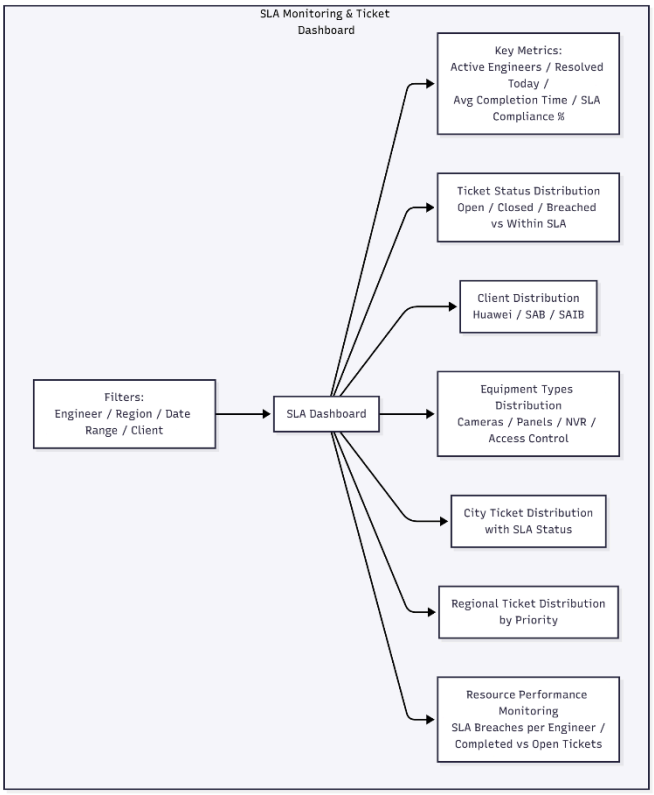


Fig 2.3 - Ticket Closure Workflow

Fig 2.2 - Daily Activity Approval Workflow



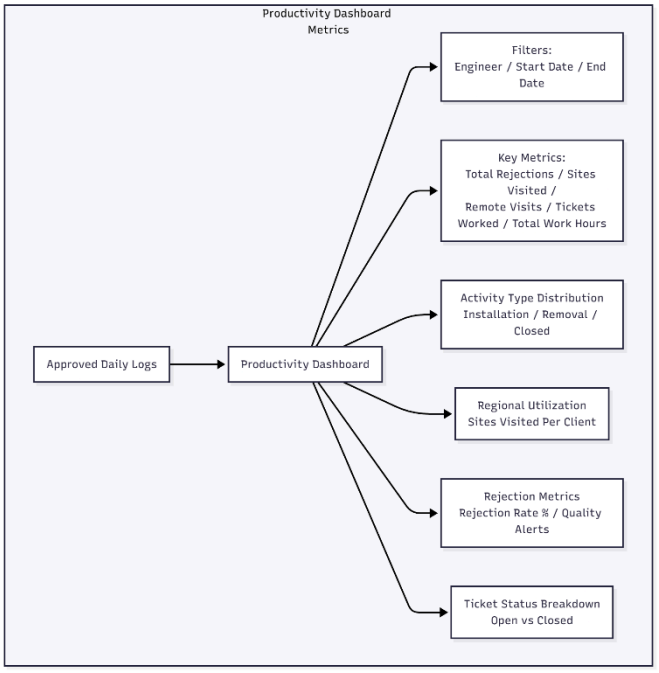


Fig 2.3 - Ticketing & SLA Monitoring Dashboard

Fig 2.4 - Performance Monitoring Dashboard

2.2. Phased Implementation Roadmap

The development is divided into three distinct phases to ensure a stable foundation before adding advanced modules and intelligence.

Phase	Focus Area	Summary of Core Deliverables
Phase 1	**Core Upload & Approval Foundation**	• Unified templates for tickets, daily logs, and resources. • **Bulk Ticket Upload** (Client Side). • **Daily Log Entry** (Spreadsheet UI). • Team Lead Approval Workflows. • **SLA Calculation & Picture Uploads**. • Core Dashboards.
Phase 2	**Operational Modules (Creation, Inv, BTR)**	• **Internal Ticket Creation Module** (Project Coordinator). • **Inventory & Asset Module**. • **BTR & Travel Cost Management**. • Certification Tracker.
Phase 3	**Intelligence & Mobility**	• **AI Operational Agents** (Smart Search, SOP Assistance). • **Mobile Application** for Engineers. • **Predictive Analytics** & Forecasting.

