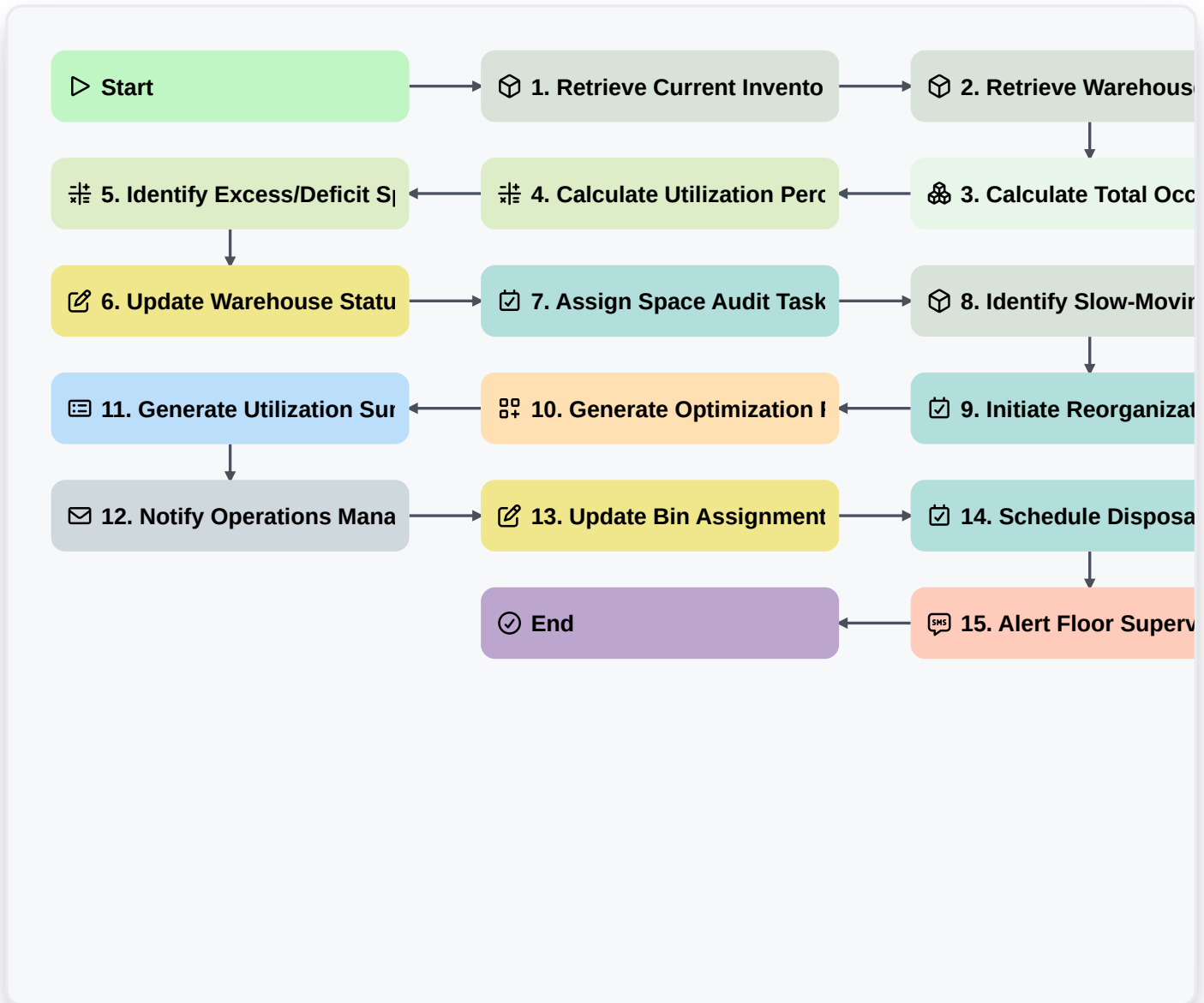


Warehouse Space Utilization Optimization Process



▷ **Start**

Start of the Workflow/Process.

 **1. Retrieve Current Inventory Levels**

Fetch all existing product entries from the Inventory Data Model to identify stock volume.

 **2. Retrieve Warehouse Capacity Data**

Fetch total available bin, shelf, and floor space metrics from the Warehouse Layout Data Model.

 **3. Calculate Total Occupied Volume**

Sum the volume of all active inventory entries to determine current utilized space.

 **4. Calculate Utilization Percentage**

Divide Total Occupied Volume by Total Warehouse Capacity to determine the utilization ratio.

 **5. Identify Excess/Deficit Space**

Subtract Total Occupied Volume from Total Capacity to determine remaining headroom or overflow requirement.



6. Update Warehouse Status

Update the 'Current Utilization' field in the Warehouse Data Model with the newly calculated percentage.

7. Assign Space Audit Task

Create a task for the Warehouse Manager to physically verify high-density zones.

8. Identify Slow-Moving Stock

Retrieve inventory entries where 'Last Movement Date' is greater than 90 days.

9. Initiate Reorganization Plan

Create a task for the Logistics Coordinator to move identified slow-moving items to long-term storage.

10. Generate Optimization Report Entry

Create a new entry in the 'Optimization Logs' data model summarizing the findings of this cycle.

11. Generate Utilization Summary Report

Create a visual report showing capacity trends and fragmentation levels for the management team.

12. Notify Operations Manager

Send an email to the Operations Manager if utilization exceeds the 85% threshold.

13. Update Bin Assignment

Update specific Bin entries to reflect new contents after reorganization tasks are complete.

14. Schedule Disposal/Liquidation

Create a task for the Procurement team to handle stock identified for removal/disposal.

15. Alert Floor Supervisor

Send an SMS alert to the Floor Supervisor if the warehouse reaches critical capacity (95%+).

End

End of the Workflow/Process.