

# Production scheduling and job sequencing

Automatically sequences and schedules fabrication jobs by analyzing material requirements, machine capacity, and delivery deadlines to optimize production efficiency. This workflow reduces idle time, minimizes material waste, and ensures on-time project delivery.

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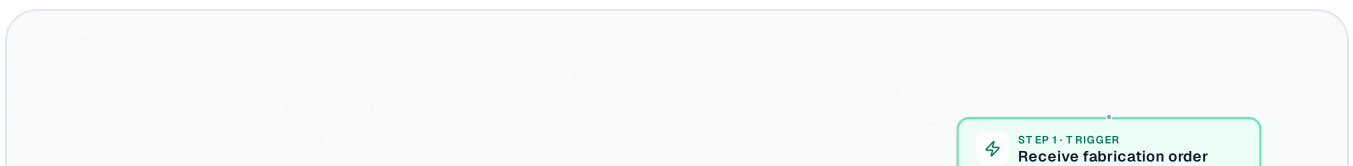
## WORKFLOW TRIGGER

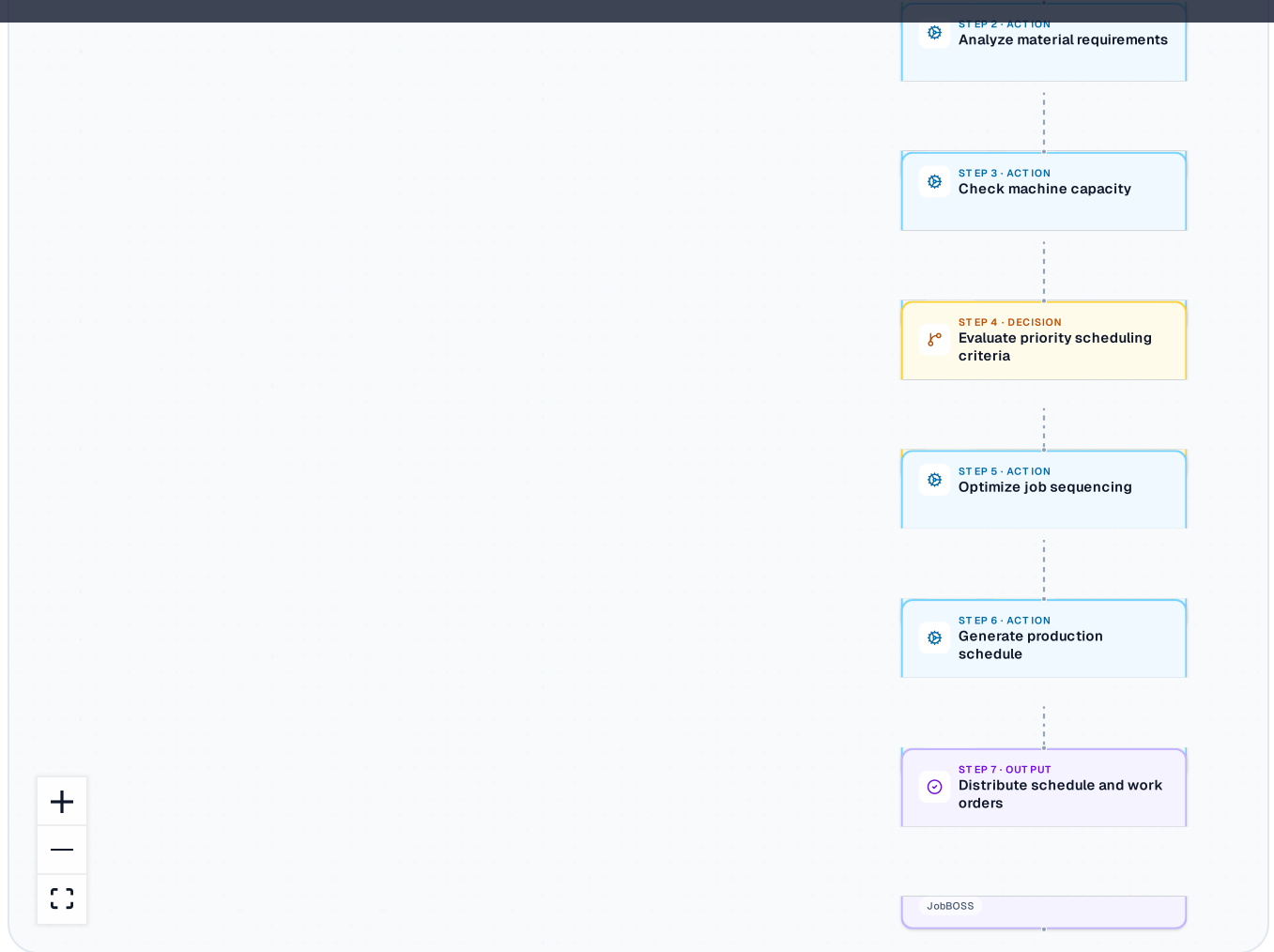


New fabrication order received or existing order specifications updated in JobBOSS

## Visual Flow

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





## Step-by-Step Breakdown

Detailed explanation of each automated stage in the workflow.

1

⚡ TRIGGER

Receive fabrication order

JobBOSS captures new order details including specifications, quantities, materials, and delivery requirements. Order data is automatically extracted and validated for scheduling processing.

JobBOSS

2

 ACTION

## Analyze material requirements

SigmaNEST processes the order specifications to determine optimal cutting patterns and material utilization. System calculates required sheet sizes, quantities, and identifies potential material sharing opportunities across orders.

SigmaNEST

JobBOSS

3

 ACTION

## Check machine capacity

System queries real-time machine availability, current workload, and scheduled maintenance windows. Capacity analysis includes cutting, welding, and finishing equipment to identify production bottlenecks.

JobBOSS

4

 DECISION

## Evaluate priority scheduling criteria

AI engine weighs delivery deadlines, order priority levels, material availability, and setup time requirements. Decision determines whether to schedule immediately, batch with similar orders, or flag for expedited processing.

JobBOSS

5

## Optimize job sequencing

System creates optimal production sequence considering setup times, material flow, and machine efficiency. Sequencing minimizes changeover time and maximizes throughput while meeting delivery commitments.

JobBOSS

SigmaNEST

6

 ACTION

## Generate production schedule

Automated system creates detailed production timeline with specific machine assignments, operator allocations, and milestone checkpoints. Schedule integrates with existing workload and updates resource planning.

JobBOSS

7

 OUTPUT

## Distribute schedule and work orders

System automatically sends production schedules to shop floor displays, generates work orders for operators, and updates project timelines. Notifications sent to relevant stakeholders about schedule changes or priority jobs.

JobBOSS



## Outputs

- Optimized production schedule
- Machine-specific work orders
- Material cutting programs
- Delivery timeline updates



## Key Metrics

- Schedule adherence percentage
- Machine utilization rate
- Average setup time reduction



## Tools & Integrations

- JobBOSS
- SigmaNEST

## AI Business OS

## AI Business OS

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