Table 2.2.1 - A phased delivery schedule prioritizing core data integrity before scaling to advanced automation and intelligence

3. Phase 1 — Data Upload & Approval Foundation

This phase establishes the "Data Upload & Approval Foundation". It focuses on capturing data via bulk uploads and daily engineer inputs.

3.1. General System Administration (Users, Roles & Audit)

To ensure security and flexibility, the system includes comprehensive administration modules:

- **User Management:** Full lifecycle management (Create, Update, Delete) for all system users.
- **Role & Permission Management:**
    - **Dynamic Role Creation:** Administrators can define custom roles dynamically.
    - **Granular Permissions:** Enforced at Page Level and Functional Level (e.g., can_approve_log) for example engineers should not see the 'Add Ticket' button on the tickets management page. **A project can be and usually is for multiple regions such as HUAWEI project is going on in multiple regions in Saudi. Engineers work as a unified team, not as project-dedicated teams. System must support engineer working on multiple projects at a time.**
- **Audit Logging:** System-wide tracking of user activities including login history and ticket updates.

3.2. Standardized Templates

Unified Ticket Template Standardizes all client sources into a single format (SAB, SAIB, Huawei). The ticket Excel template is used strictly for **ticket generation purposes only** so no need to mention engineer details.

- **Mandatory Fields:** Project, Project ID, Ticket ID, Region, Site Name, Created Date.
- **Optional Fields:** Completed Date | City | Task Type | Description | Branch Name | Resolution Notes | Latitude | Longitude.
- **NB:** Delay Days will be automatically calculated

3.3. Ticket Management (Bulk Uploads)

Client-Side Tickets Downloaded from Current Ebttikar Ticketing System (Bulk/Legacy):

- **Use Case:** For current/active maintenance clients (e.g., SAB, SAIB).
- **Workflow:** Users download the template, fill it, and upload. The system validates fields and maps the Source System automatically.
- **Features:** Bulk import validation, duplicate detection, and export capabilities.

Ticket Breakdown View: On the Tickets Management page, clicking a specific ticket displays a detailed breakdown of all related activities. This includes every engineer who worked on the ticket and their corresponding daily logs, grouped to provide a complete audit trail .

3.4. Internal Ticket Creation Module (New Installations)

A dedicated module for generating "Front Phase" tickets internally.

Role Restrictions:

- **Field Engineers** and **Team Leads (Supervisors)** are explicitly **restricted from creating tickets**. The "Create Ticket" button will be disabled or hidden for these roles.

Ticket Generation & Assignment Workflow:

1. **Generation:** The **Project Coordinator** creates the ticket manually within the OIP interface.
2. **Assignment to Regional Lead:** The system routes the newly created ticket to the **Regional Team Lead** responsible for that specific region.
3. **Final Assignment:** The Regional Team Lead reviews the ticket and assigns it to a specific **Field Engineer** for execution.
4. **Ticket closure:** Engineer completes and closes the ticket without approval.

Key Features:

- Dedicated UI with mandatory field validation.
- Hierarchical assignment flow (Coordinator → Regional TL → Engineer).

3.5. Ticket Creation Module (Client Side)

This module enables customers and Project Coordinators to create new tickets directly inside the OIP platform. It mirrors the internal creation workflow but introduces additional rules specific to client operations, dependency reporting, and regional routing.

A. Role Permissions

- **Customers & Project Coordinators** → Can create tickets
- **Team Leads & Field Engineers** → *Cannot* create tickets; the "Create Ticket" button is hidden for these roles to maintain workflow integrity.

B. Ticket Creation & Assignment Workflow

1. **Creation (Customer / Coordinator):**
   A new ticket is created through a dedicated UI with mandatory validation (Project, Region, Site, Description, Priority, etc.).
2. **Automatic Regional Routing:**
   Once submitted, the system automatically forwards the ticket to the Team Lead responsible for the selected region:
   - **Riyadh**
   - **Eastern**
   - **South**
   - **West**
   - **North**
   - **Qassim**
3. **Engineer Assignment by Team Lead:**
   The Team Lead assigns the ticket to a Field Engineer within the same region. The engineer receives the assignment and performs the required site visit/work.
4. **Material Consumption:**
   Before closing the ticket, the assigned engineer can consume parts from the

inventory module (Phase 2), ensuring material usage is linked to the ticket.

