TRANSFORMING PLATEAU STATE DRUGS AND MEDICAL COMMODITIES MANAGEMENT AGENCY (PSDMCMA) THROUGH DATA INTELLIGENCE

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Executive Summary

The Plateau State Drugs and Medical Commodities Management Agency (PSDMCMA) plays a vital role in delivering accessible, affordable, and safe medicines to health facilities across the state. However, current processes face issues of manual tracking, inefficient inventory controls, and fragmented decision-making due to the lack of timely, data-driven insights.

This proposal introduces a futuristic, automated MySQL-powered database system—engineered to enhance data visibility, reduce wastage, optimize operations, and drive predictive planning. It integrates inventory, logistics, procurement, human resources, and decision dashboards in a centralized platform.

CHALLENGE SUMMARY

The present challenges include:

- Fragmented stock records
- Expired or wasted drugs
- Limited data to make quick decisions
- Manual staff tracking (no transparency

VISIONS & GOALS

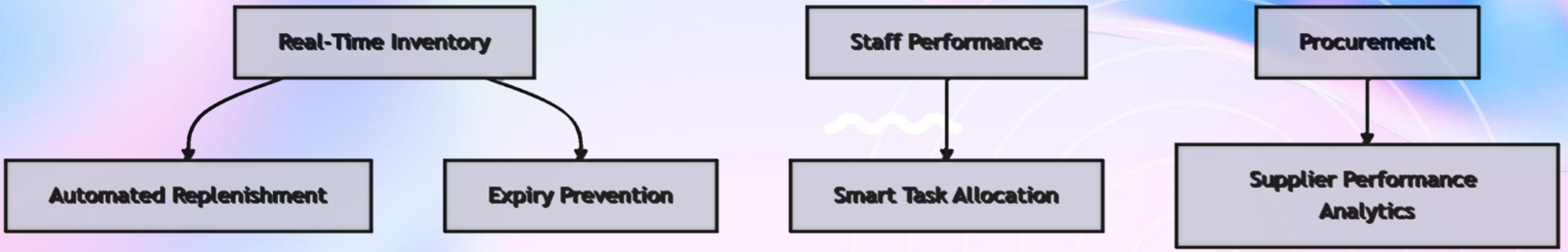
🧠 Digitally track every medicine: Digitize all PSDMCMA inventory and staff management processes

⏰ Automated low-stock & expiry alerts: Automate stock monitoring and expiry tracking

📊 Real-time dashboards for leaders: Enable forecasting through monthly trend analysis

💼 Staff accountability & training monitoring: Enhance accountability through attendance, training, and access control logging

📞 Support remote health centers faster: Support real-time decision-making via executive dashboards



SYSTEM ARCHITECTURE OVERVIEW

The proposed system comprises five main components:

A. Inventory and Supply Chain Module

Manages all product entries, batch records, disbursements to facilities, and procurement from suppliers.

B. Automation Engine

Handles real-time updates, expiry alerts, and low-stock warnings using SQL triggers and events.

C. Personnel Management

Digitally tracks staff roles, attendance logs, training certifications, and access permissions.

D. Analytics & Reporting

Offers live reports and predictive dashboards for stakeholders to make timely, informed decisions.

E. Security & Access Control

Ensures each user has role-based privileges for viewing, editing, or approving transactions.

Database Schema Highlights

Core Tables:

- ❑ Facilities: Captures details of hospitals and health centers
- ❑ Products: List of all drugs and commodities
- ❑ Inventory: Stock levels per product per facility
- ❑ Disbursements: Records outgoing stock to facilities
- ❑ Procurements: Captures purchases from suppliers

Each table is interlinked to support referential integrity and traceability.

SQL Automation Features

To ensure proactive operations, the system is equipped with:

INVENTORY TRIGGER	LOW STOCK PROCEDURE	EXPIRY MONITORING EVENT	MONTHLY CONSUMPTION VIEW
Automatically subtracts disbursed stock from facility inventory.	Generates a report of items below a specified threshold.	Daily background check logs drugs expiring in 30 days.	Aggregates usage patterns for forecasting and procurement planning.

These tools move PSDMCMA from reactive to predictive supply management.

