

Warehouse-External Management System

Case Providing Department: Management Information Technology and

System Office

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1. Background

It manages and tracks the progress of equipment dispatched from the central warehouse and projects in transit, while integrating office-essential data management functions (including IP address management, maintenance case records, quick information retrieval, etc.).

a. Daily operations require extensive data recording and archiving. The large volume of Excel spreadsheets poses considerable challenges to data integration.

b. The existing central warehouse system suffers from incomplete fields and cumbersome operations, which hinders the effective management of equipment post-dispatch.

c. A review of personal workflows reveals that the processes are fixed and highly amenable to standardization.

d. The work entails frequent requirements for quick data retrieval and real-time modification.

2. Solutions

a. Basic Data Module: Stores shared foundational information such as room numbers, data types of all system tables, and other universal configuration data.

b. Data Management Tables: Includes IP-equipment mapping, equipment location & quantity tracking, daily work logs, and AP (Access Point) location records.

c. Business Operation Tables: Covers core business transaction records, including IP address allocation records and equipment inbound/outbound transaction logs.

d. Workflow Management Module: Manages the full lifecycle of work items from initiation to completion, encompassing both internal collaboration processes and external stakeholder interactions.

3. Outcomes and Benefits

a. Data Warehouse: Quick IP/AP-switch port management (allocation,

query, statistics) to streamline workflows.

b. Work Accounting Book: Auto-generated from work records (no more year-end hassle); independent budget item management with expenditure and progress tracking.

c. Basic Information Repository: Standardized, highly readable data storage.

d. Supplier-Facing Workflow: Faster communication with suppliers — suppliers submit supplementary info via external links to boost warranty efficiency.

4. Replicability and Promotion Value

Promotion Scope: All sets of tables with fixed data volumes are suitable for large-scale promotion due to their stable structure and high reusability.

Key Advantages:

a. Linked Multi-table Structure: By associating the main table with multiple asymmetric sub-tables, the solution optimizes data storage structure, reduces redundant data entry, accelerates form filling, and simplifies statistical analysis.

b. Collaborative Supplier Workflows: Suppliers (third parties) can directly input data at designated workflow nodes, eliminating back-and-forth communication, reducing delays, and enhancing efficiency for both

internal teams and external suppliers.

5. Next Steps

Seamlessly link maintenance orders to equipment for complete lifecycle tracking and control.

Leverage an AI agent to take over repetitive manual work, freeing up human resources for more complex tasks.