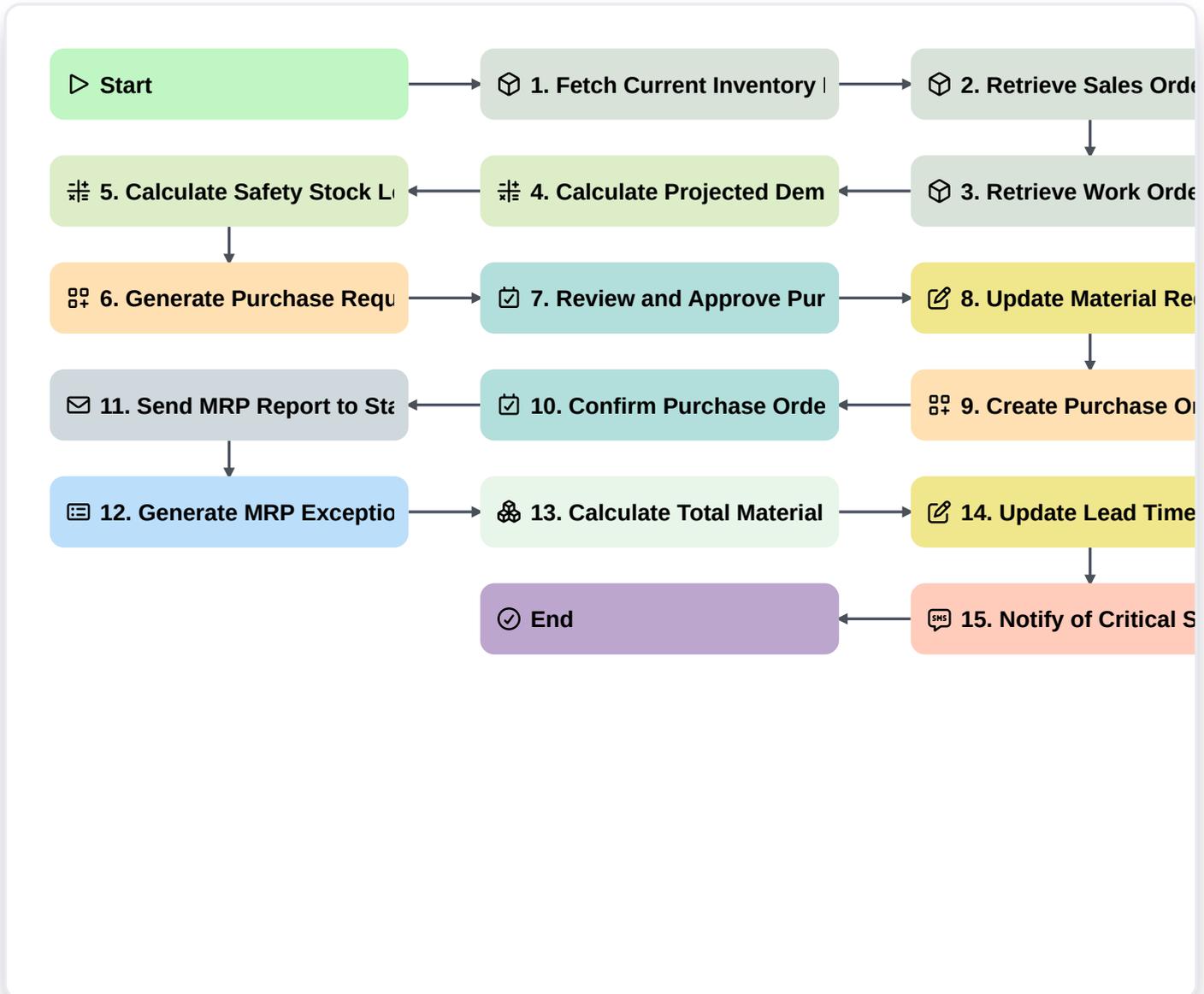


Material Requirements Planning (MRP) Workflow For Manufacturers



▷ **Start**

Start of the Workflow/Process.

 **1. Fetch Current Inventory Levels**

Retrieve current stock quantities for all bill of materials (BOM) components.

 **2. Retrieve Sales Orders**

Fetch all open and confirmed sales orders, including quantity and delivery dates.

 **3. Retrieve Work Orders**

Fetch all open and scheduled work orders, including material requirements.

 **4. Calculate Projected Demand**

Determine projected demand based on sales orders, work orders, and historical data.

 **5. Calculate Safety Stock Levels**

Determine optimal safety stock levels based on lead times and demand variability.

6. Generate Purchase Requisitions

Automatically generate purchase requisitions for required materials based on projected shortages.

7. Review and Approve Purchase Requisitions

Assign a task to procurement team to review and approve generated purchase requisitions.

8. Update Material Requirements Planning (MRP) Data

Update the MRP data model with calculated requirements and order quantities.

9. Create Purchase Orders

Generate purchase orders based on approved purchase requisitions.

10. Confirm Purchase Orders

Task for purchasing team to confirm POs with suppliers.

11. Send MRP Report to Stakeholders

Automatically send a summarized MRP report to relevant stakeholders (e.g., production, procurement, sales).

12. Generate MRP Exception Report

Create a report highlighting any exceptions or potential stockouts.

13. Calculate Total Material Cost

Aggregate all material costs for current MRP plan.

14. Update Lead Times

Update material lead times based on supplier feedback or process improvements.

15. Notify of Critical Shortages

Send SMS alerts to designated personnel for critical material shortages.

End

Start of the Workflow/Process.