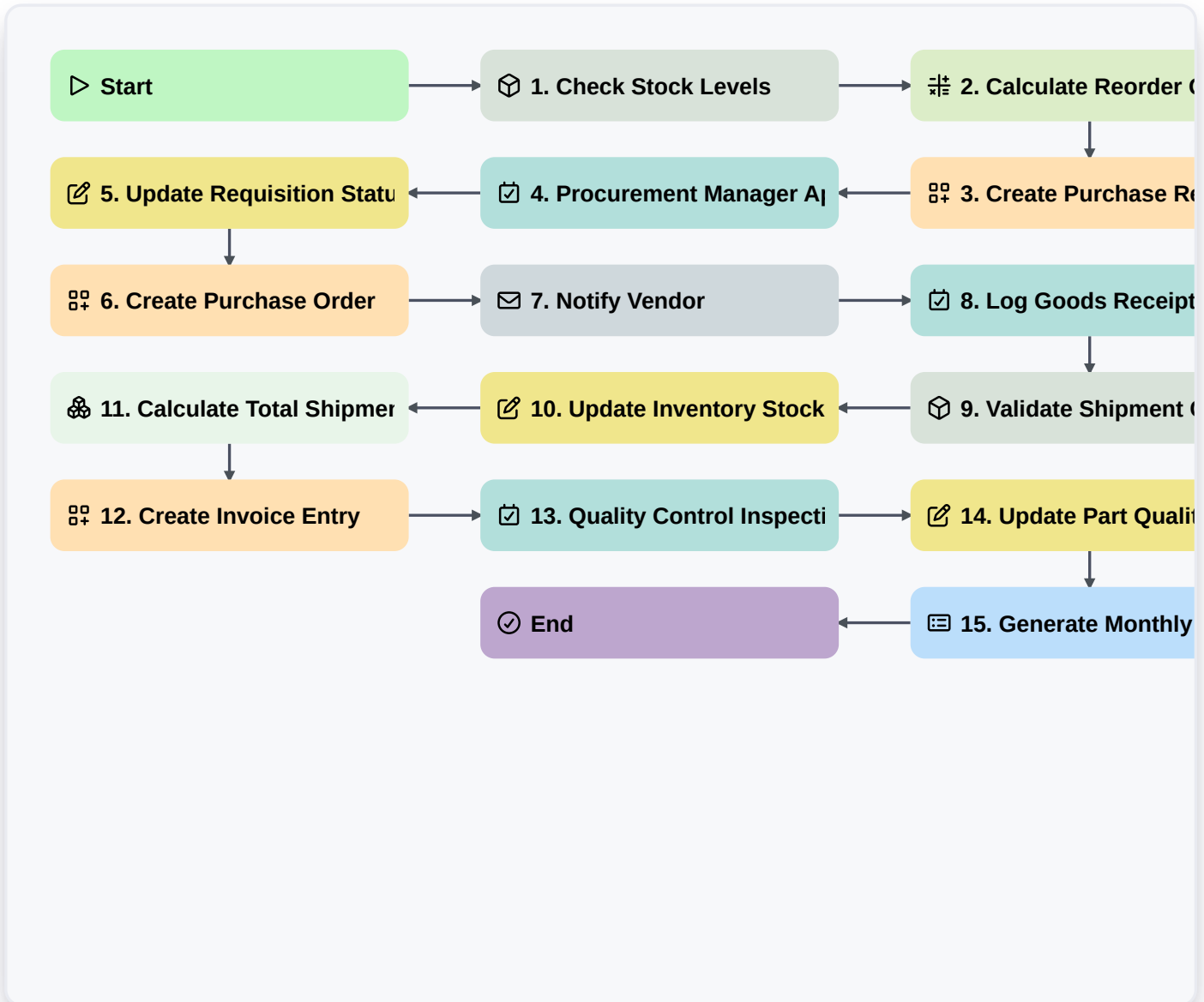


Automotive Spare Parts Supply Chain Workflow



▷ Start

Start of the Workflow/Process.

📦 1. Check Stock Levels

Retrieve current inventory levels for specific part numbers from the Inventory Data Model.

📊 2. Calculate Reorder Quantity

Calculate the required order volume based on $(\text{Current Stock} - \text{Safety Stock}) + \text{Forecasted Demand}$.

📝 3. Create Purchase Requisition

Generate a new entry in the Purchase Requisition data model for the identified shortage.

✅ 4. Procurement Manager Approval

Assign a task to the Procurement Manager to review and approve the new purchase requisition.

📝 5. Update Requisition Status

Update the status of the Purchase Requisition entry to 'Approved' or 'Rejected'.

📝 6. Create Purchase Order

Generate a new Purchase Order (PO) entry linked to the approved requisition and the selected Vendor.



✉ **7. Notify Vendor**

Send an automated email to the Vendor with the Purchase Order details and delivery requirements.

📅 **8. Log Goods Receipt**

Assign a task to the Warehouse Clerk to verify physical items against the incoming shipment.

📦 **9. Validate Shipment Contents**

Fetch the expected items list from the Purchase Order data model to compare against received goods.

✍️ **10. Update Inventory Stock**

Increment the 'Quantity on Hand' in the Inventory Data Model for the received parts.

🧮 **11. Calculate Total Shipment Value**

Sum the total cost of all line items within the specific shipment to update the Logistics Budget.

🧾 **12. Create Invoice Entry**

Create a new entry in the Accounts Payable data model based on the validated shipment.

📅 **13. Quality Control Inspection**

Assign a task to the QA Specialist to perform a technical inspection on a sample of the parts.

✍️ **14. Update Part Quality Status**

Update the 'Quality Grade' attribute in the Inventory Data Model based on inspection results.

📊 **15. Generate Monthly Supply Chain Performance Report**

Create a summary report aggregating lead times, stockout frequencies, and vendor accuracy.

🏁 **End**

End of the Workflow/Process.