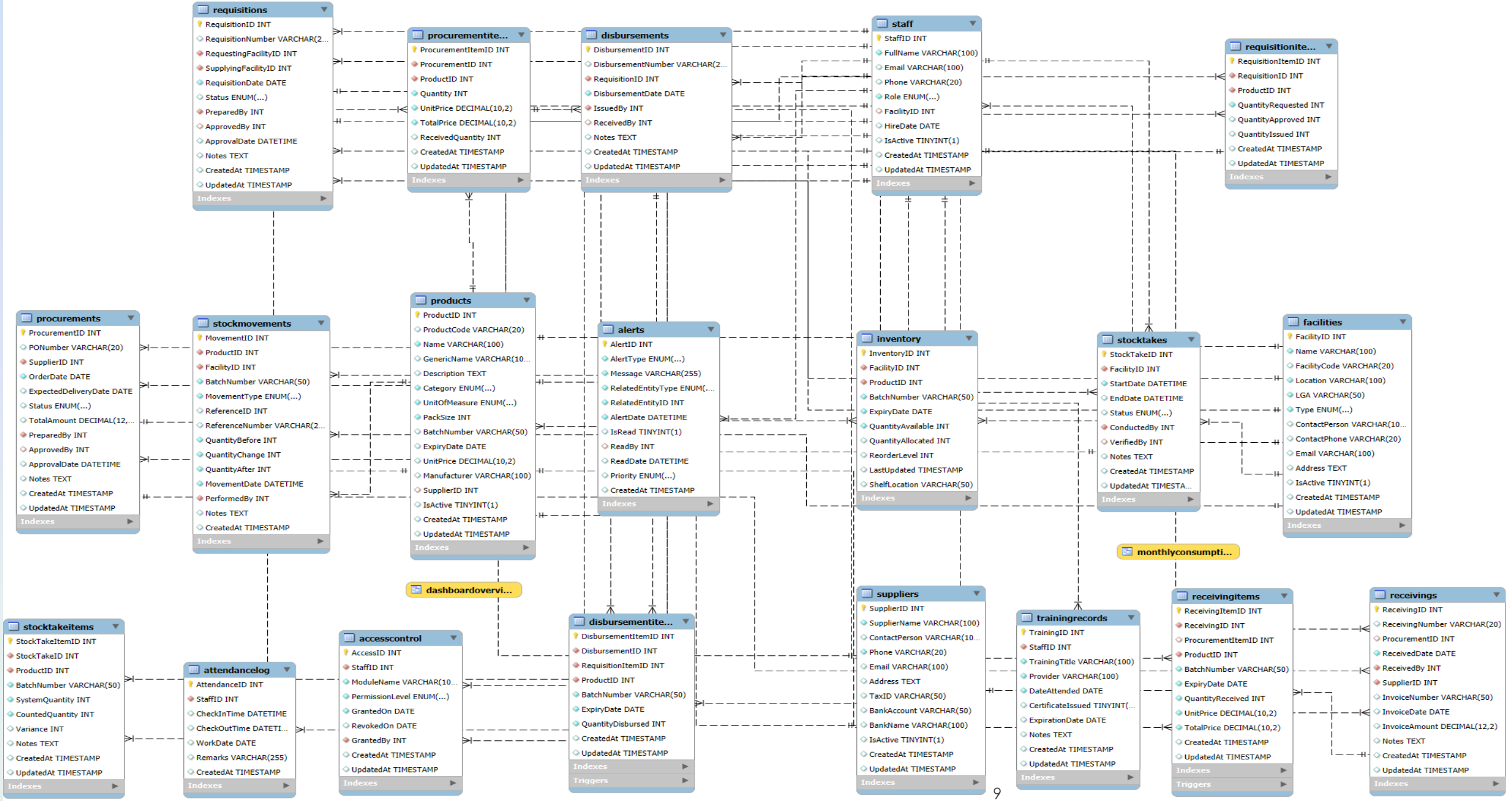
Personnel Intelligence System

Staff play a crucial role in the pharmaceutical supply chain. The following modules support HR performance, planning, and oversight:

STAFF	ATTENDANCE LOG	TRAINING RECORDS	ACCESS CONTROL
Stores full profiles of personnel and links them to the facility they're assigned to.	Tracks work attendance and helps generate timesheets and duty compliance reports.	Archives past workshops, certificate expirations, and professional development logs.	Defines who can view, modify, or approve data in modules such as inventory or procurement.

