How Production Performance Affects Logistics

Learn How Performance On Your Production Line Impacts Logistics

Introduction

When evaluating a facility's production performance and supply chain capabilities, there is a common misconception that a facility's overall performance will be more positively affected by changes made to the supply chain, than by affecting change in a production line or cell.

The Truth

This misconception is predicated on the belief that because items and supplies spend more time in transit, that fixes and improvements to the supply chain will result in a drastic increase in facility effectiveness.

- In actuality, many improvements to be found are more *often* found in the few days an item may spend in production.

A Birds-eye View

It is important to have a holistic view of the effect production performance has on supply chain.

- This will allow you to better understand how these two systems within a facility impact each other.

The Example

Take for example the operations of a neighborhood grocery store.

- Often, these stores have inefficient checkout stands, resulting in longer queue lines.
  - A checkout-stand transaction that may take only 5-minutes is preceded by a 20-minute wait.

The Queue Problem

To improve on this issue, the temptation may be to focus on the organization of the waiting lines.

- Note: These waiting lines can be understood as an analogy to supply chain and logistics, and by careful analysis and discussion can be used to illustrate important differences between supply chain and production.
- Addressing this problem, some solutions may be to create express lanes for people with fewer items, or to merge the lines into a one queue with a priority system based on first-come first-serve, is only a stopgap solution.

The True Problem of the Processing

These strategies may improve the customer experience somewhat and possibly reduce the average waiting time by 15%, but do not address the true, core issue which is centered on processing groceries.

- By addressing this issue, it becomes possible to reduce the average waiting time to only 5 minutes.

The Key

The key to reducing waiting times is improving how customers flow through the checkout-stand.

- This addresses the issue at the production level.

Processing Improvement

Originally, the checkout procedure involved one clerk pulling items, reading the item numbers, and then inputting those numbers into the scanning system.

- This is a less-than efficient system.

Instead, keep the supply of goods flowing past the clerk.

- Invest in a system with a modern conveyor and scanning system.

The Root Cause

The original problem, too long of queues, ends up being more about the process at the checkout stand than the queue itself.

Any row of checkout stands, on average, must be able to process customers' items faster than they arrive, or the line will grow indefinitely.

Focusing Power

Improving the organization of the waiting lines can slightly lower the wait time, reducing the total time in by perhaps 15%, but increasing the checkout stand throughput by 25% using a conveyor and scanning system yielded a 50% reduction in wait time.

Conclusion

This is not to imply that improvements in logistics are negligible, however.

- They are not -- and they need to be pursued in conjunction and coordinated with improvements in production.

By learning to differentiate between production and supply chain, you will be able to more accurately and quickly make Lean improvements.