5. **Closure by Engineer:**

   After completing the work:

   - Engineer attaches closure report and requires supporting evidence (images, documents).
   - The engineer submits the ticket as Closed.

6. **No Approval Required for Closure:**

   Unlike daily activity logs, ticket closure does not require approval.
   Business rule:

   - The engineer is responsible for confirming the closure *only after the customer verbally verifies the completion*.
   - The Team Lead does not approve or reject ticket closure.

C. Dependency & Incident Reporting

If the ticket cannot be closed due to **external or environmental constraints, the engineer raises an Incident Report instead of closure with status 'Suspended'.**

WE WILL USE THE STATUS: SUSPENDED & NOT "ON-HOLD". NEED REMARKS TO BE SHOWN IN SUSPENDED STATUS. WHEN THE SUSPENDED STATUS IS CLICKED, THE DATE & TIME ARE RECORDED SO IT CAN BE SHOWN IN THE DASHBOARD HOW LONG THE TICKET HAS BEEN IN SUSPENDED STATUS.

STATUS: OPEN, SUSPENDED, COMPLETED (only 3)

Dependency Categories

The dropdown list includes (and can be expanded):

- Permit Required
- Joint Visit Required
- Power Issue
- AC Not Working
- Branch Closed
- Manager Not Available

- Network Issue (e.g., router down, requiring network team)
- Out of Scope Activity
- Others (with remarks)

Out of Scope Activity Example

When a customer requests work beyond the original ticket scope (such as additional equipment installation), the engineer documents the request under "Out of Scope Activity."

This triggers a workflow where a supplementary quotation is prepared and submitted to the customer for approval before any additional work proceeds.

TEAM LEAD WILL SEE THE IR REPORT AND CHECK WITH CUSTOMER.

So the IR report will be generated in PDF format and sent to the team lead who will use that and communicate with the customer. Once it is resolved, the engineer can change the status from On-hold to Completed.

Removal of Dependency

Once the external factor is resolved:

- The engineer removes the dependency flag,
- Completes the work,
- Consumes parts if needed,
- Attaches the final report,
- Submits closure normally.

D. Customer Dashboard Visibility

Customers accessing the portal will be able to see:

- Open Tickets
- Closed Tickets
- Cancelled Tickets
- Tickets with External Dependencies

- Delay indicators (system-calculated SLA delays)

This ensures customer-side transparency without exposing internal workflows.

E. Team Lead Visibility & Restrictions

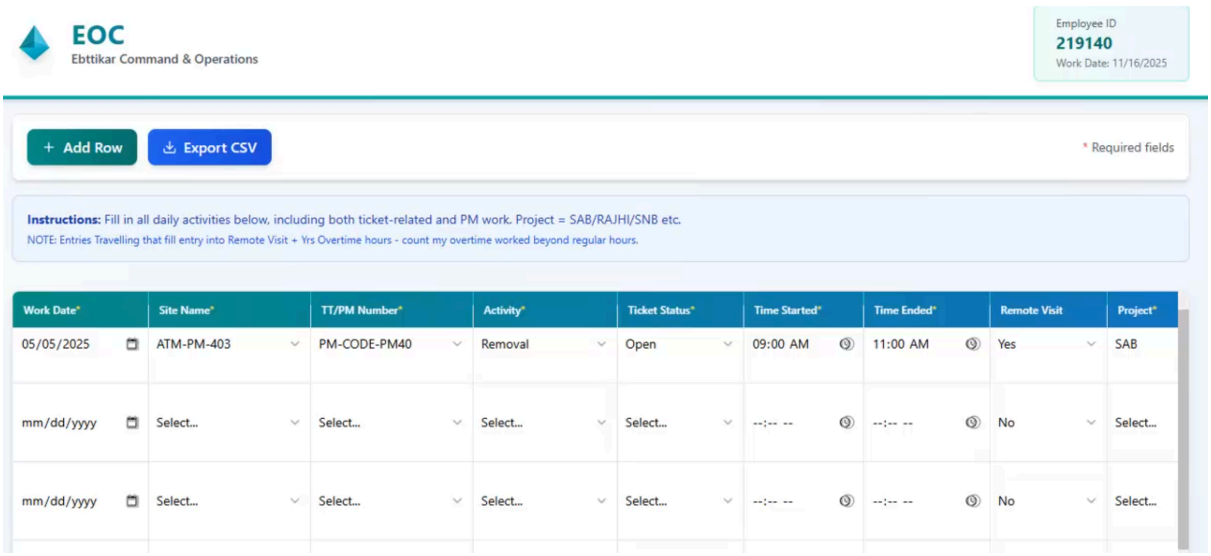
- Team Leads only see tickets for their own region.
- They cannot create tickets.
- Their responsibility starts *after* a ticket is created — for assigning it to an engineer and overseeing regional progress.