This ensures accountability, enhances compliance, and strengthens workforce planning.

ERD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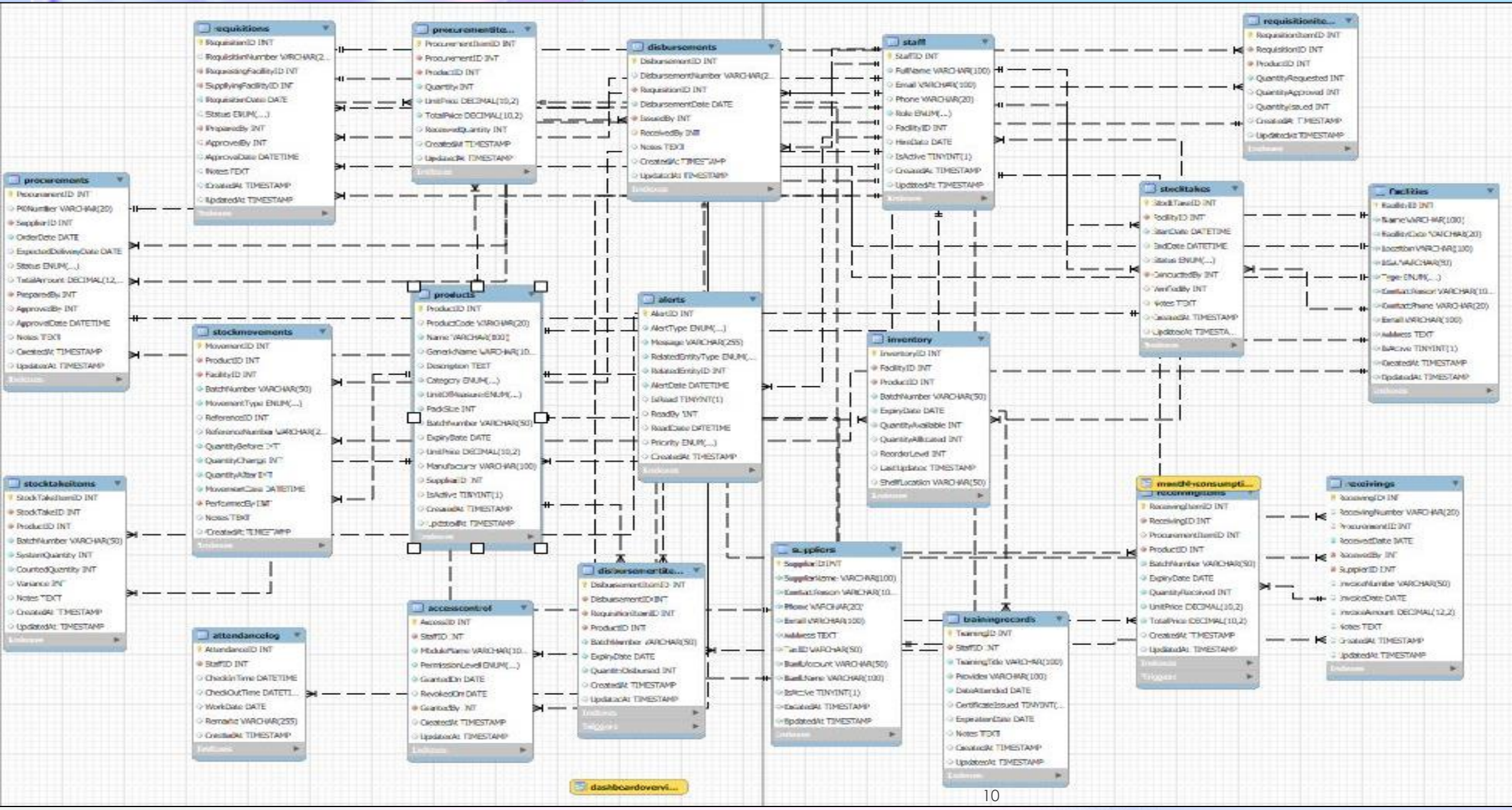
ERD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facilities
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accesscontrol
suppliers
trainingrecords
attendancelog
dashboardoverview

