



White Paper

Tips on Optimizing Current Supply Chain Investments

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Interview

The following interview was conducted at the annual WERC conference in Anaheim, CA in May 2010 between Senior Editor of Supply Chain Brain, Bob Bowman, and John Giangrande, senior account executive from Fortna Inc.

Robert Bowman:

Especially in tough economic times, it's important to optimize your existing assets, and that certainly holds true within distribution centers. Why do you feel that this an important issue today?

John Giangrande:

Well it's an important issue because they are existing assets and investments, and with the economic climate of the last couple of years, more and more emphasis is being placed on utilizing what we have at hand.

RB:

And the companies don't want to be spending money on new investments, but maybe they're not making the best possible use of what they already have. Are they actually finding opportunities that they didn't realize were there before hand?

JG:

Yes, they are, on both on a small and a large scale, depending upon how good the operation was performing prior to doing any sort of review.

RB:

Can you give me a sense of where some of the low hanging fruit or the big discoveries are taking place?

JG:

Well, the best way to look at this is from two perspectives, and the first one is tactical, or inside the four walls. Within the four walls, one of the biggest cost drivers is labor. Everybody's looking at a way to get more done with less labor expense. From there we can look at space utilization of the building, the storage equipment, and the processes behind those that drive material flow, such as inventory slotting and order management. All of these issues affect the entire labor resource on how efficiently the facility functions. A lot of low hanging fruit really starts with some basic blocking and tackling within a distribution center. For example, is there a slotting process? Is the item master file updated? Is there a regular routine to actually take a look at the correlation between movement and the actual location of SKUs?

RB:

So it's not just squeezing more productivity out of your workers, saying "You have to work faster. You have to work better"? There are some intelligent ways to approach this.

JG:

Absolutely. That's just one of them. And of course getting involved with "best practices" is extremely critical. Take a look at what people are doing within the facility and ask the basic questions: Are they doing a task efficiently? Should they be doing that task at all? Or is there a better way to perform it?

RB:

So this is an official, formal process that you're saying companies are undertaking? I'm just wondering how deep the dive is, and how long it takes in order to come up with these conclusions.

JG:

This type of approach is called an operations assessment, and based on how deep the dive, it could take anywhere between one and four weeks, which in itself isn't an extensive amount of time when you take a look at the payback opportunity that exists. An operations assessment can be done with internal or external resources. There could be benefits from a set of fresh eyes. But essentially it's all about taking a look at what's physically occurring today, identifying the bottle necks and pinch points. Taking a look at key metrics to say "Hey, these particular areas aren't performing at the level that we think they should be" based on industry standard, benchmarking, or even historical standards within that operation. And to say, "Okay, let's take a look at the root cause and determine the fixes to get it on track".

EXHIBIT 1

the top 10: the most commonly used DC metrics

Metric and category	% Using	2009 Rank
1. On-time shipments (Customer)	85.8%	2
2. Order picking accuracy (Quality)	73.2%	1
3. Average warehouse capacity used (Capacity)	70.4%	3
4. Annual workforce turnover (Employee)	60.2%	5
5. On time ready to ship (Outbound operations)	58.8%	7
6. Peak warehouse capacity used (Capacity)	58.7%	8
7. Fill Rate - line (Outbound operations)	57.7%	6
8. Dock-to-stock cycle time, in hours (Inbound operations)	56.2%	9
9. Inventory count accuracy by location (Quality)	53.0%	*
10. Order fill rate (Outbound operations)	50.7%	4

* Did not appear in Top 10 in 2009

Chart courtesy of DC Velocity/WERC 2010

RB:

So, is it just within the four walls of the distribution center, or can this exercise go outside those walls?

JG:

Yes, there are many ways to optimize an operation by looking outside the four walls. This is not so much of a tactical approach but rather more of a strategic approach. What I mean by that is simply every dollar we take out of costs goes directly to the bottom line, so when we take a look outside the four walls, there are some huge cost drivers for overall supply chain expenses.

The first and foremost expense for many companies is transportation cost. You need to take a look at your network strategy in terms of the number of DCs, and how product flows from suppliers through the DC operations to end customers. Clearly flow path affects the network design, transportation, and the inventory strategy behind it. For example, do I store all my slow moving SKUs at each of my facilities for customer service's sake, or is there a strategy that allows me to reduce inventory within the supply chain, maybe centralize part of those activities, and still maintain expected customer service levels? Tax implications should be considered as well.

RB:

But now we're getting much more complicated. Now we're not talking about warehouse or facility optimization, we're talking about network optimization. And controlling partners, and bringing everybody else into the mix. That seems like an awfully complex exercise. How long does that take? What kind of resources are required there?

JG:

Well clearly this is much more complicated, not only because of the process, but also the tools required to do the analysis. This supply chain assessment can be done on multiple levels. Typically, an initial assessment would run in the neighborhood of four to eight weeks. During this process, we identify all the key variables of the supply chain and determine which ones may have a stronger or a weaker play for that particular client's situation. So for example, take a look at flow path strategy. Should all SKUs flow the same way into a particular distribution center, and then back out to our end customers? Or based on the complexity or variety of the inventory characteristics, maybe certain items should be direct shipped, or others would come into a centralized distribution center.

So we first take a look at it from a flow path perspective, then dial down to network questions. Do we have the right number of distribution centers? Are they optimally located throughout the country based on transportation costs and client service requirements? What about inventory deployment strategy? So we start to peel back the onion and identify the key five or six drivers to take a look at.

At the end of the assessment, we are left with a roadmap. Ideally it's recommended to put it on a grid to illustrate the level of difficulty with the corresponding benefit to the organization. How does each one of these strategies plot on that grid? That helps start a prioritization. At that point, each option is typically an independent project that you then have to drill down very specifically to get detailed answers and determine implementation results needed to achieve the business case.

RB:

And prioritize, and pay for, and organize, and get people to support. It sounds like we're already well past that low hanging fruit point at this point. I'm just wondering, when companies make that transition, when they get that obvious stuff out of the way, what are the major opportunities that first present themselves for a little bit of a deeper dive, of what you talked about here?

JG:

Well, first of all, let's go back to tactical, within the four walls opportunities. Typically, labor productivity improvement is low hanging fruit. We expand this notion to be called organizational excellence. Many companies consider organizational excellence to be only labor management systems. But organizational excellence is much broader than that. It defines and challenges what the best practices should be within the facility, and then develops engineered standards and metrics to support that. So even before we get to a software discussion, there's a lot of in depth work that can be done from a labor view point to start to increase productivity.

Once standard operating procedures and labor standards are in place, rolling in an LMS may make sense. But companies must also consider the culture shock that sometimes follows this effort. It's important to support your people with leadership training and motivation, or some sort of incentive plan. This is sometimes implemented as a gain share program for employees that are exceeding the 100% level, or whatever the thresholds are established for that particular client. When you summarize all these functions, that's organizational excellence and it drives the biggest opportunity for operations improvement within the four walls.

RB:

John, thank you so much for sharing your expertise with us today. John Giangrande of Fortna Inc. has helped us go down the road of organizational excellence.

About Fortna

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