



Real Economics of Warehouse Order Picking - Order Fulfillment Operations

By Integrated Systems Design

We're going to talk a little bit today about some concepts that may be foreign to a lot of distribution warehouse management operations. I actually am one of the exhibitors here. I started out as an operations person and I worked my way up through the ranks and ended up being a VP at several companies with global distribution operations. Through that process, I've learned a lot along the way. One thing that I've learned is the focus in most distribution operations is on things like how do we get our accuracy better, how do we get our throughput better, how do we assimilate more skews, how do we do this, how do we do that? Those are great measurements within the distribution realm, however, we tend to forget that what we're part of is a financial situation at a company. We're trying to make money and a lot of distribution entities are viewed as cost centers, not profit centers and that becomes a very clear distinction on how you approach your distribution operations.

So, why is doubling productivity not enough? Well, one reason is because you're faced with these types of things. Every distribution center I walk into, I hear the same things over and over. I've experienced the same things over and over. I've got SKUs growing abound, "Oh, by the way, we're no longer picking cases, we're picking eaches." Smaller more frequent orders. E-commerce has put everybody on their heels. Even traditional big-box stores are requiring less inventory more often. "How do I reduce my labor costs in that expanding area of growth?" And then, the big one, "How do I provide value-added services?" "My VP of Sales just sold a new program which we have to label all these products special. Okay, I got to figure that out and I got to do that and keep my costs down." These are all viewed as "how do we run an operation and how do we keep our costs down?".

We're also faced with compliance. Those of you who that have worked in the FDA world, have worked with the big-box stores, you know a lot about bill backs,

chargebacks, compliance fines. We have a lot of programs for free shipping, which has a lot of impact on your accuracy. Same-day or next-day delivery. A lot of clients I work with, there out the door 7:30; they're taking orders at 7:30; oh, by the way, UPS, FedEx is picking up at 8 o'clock. They have to push those orders out.

And then ultimate customer service. Okay. So I go into operations and I see Kaizen operations and I see this, and we spend four days trying to figure out where to put a roll of shrink wrap, and yet, I've got to reduce my labor by half. Don't know how I can do that.

You have to show what profit a distribution center can generate. Your mindset has to change. When I'm sitting in a meeting and I'm talking to the VP of Purchasing, they are paid on what money they can save when they buy a product, and yet, in a distribution operation, it is a cost center. How much are you costing us today to do your jobs? And the mindset has to change is how do I actually change that to show how much profit I'm pulling for the company"? What am I adding to the bottom line?

Your competition, as you can see by the technology that's out there, is getting mean and they're getting lean, and they are doing things that many of you may or may not be doing; but they are looking for ways to get better and reduce that operational overhead while adding additional services and becoming very, very accurate.

And then we all know space. The old adage, "If they build it, they'll fill it." We've all been there. Half a million square foot facility, "it'll last us for 10 years". A year and a half later, I'm looking for a new facility. So the optimization of space now falls into that.

There's a rule I've always lived and died by, and people forget this. "Sales gets the customer, operation keeps the customers". So when your sales person goes out, or if you don't have sales people, however you go to market, they land that sale, that sale is golden until the first order or first product comes in screwed up. Now they're (sales) on the defense and they're offering things like free shipping, extra product, making excuses; it becomes a real kind of vicious cycle for the sales. So what I always tell the sales people is that at the end of the day, the last person that's going to touch your customer are the operations people within the four walls of that distribution warehouse. That is who is going to make or break your next sale, and we seem to lose track of that as well.

In a manual facility, this is typical, we see sales rising – hopefully they're rising. That's a whole different kind of problem which I don't have the time or the effort to go through right now, but my cost per unit tends to go up with that, and I'll even say a lot of times, it will go up exponentially higher; so people are throwing more people at it, the operations are getting more diverse with the same group of people, you can't cross-train, people are making mistakes, new elements added, we're not maintaining. Our profit remains consistent if you're lucky.