DASHBOARD & EXECUTIVE VIEW

A consolidated SQL view—Dashboard Overview—was created to enable:

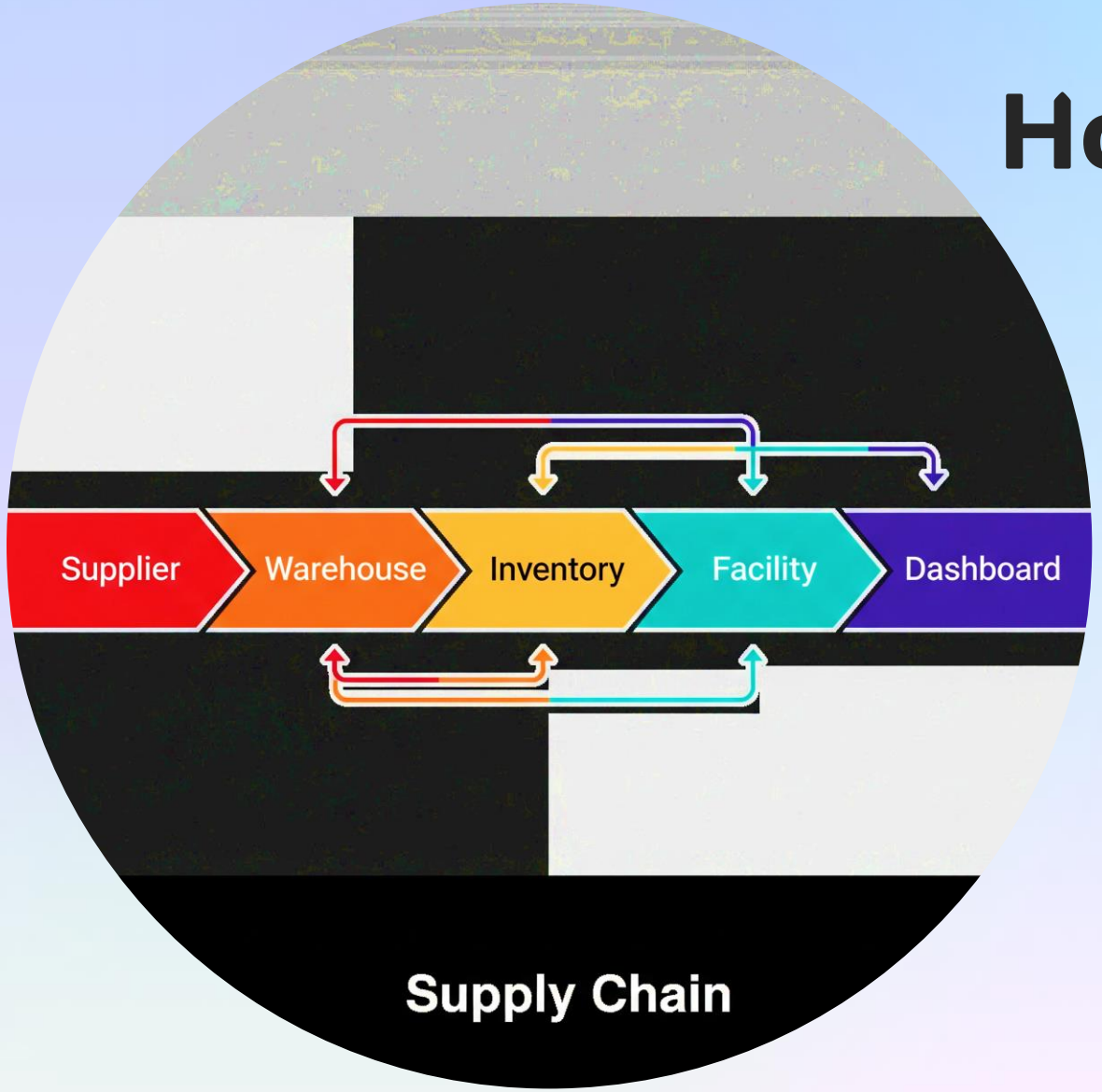
Monitoring of facility-level stock and expiry status

Classification of stock health (Low, Moderate, Healthy)

Trend comparison with prior monthly usage

Real-time alerts on low inventory or soon-to-expire products

This connects seamlessly with dashboard platforms like Power BI, Metabase, or Tableau for visual insights.