F. Additional Scenarios (Optional Dropdown Items)

To match real field situations, the dependency list may include extra optional scenarios:

- Spare Parts Not Available
- Site Access Delay (Security Protocols)
- Weather Restrictions
- Vendor/Third-Party Coordination Require

3.6. Daily Activity & SLA Logic



A. The Spreadsheet-Style Interface

- **UI:** Instead of uploading an external Excel file, the system provides an **Excel-style input table** where engineers enter their daily logs directly.
- **Auto-Retrieval: Employee ID** is auto-retrieved from the session; **Work Date** is assigned per row (DD-MM-YYYY).
- **Columns:** Site Name | TT/PM Number | Activity | Ticket Status | Time Started | Time Ended | Remote Visit | Project | Remarks | Distance Travelled | Overtime | Hotel Stay.
- **Features:**
    - **Ticket Selection:** The TT/PM Number column allows selection from existing tickets directly inside the table.
    - **Logic:** "Distance Travelled" is required only if "Remote Visit = Yes".

B. SLA Calculation & Picture Uploads

- **SLA Delay Logic:** The system automatically calculates delay days, excluding weekends (Friday–Saturday) and providing a 24-hour grace period[11].
- Delay Formula:
- *=MAX(NETWORKDAYS.INTL(INT(Created Date), INT(IF(Completed Date="", TODAY(), Completed Date)), 7) - 1, 0)*
- *(Note: Parameter 7 defines the Friday–Saturday weekend).*
- **Picture Uploads:** Capability to upload validation pictures during ticket closure
- **Customized SLA:** Capability to customize SLA rules as per project requirements

3.7. Approval Workflows

A. Daily Activity Approval (Visibility Rules)

- **Submission:** Engineers enter logs → Stored as *pending_review* and **hidden** (*is_visible* = false) from Manager/Admin .
- **Overtime Validation:**
    - **Engineer Input:** Engineers enter their claimed overtime hours in the daily log.
    - **Team Lead Edit Authority:** Before approving the log, the **Team Lead has the option to edit** (increase or decrease) the overtime hours based on their assessment of the work performed.
    - **Finalization:** The final approved log reflects the Team Lead's edits, overriding the engineer's initial input if changes were made.
- **Engineer BTR Travel Tracker**
    - An automated tracking system that validates BTR eligibility and calculates reimbursement entitlements.
    - **Core Logic & Calculations:**
    - **Distance Thresholds:** The system automatically validates eligibility based on entered distances:
        - **One-Way Trip:** Must be **≥120 km** with recorded activity (not just working from home) to qualify as 1 BTR day.
        - **Two-Way Trip:** Total distance must be **≥240 km** to qualify.
        - **Return Journey:** If an engineer returns the next day, the return trip counts as a separate BTR day.
    - **Constraint (Overtime vs. Travel):** If "Distance Travelled" is entered (indicating a remote visit), the Engineer **cannot** enter "Overtime Hours" for that day. This prevents double compensation, as BTR covers the additional effort .
    - **Hotel Stays:** A dedicated column allows engineers to indicate if a hotel night was required. Each entry is recorded as one hotel night for reimbursement purposes.

- **BTR Configurations:** Customize BTR as per client requirements

- **Review:** Team Lead reviews pending logs.
    - **Approved:** Status becomes approved, visibility becomes true.
    - **Rejected:** Status becomes rejected, log returns to engineer with comments, and rejection_count increments.
- **Access Rules:**
    - **Team Lead:** Sees all pending reviews.
    - **Manager/Admin:** Sees only logs where is_visible = true.

