ChecklistGuro

MRP Simulation and Validation Checklist

Simulation Setup

Verifies correct configuration of simulation parameters and data inputs.

Simulation Run Start Date (Epoch)

Enter a number...

Simulation End Date

Enter date...

Simulation Time Step (Days)

Enter a number...

Simulation Scenario

- [ ] Base Case
- [ ] High Demand
- [ ] Supply Disruption
- [ ] Material Shortage

Initial Inventory Levels (Starting Quantity)

Enter a number...

Simulation Assumptions & Notes

Write something...

Data Accuracy Verification

Confirms the accuracy of data used in the simulation, including BOMs, routings, lead times, and demand forecasts.

BOM Accuracy Percentage

Enter a number...

Routing Lead Time Deviation (Average)

Enter a number...

Demand Forecast Accuracy (MAPE)

Enter a number...

Unit of Measure Consistency

☐ Consistent

☐ Inconsistent

Last Data Validation Date

Enter date...

Notes on Data Anomalies

Write something...

Scenario Definition and Execution

Ensures various scenarios are defined (e.g., different demand levels, supply disruptions) and the simulation is executed correctly for each.

Simulation Run Number

Enter a number...

Simulation Start Date

Enter date...

Simulation Start Time

Demand Scenario Type

☐ Normal

☐ Peak

☐ Decline

☐ Unexpected Surge

Demand Increase/Decrease Percentage (if applicable)

Enter a number...

Description of Scenario Conditions

Write something...

Potential Supply Chain Disruptions Simulated

☐ Supplier Delay

☐ Transportation Issue

☐ Raw Material Shortage

☐ Labor Strike

Duration of Simulation (Days)

Enter a number...

Output Analysis - Material Requirements

Analyzes generated material requirements and identifies potential shortages or surpluses.

Forecasted Material Shortage (Units)

Enter a number...

Projected Material Surplus (Units)

Enter a number...

Explanation of Significant Variances from Plan

Write something...

Safety Stock Levels - Sufficient?

Enter a number...

Potential Root Causes of Shortages?

☐ Inaccurate Demand Forecast

☐ Supplier Delays

☐ Production Bottlenecks

☐ Material Availability Issues

Proposed Actions to Address Shortages

Write something...

Output Analysis - Capacity Constraints

Evaluates simulation results for capacity bottlenecks and potential production delays.

Maximum Workcenter Utilization (%)

Enter a number...

Current Workcenter Utilization (%)

Enter a number...

Description of Bottleneck Workcenter

Write something...

Additional Capacity Required (Units/Time Period)

Enter a number...

Potential Solutions Considered (e.g., overtime, subcontracting, new equipment)

- [ ] Overtime
- [ ] Subcontracting
- [ ] New Equipment
- [ ] Process Optimization

Reason for Capacity Constraint

Write something...

Date Constraint Expected to be Resolved

Enter date...

Cost Impact Assessment

Assesses the cost implications of different scenarios and potential adjustments.

Increased Inventory Holding Costs (Simulation vs. Baseline)

Enter a number...

Expedited Shipping Costs (Due to Shortages)

Enter a number...

Overtime Costs (to Meet Demand)

Enter a number...

Scrap/Rework Costs (due to incorrect planning)

Enter a number...

Lost Sales Revenue (Due to Stockouts)

Enter a number...

Qualitative Impact Assessment (e.g., Customer Satisfaction)

Write something...

Plan Adjustments and Validation

Documents any plan adjustments made based on simulation results and validates their effectiveness.

Description of Plan Adjustments Made

Write something...

Percentage Adjustment to Safety Stock

Enter a number...

Date of Adjustment Implementation

Enter date...

Reason for Plan Adjustment

- [ ] Demand Forecast Inaccuracy
- [ ] Supply Chain Disruption
- [ ] Capacity Constraint
- [ ] Process Improvement
- [ ] Other

Justification for Adjustment

Write something...

Estimated Impact on Inventory Levels

Enter a number...

Date of Validation Start

Enter date...

Documentation and Reporting

Ensures thorough documentation of simulation setup, results, and conclusions.

Simulation Objective Summary

Write something...

Simulation Run Date

Enter date...

Simulation Run Time (Hours)

Enter a number...

Simulation Output Report

⬆ Upload File

Key Findings and Recommendations

Write something...

Report Distribution List (Group)

☐ Management

☐ Planning

☐ Production

Prepared By