In an automated facility – and when I say automation, I don't mean just physical automation, I mean information automation, I mean directing traffic on the floor, I'm talking about operators that know exactly where they're going, why they're going there, how long it takes to get it and process it, or using high-end automation, typically we see the cost per unit go down. And now, that is the true definition of profit. So no different than the purchasing manager who scored a great deal, and by the way, loaded up my distribution center for six months, I am pulling profit because I'm actually taking the same structure of the company and I'm squeezing money out of it and unless I become dumb in a very short period of time – which some of you might argue after meeting me – that means I'm pulling profit no different than anybody else in that company. The problem is nobody realizes it. I'm not promoting myself as a profit maker.

So, can a warehouse make a profit? Is it possible? Well, if your definition of profit is retaining more money than we have previously, then absolutely. We made more money on the same sales and the same margin we did before. Makes sense to me. The savings go directly to the bottom line. Every dollar I save doesn't get caught up in cost of goods or anything. It goes directly to my bottom line. That goes to one of the points of the slide here. If you increase your sales – and let's say that we're making \$0.10 on every \$1, which isn't too far off the norm for a distribution company, bottom line net after EBITDA, blah, blah, blah, \$0.10 on every \$1, I have to make 'x' amount of sales to pull down that \$0.10. However, if I save a \$1 in the warehouse, I put that dollar in my pocket.

So, these are the things I look for in distribution operations. We can talk about all the metrics in the world, but here are the ones that matter the most. The order accuracy at the line and the order level. I will challenge you to look more at order level than line level, because it's a higher standard of measure, and that basically says for every order you ship, if any line is inconsistent in that order, the entire order is discounted, because that's the way your customer views you. They don't say "Hey, I ordered 10 lines, they got nine right. They were 90% right." Nope. They pick up that phone and they had to call. You are 100% wrong.

The other thing is inventory accuracy, and this is a dicey kind of subject sometimes. We have financial and we have operational. Financial is great for the CFOs of the world and it's very important for the banks and credit lines and yada yada yada, but operational accuracy is what matter to me. Operationally means when I walk to a shelf or a bin or a pallet or whatever, if it says there's 100 units on there, there's 100 units on there. Period. End of discussion. If it's over, that's not a good thing. Now, I'll have CFOs disagree with me, but from my perspective, that's not a good thing. And then the order fill rate on the line and order levels.

The cost per line ordered is the absolute key measurement and every distribution center at every operation should be looking at that almost on a daily basis – and it's a very simple measurement. Take all my processing for a day, take all my labor for the day, divide it out, that is your cost per line, because even receiving functions all roll up into that end unit, which is your saleable unit. That's where you start, on that cost per line, and you use that as a benchmark to say I'm going to drive that cost per line down. You go out there and buy expensive piece of automation and you have an ROI, that cost per line will reflect it. If it doesn't, it means you didn't meet your hour ROI. It is the key measurement in any distribution operation.

So, if you're really brave, develop a customer-service index. So now, take every single thing that your customer has to deal with and basically say that your order is either completely correct or it's not. So, fill rate issues, and I'm talking about purchasing fill rate – we don't have the inventory in stock, warehouse error rate, customer service, sales errors; “Oh, yeah, we entered this, but we fat fingered one of these things and this came out.”

Time in transit, because whether you like it or not, the freight companies, UPS, FedEx, they're an extension of that operation, and they view it as a supply chain, so when UPS makes a mistake, they call you, typically. Damaged product, pricing issues. So what you need to look at is how many orders went out complete where none of these things were impacted and what is that number. In the example I gave, which are fairly common in the industry, you're talking about 25% of the orders go out have some type of problem or the customer has to pick up the phone, call customer service and say, “I've got a problem.” That costs money and it costs sales.

So as we said, if any one of those elements is in error, the entire order is discounted. I have seen it as low as 40%, so 60% of the orders that go out the door have some type of problem that the customer has to call. This is where you can start seeing, when you talk to sales people for these companies, “Oh yeah. I

spend a lot of time doing 'x' and 'y.' I'm not selling. I'm trying to schmooze, I go pick a bad product, I do this, I do that," you can hear it. It's systemic within the company. They just haven't gotten their arms around it yet, and they haven't measured it. Typical world class companies are in the 95% and higher rate.