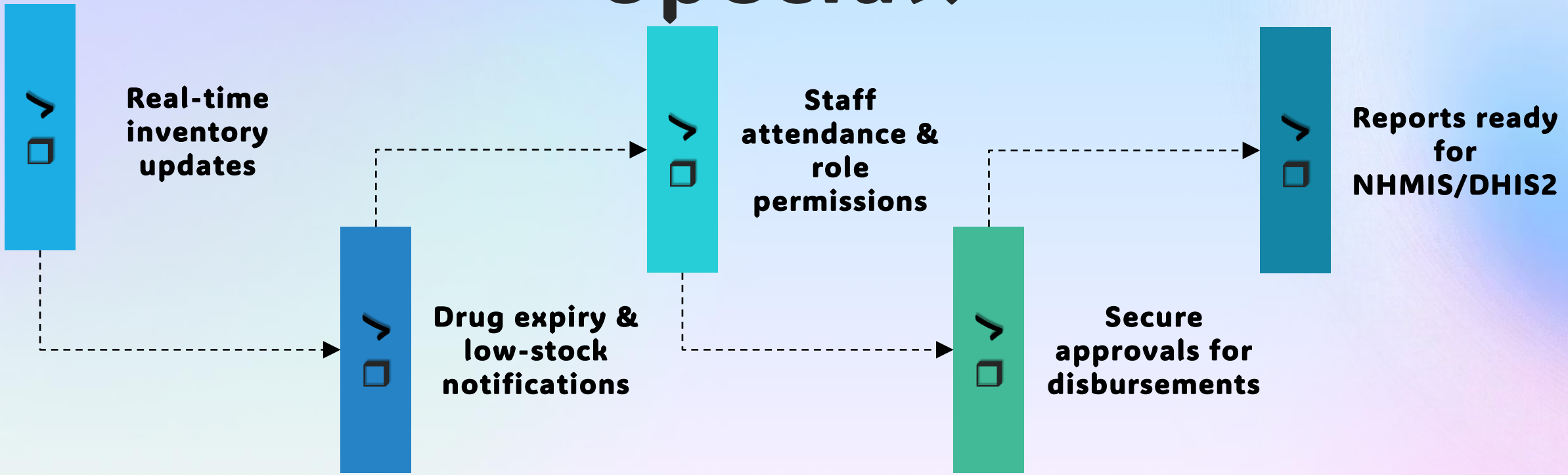


How does all these really work?- simplified

- Medicines come in → added to the system
- Inventory updates automatically as drugs move
- System alerts staff before stock runs out or expires
- Managers see everything in real-time
- Staff check-in and training logs are tracked digitally

SMART FEATURES

What Makes This System Special?



What This System Means for You!