B. Ticket Closure Workflow

- **Path 1 (Automatic):** Excel re-upload with "Closed" status and "Completed Date" automatically closes the ticket after validation .
- **Path 2 (Engineer Request):** Engineer submits a closure request inside **Ebttikar OIP**. This is routed **only** to the Team Lead for approval. The ticket is closed upon Team Lead approval .
    - **Evidence:** The Engineer must attach visual proof (images/reports) to enable Team Lead validation.

3.8. Dashboards & Reports

- **Ticket Dashboard:** Real-time ticket counts by status, region, and engineer.
- **Productivity & Activity:** Engineer work summary by day/week, total sites visited, overtime hours, and total tickets closed.
- **SLA Dashboard:** Metrics for met vs. breached SLAs and average SLA duration per customer.
- **Approval Dashboard:** Pending and approved log counts per Team Lead.
- **KPI Oversight:** Monitors rejection rates per engineer, approval turnaround time, and visibility ratios.

4. Phase 2 — Operational Modules: Creation, Inventory & Travel

4.1. Engineer Certification Tracker

A critical compliance module enabling the upload, monitoring, and enforcement of engineer certifications.

A. System-Enforced Certification Load (Onboarding)

- **Mandatory Upload:** Engineers **cannot** be defined or active in the system without loading their required certificates into their profile. The system will block the creation of an engineer profile if the certificate fields are empty.

B. Assignment Validation Logic

- **Context-Aware Checking:** When a Project Coordinator or Team Lead attempts to assign an engineer to a ticket, the system automatically checks the engineer's profile against the **certification requirements defined by the Admin** for that specific Client or Project (e.g., Huawei, Banks).
- **Compliance Rule:**
    - **Service Demands:** For high-compliance clients (e.g., Huawei or Banks), engineers must hold a specific set of valid certifications (including Device Certification and Health & Safety) before they can "touch" a device.
    - **Blocking Action:** If the engineer lacks the valid, client-specific certificate required for the ticket's project, the system will **block the assignment** and prompt the manager to select a qualified engineer.
- **Client-Specific Scope:** Certificates are mapped relative to the client being served (e.g., an engineer with only Huawei certs cannot be assigned to a restricted Bank project requiring different credentials).

C. Expiry Monitoring

- **Automated Alerts:** Notifications are sent **30, 15, and 7 days** before expiry to the engineer and management to ensure timely renewal.

4.2. Inventory & Asset Module

This module mirrors OWS principles to enable comprehensive tracking of spare parts and asset movements per engineer and site.

A. Overview & Infrastructure

- **Core Principle:** Ensures material checks and balances across all warehouses and field operations.
- **Barcode System:**
  - Barcode printers and scanners are utilized for every inventory item at all warehouse locations.
  - **Scanning:** Updates inventory status instantly, guaranteeing accurate location and condition tracking.

B. Operational Workflows

1. Initial Setup & Material Arrival (Barcode Generation)

- **Material Arrival:** New stock arrives at the warehouse.
- **Generation:** The **Ebttikar OIP system is responsible for generating a unique barcode ID** for each individual item.
- **Printing & Labelling Logic:**
  - Standard Printing: The system triggers a connected printer to produce the specific barcode label for all items, including those with Serial Numbers.
  - Exceptions (Skip Printing): The printing process is **only skipped** if the item is physically unsuitable for a sticker. This includes:
    - Items that are too thin to hold a label.
    - Items with surfaces that cannot accept stickers (e.g., door locks, electronic lock systems).
- **Registration:** The labelled item is scanned using a barcode scanner to confirm its entry into the Master Inventory.

2. Material Request Workflow:

- Field Engineers enter requests specifying items, **Site ID, TR Call ID, and Project info.**
- **Approval Chain:** Engineer requests → Supervisor (Team lead) → Operations Manager. Logistic Supervisor is responsible only to release the items, not included in the approval chain.
    - **Supervisor can also directly request inventory from the inventory manager as well, not just the field engineer.**
- **Dispatch:** Materials ship from Riyadh to Regional Warehouses for collection dispatch by logistic supervisor.
- **Account Update:** Collected materials are automatically added to the Engineer's account.

3. Faulty Item Workflow:

- Engineers report faulty items during site work and return them to their Regional Warehouse.
- **Tracking:** The system captures Old Serial Number, New Serial Number, Part Number, and Quantity for both faulty and replacement items.
- **Replacement:** Issued from Master Inventory and assigned to the Engineer account.

