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# MATERIAL FLOW EFFICIENCY & LAYOUT OPTIMIZATION CHECKLIST

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## 1 Flow Direction & Alignment

- ☐ Does material move in a straight or logical path?
  - ☐ Are there unnecessary backtracks or cross-traffic points?
  - ☐ Are 90° or 180° turns required before next operation?
  - ☐ Is product manually rotated between stations?
  - ☐ Are transfer points aligned with downstream process?
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## 2 Distance & Travel Time

- ☐ Average distance product travels between stations (feet)?
- ☐ Are forklifts used for short-distance repositioning?
- ☐ Are operators pushing product more than 10 feet repeatedly?
- ☐ Are high-frequency moves supported by mechanical assist?

Calculate:

Total daily feet traveled by product = \_\_\_\_\_

Estimated labor minutes tied to repositioning = \_\_\_\_\_

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## 3 Transfer Efficiency

- ☐ Are products lifted when they could be rolled?
  - ☐ Are products dragged across surfaces?
  - ☐ Is excessive force required to reposition?
  - ☐ Are surfaces level at transfer points?
  - ☐ Is transition between conveyor and workstation smooth?
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## **4 Workstation Integration**

- ☐ Are transfer surfaces flush with workstation height?
  - ☐ Are operators reaching or twisting to reposition product?
  - ☐ Is rotation required for inspection or assembly?
  - ☐ Could omnidirectional movement reduce effort?
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## **5 Staging & WIP Flow**

- ☐ Is WIP staged in clearly defined zones?
  - ☐ Are staging areas over capacity during peak hours?
  - ☐ Are pallets stacked inefficiently?
  - ☐ Does staging interfere with aisle flow?
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## **6 Congestion & Traffic Interference**

- ☐ Do forklifts cross primary production flow?
  - ☐ Are pedestrian paths intersecting forklift lanes?
  - ☐ Are aisles sized appropriately for turning radius?
  - ☐ Is congestion worst during shift change or peak output?
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## **7 Flexibility & Scalability**

- ☐ Can layout adjust to volume changes?
  - ☐ Is expansion limited by fixed anchoring?
  - ☐ Are transfer systems modular?
  - ☐ Can stations be reconfigured quickly?
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## **8 Surface & Equipment Condition**

- ☐ Are rollers worn or uneven?
  - ☐ Are ball transfers properly spaced?
  - ☐ Is load capacity matched to product weight?
  - ☐ Are components aligned and secured properly?
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## **9 Efficiency Summary**

- ☐ Where is the longest material travel path?
- ☐ Which station causes the most repositioning effort?
- ☐ Where is the highest congestion point?
- ☐ If one section were optimized, which would yield the biggest throughput gain?