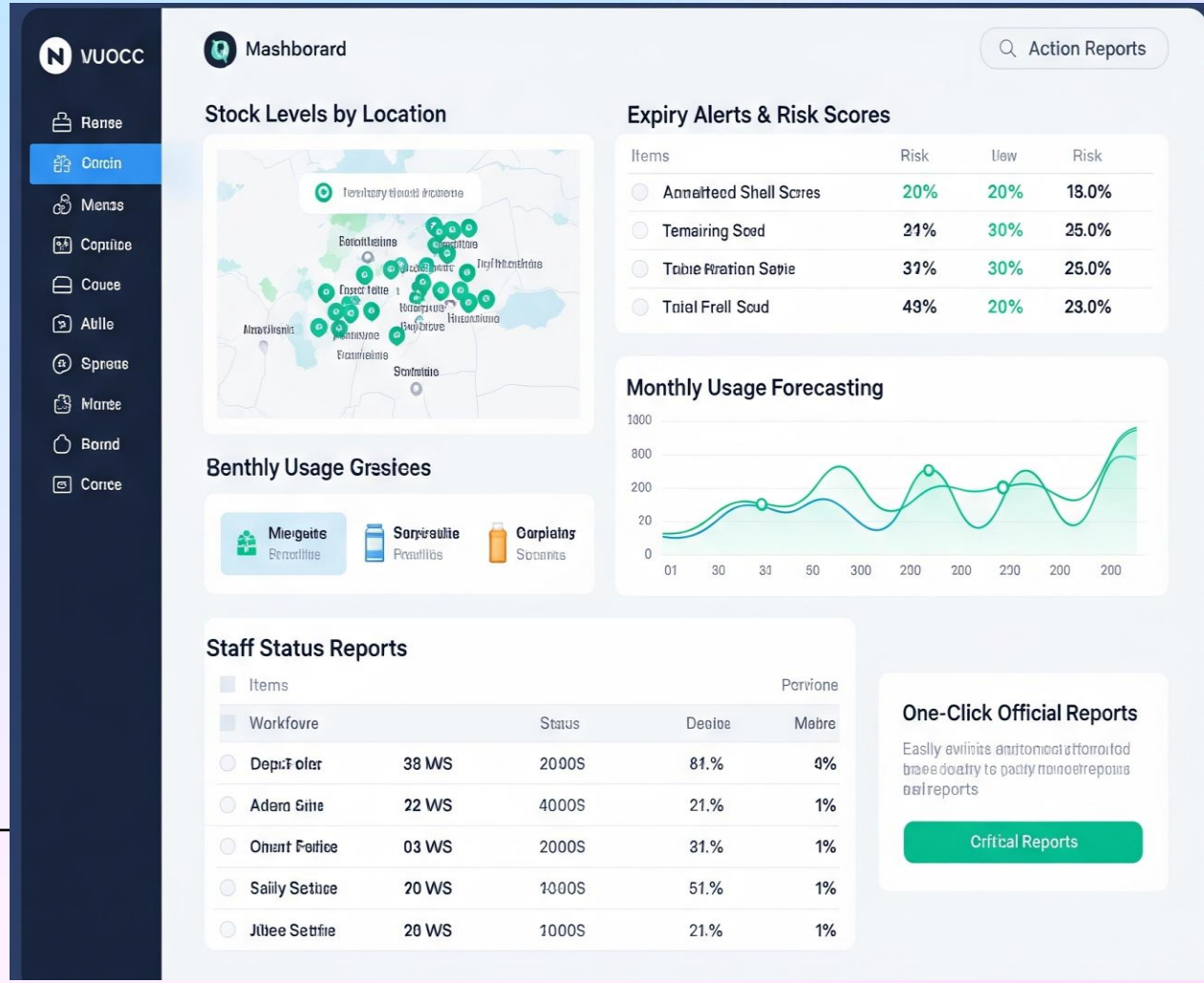
REDUCE SHORTAGES — Get notified before stock runs out