C. Engineer Account & Service Reporting

- **Real-Time View:** Engineers can view their assigned, consumed, and faulty materials in real time.
- **Consumption Logic:** Material consumption is linked to active TR Call and Site IDs and automatically subtracts from the engineer's available stock.
- **Service Reports:** The system generates reports detailing materials received, used, and faulty items returned per engineer/ticket.

D. System Exclusions & Differentiators

- **Procurement Excluded:** Procurement and purchase processes are managed externally; this system tracks inventory only.
- **No ISDB Integration:** Utilizes a custom barcode system independent of OWS ISDB.
- **Success Criteria:** Barcode system is fully operational; material lifecycle is tracked from arrival to consumption.

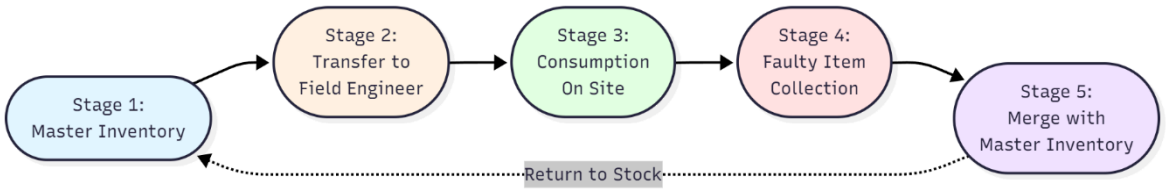


Fig 4.2.1 - This flow depicts the end-to-end inventory lifecycle

E. Faulty Item Workflow

Regarding faulty items, the engineer completes a form to return the faulty item to the warehouse and order a new one. We need supervisor approval, once approved the item will be as registered as faulty in the inventory system. After the project, this will be returned to the client as faulty items.

E. Inventory Forms

Description column should be added in the inventory requests page so the engineer knows what type of items are available, the description should be added when adding the stock item in a particular category. The inventory should have categories and sub-categories.

The inventory manager should be able to create a category, upload images of that category, add items to that category and can we even assign a parent category to that through checkboxes. For each category, we can even see the quantities for subcategories and so on. We can search categories as well, add vendors for the items, we can print the labels additionally which will help in barcode scanning (e.g., if you have 3,000-line-items in the inventory, searching should be categorized for easier navigation and select functionality).

F. Operational Rules, Permissions & UX Clarifications

Item Consumption Visibility (Engineer View):

- ✔ Engineers can clearly see which inventory items have already been consumed against a specific ticket. **Engineer must be able to see all available items to him & then see their details such as Serial Number, Barcode, Item Code, and Description.** As the part consumed details will be used to generate the invoice to the customer.
- ✔ When selecting items for consumption, the **request number need not be shown**, to avoid confusion. **The request number is not mandatory for inventory requests as discussed below.**
- ✔ Instead, engineers must see **Serial Number, Barcode, Item Code, and Description** for every consumed item, enabling accurate service reporting and accountability. **Engineer can select the item number, then in dropdown it will show further serial numbers to select.**

Inventory Request Flexibility (Ticket-Independent Requests):

- ✔ Engineers are allowed to request inventory items **without linking the request to a specific ticket**.
- ✔ Inventory requests can be made for general stock usage, preparation, standby materials, or future site work, and are **not mandatory to be tied to a TR Call ID or Ticket Number** at the time of request.

Out-of-Stock Request Handling:

- ✔ Team Leads / Engineers are allowed to request inventory items **even if the item is currently out of stock but the workflow will be engineer -> supervisor -> logistic supervisor for inventory approvals as normally the regional supervisor is the one requesting the inventory stocks for regional warehouses and then assigning to engineer once engineer requests**.
- ✔ Such requests are automatically routed to the **Logistics Supervisor**, who is responsible for replenishment and fulfilment once stock becomes available.

Internal Regional Stock Request & Issuance Model:

- ✔ The Team Lead is permitted to **submit inventory requests on behalf of their assigned region** for the purpose of **maintaining regional stock levels, buffer inventory, or anticipated operational needs**. Such requests are **not required to be linked to a specific engineer or ticket** and once approved and fulfilled, the **items are added to the regional inventory**.

