



# Distribution Center MANAGEMENT

May 2011

Managing people, materials and costs in the warehouse or DC

## From the Golden Zone

### Avoiding productivity drains from the law of unintended consequences

By Fred Kimball

What would you say if you saw the chart below for your warehouse operation? The manager of this operation said he knew it was bad, but not how bad.

The chart shows the relationship between inventory and productivity. The Y-axis on the left, the dashed line, shows inventory units on hand each month.

The Y-axis on the right, the solid line, shows the productivity measurement for the operation in lines shipped per labor hour.

Productivity declined about 50 percent over a few months. It recovered a bit, but it is still very low and warehouse labor costs have virtually doubled since a year ago. The parent firm is unhappy, and people's jobs are on the line.

New receipts from overseas sit on the receiving dock for weeks without putaway to storage. Ultimately, pickers open boxes in the receiving area to pick items for orders. Now, the receiving area is a mess with many open boxes. The operation is behind on shipping orders, and credibility with customers is declining. There is tension between warehouse personnel and customer service, marketing, sales, and finance.

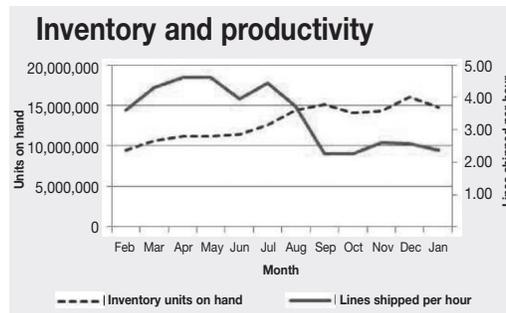
The operation has a good warehouse

management system (WMS), yet the implementation of most modules was deferred, so the WMS is just a stock location system. The order management system still prints paper pick lists, and the pickers must use their WMS scanners to look up an item's location. Daily cycle counting stopped over a year ago; a recent cycle count sample measured location accuracy at 67 percent.

None of these "points of pain" was the principal cause of the decline in productivity. Look at the chart again, and look at the point where the inventory line really begins to turn upward last June.

The warehouse was already near full capacity with nearly 100 percent of rack spaces occupied. A surge in customer demand caused backorders and increased production. From the warehouse manager's perspective, the facility was already full and a lot more product was coming. The surge in customer demand turned out to be a onetime event. With no rack positions available, there was no place to store incoming product except in the receiving area and in rack aisles. The warehouse manager added some temporary staff to help with receiving and picking. The result was gridlock.

Excess inventory is the culprit: too much



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inventory of things that aren't selling. An analysis found that 53 percent of the inventory on hand was for items for which there was more than a year's supply on hand.

In this real-life saga, the warehouse manager predicted problems from the tremendous increase in production on an already full warehouse. He complained about excessive inventory levels for mostly obsolete product. What he did not do well was document the impact in a rational manner. He had not been tracking operational metrics. He had no real data. His emotionalism fell on deaf ears.

No one could have predicted a 50 percent decline in productivity. However, the manager would have had a better chance of mitigating the problems had he been tracking the operational metrics all along. In this case, he could feel the decline in productivity, but he did not quantify the impact.

When the stuff hits the fan, tactical actions are usually the only options. The following tactical actions will bring some relief:

- Consolidate multiple partial pallets of the same SKU into fewer pallets.
- Create mixed SKU pallets of dead stock and store them out of the way.
- Rent trailers for yard storage of dead stock.
- Discard stock that has already been written off.
- Acquire offsite storage for slow-moving and dead inventory.

- Look for places to add racking, such as crossover tunnels, over dock doors for corrugated and supplies, and in floor stack areas.
- Reduce the quantity of corrugated supplies in inventory by having more frequent deliveries from the supplier.
- Reduce the number of SKUs of corrugated.

This warehouse has endured a series of events with unintended consequences. The damage is real, the costs — financial, customer service, and people — are high, and the road back will be long.

The message is to be proactive. Do you measure, track, and report productivity every week? Do you report what percent of your storage capacity is utilized and how many pallet positions are available? Do you quantify the space consumed by slow-moving or dead product?

Do you educate your management that 100 percent rack occupancy is a bad thing? Do you quantify the productivity gain you'd get with functionality in your WMS that was never implemented? Are you leading your operation, or are you just going along for the ride?

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