

# Material requirement planning and procurement

This workflow automatically calculates material requirements from active fabrication orders and manages the entire procurement process from vendor selection to purchase order generation. It optimizes inventory levels while ensuring timely material availability for production schedules.

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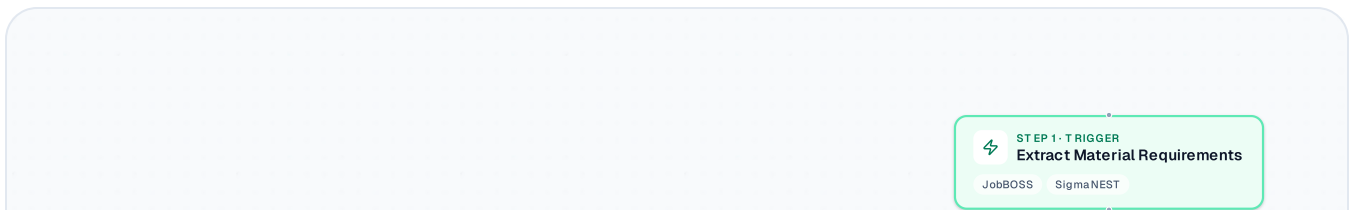


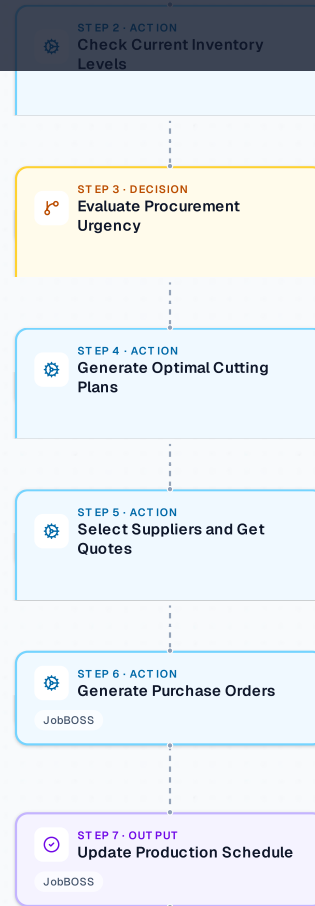
## WORKFLOW TRIGGER

New fabrication order is approved and added to production schedule

## Visual Flow

Each node represents an automated step. Connections show how data and decisions move through the workflow.





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## Step-by-Step Breakdown

Detailed explanation of each automated stage in the workflow.

1

⚡ TRIGGER

### Extract Material Requirements

Automatically pulls bill of materials data from approved fabrication orders and calculates total material requirements including steel plates, beams,

and consumables. Integrates with nesting software to optimize material usage calculations.

JobBOSS

SigmaNEST

2

 ACTION

## Check Current Inventory Levels

Queries existing inventory database to determine available materials on-hand and calculates net material requirements. Accounts for committed inventory from other active orders.

JobBOSS

3

 DECISION

## Evaluate Procurement Urgency

Determines if materials need immediate ordering based on production schedule deadlines and current lead times. Routes urgent requirements to expedited procurement process.

JobBOSS

4

 ACTION

## Generate Optimal Cutting Plans

Creates nesting layouts to determine exact material dimensions and quantities needed for efficient cutting. Minimizes waste and optimizes material utilization across multiple orders.

SigmaNEST

ProNest

5

 ACTION

## AI Business OS

### Select Suppliers and Get Quotes

Automatically requests quotes from approved vendors based on material specifications, quantity, and delivery requirements. Compares pricing and availability from multiple suppliers.

JobBOSS

6

 ACTION

### Generate Purchase Orders

Creates and routes purchase orders to selected vendors with optimized delivery schedules aligned to production needs. Includes material certifications and quality requirements.

JobBOSS

7

 OUT PUT

### Update Production Schedule

Confirms material delivery dates and updates production timeline accordingly. Sends notifications to production managers about any schedule adjustments needed.

JobBOSS



## Outputs

## AI Business OS

- Purchase orders sent to vendors
- Updated production schedule with material delivery dates

- Optimized nesting plans for material cutting
- Inventory requirement reports



### Key Metrics

- Material waste reduction percentage
- Days saved in procurement cycle time
- Cost savings from optimized purchasing



### Tools & Integrations

- JobBOSS
- SigmaNEST
- ProNest

## AI Business OS

Actionable AI implementation strategies for business leaders ready to transform their operations.

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