- ✔ Separately, engineers submit inventory requests (**ticket-linked or ticket-independent**) for required materials. Upon **approval by the Team Lead**, items are **issued from the available regional inventory and assigned to the requesting engineer**. This ensures **clear separation between regional stock replenishment and engineer-level inventory consumption**, while maintaining **full traceability and control**.

SLA-Driven Regional Buffer Stock Policy

• Proactive Regional Backup Stock for SLA Compliance:
All tickets operate under a 24-hour SLA. To prevent delays in ticket resolution and avoid SLA breaches, each Team Lead is required to maintain pre-approved backup (buffer) inventory within their assigned region.

• Immediate Fulfilment for Incoming Tickets:
When a ticket is raised, **the Team Lead can immediately fulfil inventory requirements from the existing regional backup stock,** without waiting for central warehouse replenishment or inter-region transfers.

• Proactive Stock Planning:
Regional buffer stock is maintained proactively based on historical consumption, anticipated demand, and critical item categorization, ensuring that required materials are already available at the time a ticket is assigned.

4.3. Delegation, Communication and Notification Hub

A consolidated suite of management tools.

- **Delegation System:** Allows temporary reassignment of tickets/approvals when an Engineer or Team Lead is on leave.
- **Defined Timeline/Limits:** There is a need for defined timelines or **time limits** (e.g., demotion after 10 days).
- **Communication Panel:** Built-in chat module with dedicated rooms (Team-specific, Leader-to-Leader). Supports exchange of messages, images, and videos. Admins have full visibility to ensure compliance.
- **Notification Hub:** Centralized alerts via **Email or WhatsApp** for SLA breaches, expiring certificates, pending approvals, and status updates.
- **Data Analysis Capability:** The system should provide data that allows analysis, such as identifying if "30% of your problem come because of password lost," so that appropriate actions (like user training or advising a vendor) can be taken based on the data presented.
- **Average Time Calculation:** Metrics should include the ability to calculate the **average time taken** for engineers to complete a ticket.

4.4. Executive Performance Module

This module is designed exclusively for the Super Cloud Admin (Managing Director) to provide a high-level strategic view of operational performance across all regions and teams. It aggregates human performance, SLA compliance, and service quality into a centralized executive dashboard. The purpose is to help senior management identify high performers, understand SLA breach patterns, and track repeat-ticket risks and customer dissatisfaction.

A. Dashboard 1 – Individual Engineer Performance & Ranking

This dashboard ranks engineers based on output, efficiency, and quality of service. It helps management identify top talent and underperforming engineers requiring intervention.

Leaderboards

- **Top 10 Engineers** – Ranked by highest performance score
- **Bottom 5 Engineers** – Highlighted for immediate managerial review

Performance Score (0–100)

A composite, weighted metric calculated for each engineer based on:

- **Productivity** – Tickets Closed vs. Assigned
- **Speed** – Average Resolution Time
- **Compliance** – SLA Adherence Percentage

Key Widget

- **First Time Fix Rate (FTFR)** – Percentage of tickets resolved in one visit without recalls

B. Dashboard 2 – SLA Monitoring & Breach Root Cause

This dashboard provides insight into **why** SLA breaches happen, not just how many.

Key Components

- **Breach Heatmap** – Shows where SLA failures are occurring across regions and ticket priorities
- **Top Offenders List** – Engineers contributing the highest number of SLA breaches
- **Worst Performing Regions** – Regions consistently missing SLA targets
- **SLA Compliance Trend Line** – Daily/Weekly compliance performance over time

This helps the Managing Director quickly identify systemic problems versus individual issues.

C. Dashboard 3 – Service Quality & Repeat Ticket Analysis

This dashboard identifies operational inefficiencies and service-quality problems, focusing on **repeat visits**, **customer complaints**, and **forced reopenings**.

Repeat Ticket Logic

A ticket is flagged as a **Repeat Ticket** if a new ticket is opened for the same Asset ID or Site ID within **7 days** of a previous closure (configurable).

Key Visualizations

- **Repeat Tickets by Engineer** – Highlights premature closures or skill gaps
- **Repeat Tickets by Asset or Site** – Identifies recurring hardware or infrastructure problems
- **Customer Complaints Counter** – Tracks client dissatisfaction associated with tickets
- **Reopen Rate** – Percentage of closed tickets reopened due to incomplete resolution

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5. Phase 3 — Automation & Integrations

5.1. Predictive Analytics & Automated Reporting

- **Forecasting:** AI-based insights to forecast SLA breaches and workload surges.
- **Automated Reports:** Periodic performance summaries emailed to management.