SAVE MONEY — Less waste from expired medicines

MAKE BETTER DECISIONS — Live reports and planning tools

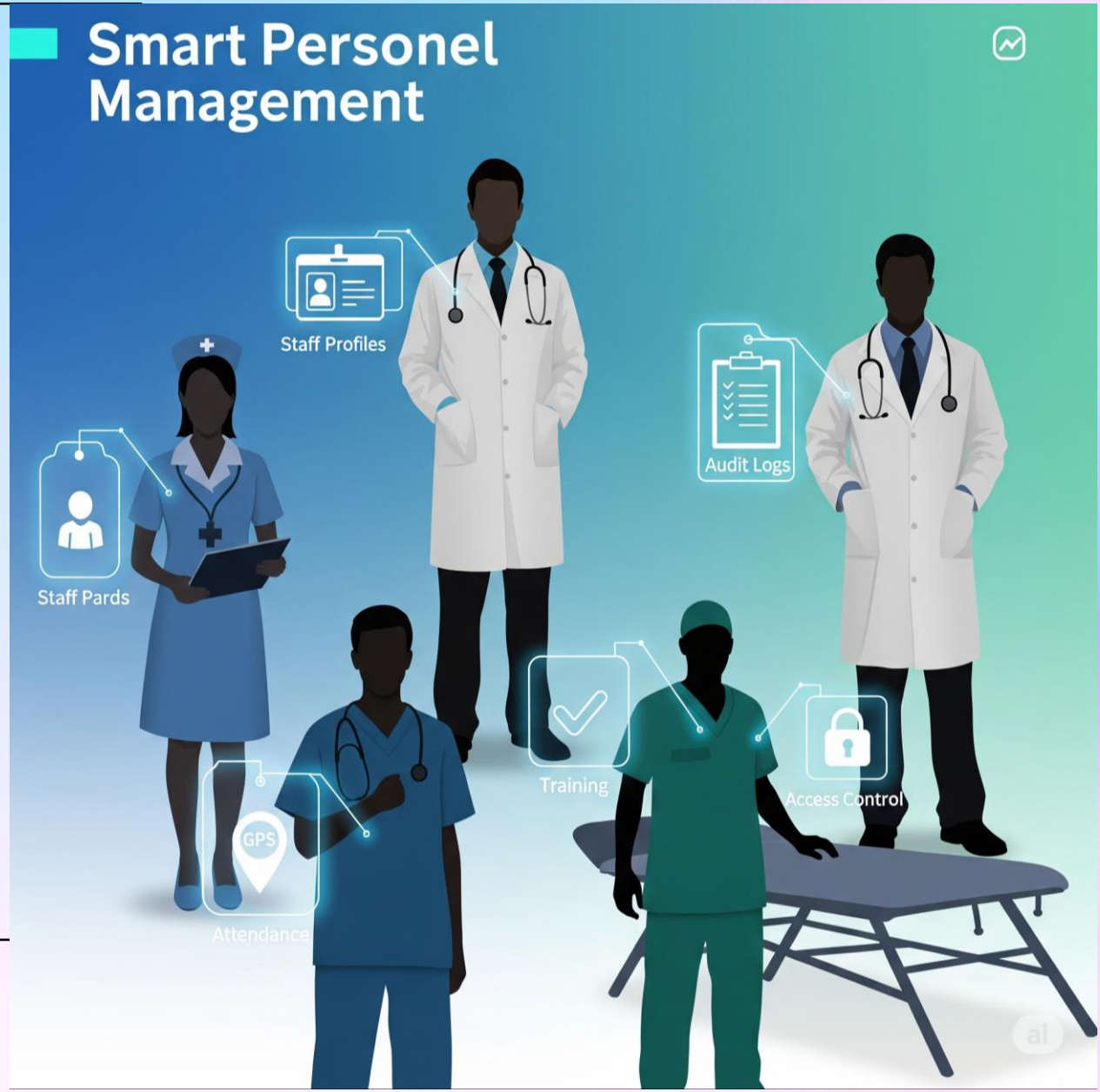
INCREASE TRUST & COMPLIANCE — Secure, logged approvals

BOOST STAFF PERFORMANCE — Track training and attendance



Building a Smarter Workforce

- STAFF PROFILES & FACILITY ASSIGNMENTS
- GPS-LINKED ATTENDANCE LOGS
- TRAINING HISTORY AND GAP DETECTION
- ACCESS CONTROL BY JOB ROLE
- AUDIT LOGS FOR ACCOUNTABILITY



LET'S START STRONG AND SCALE

PILOT PLAN & ROLLOUT

1ST Q 2026
STAKEHOLDER WORKSHOP – FINALIZE KPIS

2ND Q 2026
PILOT AT 3 TERTIARY FACILITIES

3RD Q 2026
FULL ROLLOUT

WORKSHOP TEST EXPAND

SUMMARY

- WITH THIS SET UP WE'RE BUILDING A SIMPLE DIGITAL SYSTEM TO HELP PSDMCMA TRACK MEDICINES BETTER. IT SHOWS WHEN DRUGS ARE RUNNING LOW OR GETTING CLOSE TO EXPIRY.

- STAFF CAN BE MONITORED MORE EASILY, AND APPROVALS ARE MORE SECURE.

REPORTS AND UPDATES HAPPEN INSTANTLY, WITHOUT PAPER OR DELAY.

THIS SYSTEM HELPS EVERYONE MAKE FASTER, SMARTER DECISIONS FOR BETTER HEALTHCARE.

TRANSFORMING PLATEAU STATE DRUGS AND MEDICAL COMMODITIES MANAGEMENT AGENCY (PSDMCMA) THROUGH DATA INTELLIGENCE

This isn’t just software

—it is infrastructure for better governance, better health outcomes, and a smarter future for Plateau State.

Let’s pioneer it. Together.

THANK YOU

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