5.2. Mobile Application

- **Engineer Access:** Dedicated Android/iOS application for engineers to fill daily logs and request closures on the go.

5.3. Client Portal

- **Visibility:** Read-only dashboard for clients to view project ticket performance and SLA metrics.

5.4. AI Operational Agents & Chatbots

- **Smart Search Agent:** Natural language querying (e.g., *"Show me open tickets in Riyadh"*).
- **SOP & Policy Assistant:** Chatbot to answer process questions (e.g., *"What is the BTR distance threshold?"*).
- **Status Agent:** Provides quick summaries for Project Managers.

6. Additional Notes and Clarifications

- **System Flexibility:** The platform supports dynamic role definition and granular permissions without code changes.
- **Permissions:** Controls are enforced at the inner-functionality level (e.g., visible vs. hidden buttons).s

Super Cloud Admin Metric Definitions

Metric	Logic / Formula	Purpose
Performance Score	Weighted Average: (Volume * 30%) + (SLA Compliance * 40%) + (FTFR * 30%)	Single ranking score (0–100) for comparing engineers
First Time Fix Rate (FTFR)	(Tickets with 1 visit) / (Total Closed Tickets)	Measures engineer skill & resolution quality
Repeat Ticket	If (New_Ticket_Asset == Previous_Ticket_Asset AND Days_Between < 7)	Detects poor resolution or recurring issues
SLA Breach Count	Count of tickets where Resolution_Time > SLA Limit	Tracks contractual failures

7. Roles Hierarchy & Permissions

Role	**Responsibilities & Permissions**
Field Engineer	• **Cannot create tickets.** • Enters logs (UI), requests closures. • Requests/consumes materials; creates service reports. • Receives assignments only if Certifications match Project.
Supervisor (Team Lead)	• **Cannot create tickets.** • **Assignment:** Receives tickets from Coordinator → Assigns to Engineers. • **Approvals:** Edits/Approves Overtime, Logs, Closures, and Material Requests.
Project Coordinator	• **Primary Ticket Creator:** Generates tickets for New Installations. • **Coordination:** Assigns tickets to Regional Team Leads.
Project Manager	• **Ticket Gen:** Support role for creation. • **Oversight:** Coordinates material arrangements; monitors Dashboards.
Logistics Supervisor	• **Inventory (Central):** Manages master inventory, authorizes dispatches, logs faulty items.
Resident Engineer	• **Inventory:** Obtains customer approvals for material requests.
Operations Manager	• **Escalation:** Handles inventory and ticket escalations.
Administrator	• **Config:** User roles, permissions, audit logs. • **Definitions:** Defines Client/Project Certification requirements. • **Backup:** Authorized to generate tickets.

Super Cloud Admin (For CEO / Managing Director)	• **Strategic Oversight:** Read-only access to all modules. • **Executive Dashboards:** Access to Engineer Rankings (Top 10 / Bottom 5), SLA Breach Root Cause, Repeat Ticket Analysis. • **Drill-Down Capability**: Click from high-level metrics (e.g., Breaches, Repeat Tickets) down to specific Engineers, Regions, or Ticket IDs

8. Phase Deliverables Summary

Phase	Deliverables
1	Unified Templates, **Bulk Ticket Upload**, **Internal Ticket Creation Module** (Coordinator → TL → Engineer), **Spreadsheet Daily Log UI**, SLA Logic, **Team Lead Approval (with Overtime Edit)**.
2	**Inventory Barcode System (Generation/Printing/Scanning)**, **BTR Travel & Overtime Logic**, **Certification Tracker (Enforced Assignment)**, Delegation System, Communication Panel, Notification Hub.
3	**Mobile App**, **Predictive Analytics**, **Client Portal**, **AI Agents** (Search/SOP).

9. Conclusion

The **Ebttikar Operations Intelligence Platform (OIP)** establishes a robust operational backbone. By strictly defining the **Ticket Creation** workflow in **Phase 1** and enforcing **Certification Compliance** and **Inventory Tracking** in **Phase 2**, the platform ensures that only qualified personnel work on client assets using properly tracked materials. This positions Ebttikar for scalable, intelligent, and compliant operations management.