Okay. So let's talk about order accuracy. This is the common answer I get when I walk into a distribution center. "What's your accuracy rate?" "99%." If I had a dime for every time that I've heard this, I wouldn't be doing this right now. So, is 99% good enough? It sounds really good. I've got a 1% error rate going to my customer. Maybe it's 99.1%, 99.2%. There's a fallacy to this type of measurement and this is where operations people and company as a whole lose the message, because they're getting caught up in statistics. You need to apply a numeric to this.

So, here's an actual company. It did 3.7 million lines a year, 3,000 orders a day, 5 lines a per order, measured it 99%, they were just a shade over 99%. The executives were very satisfied with the performance. Footnote: There were some customer complaint, some sales people, but you know sales people, they're kind of whiny and blah blah blah, so it wasn't a big deal. So let's take a look at that. If I take 3 million lines times 1%, that's essentially 37,000 errors per year on a 1% error rate. Now, apply a cost to that. How many of you actually apply costs to errors? Anybody? Typically in the industry, we see anywhere from \$50 to \$300 per error to fix an error, depending. If you have your own truck fleet and they're going out, picking up product, bringing it back, it's going to be on that 300 side. Small package tends to be more on the \$50 side. Using that \$50, I have a \$1.875 million dollar bill that I have to come up with to pay for those errors. That is bottom-line profit.

Now, people say "\$50 an error?", it doesn't cost us \$50 an error to fix that. No way. Here's what happens when you cause an error. You have to take time to field the complaint typically, customer service, maybe even a manager. You have to document the issue, you have to issue call tags, you have to pick up the freight. If you have a policy where you say throw out the wrong item, well, that's a whole different kind of calculation. The cost of the return freight, you have to inbound that return freight, you have to label it, you have to put it away, you have to make sure it's sellable, you have to repackage it if it's not, you have to order the correct item, you have to pick it, pack it, ship it; you have the cost of shipping, which is usually expedited at your expense, and then, if you're running your operation right, your assumption should be if you picked it wrong, we stocked it wrong. Somebody better go cycle count that location. If that isn't \$50, then I don't know what is. It is a very real cost that is draining profitability.

So, take that same profit – if they were at 3% profit on \$15 million, 12% of their profitability has evaporated in errors, and this was an executive staff who was satisfied with their performance, and yet, they're scratching and clawing trying to figure out how to make sales, how to increase their margins. Plus, how do you increase your margins when your operation is suffering so bad? How do you go to your customers and say "We want to increase our margins, and by the way, we have an exemplary service." That's a hard case to make. They would need to make \$62 million in additional sales to offset what they lost in errors.

So, being the simple guy that I am, I'm thinking I would much rather just not ship out those errors, pocket that money and not have to worry about making any sales – and I'm going to go directly to my CEO and say "Hey, I just made you \$62 million in sales or in net profit." Now, it's a little outlandish, but you understand what I'm saying. Unless you bring this into the financial arena and make people understand what it is you're trying to accomplish and why, then what it is is statistics. "I'm going to get from 99% to 99.5%. Great. Oh, by the way, I need \$1.5 million automation." "No way. Go figure out how to do it." There's no financial impetus for that change because you're not playing in the arena that companies are driven, which is the financial arena. You need to show that you can pull a profit.

So, just for yucks and grins, they had outbound inspectors doing 100% QC. So, to get to 99% at the \$1.8 million loss, I've paid an additional \$320,000 to get there. So to add insult to injury, I now have a labor component to this.

Okay. We won't spend too much time in this because we've got other subjects to cover. So causes of errors within the distribution world are enormous, and they're all over the map. The more that you can drive validation to the operator, whether it's through automation or voice or whatever, really doesn't matter to me. That's all specific. One thing that you'll hear me say a lot as we go forward here is there's a lot of things out there that you're going to go "Wow, that's great," or "I know that this company, man, they're the big company, they do this. It must be the best thing since sliced bread." My response is, "It is for them, may not be for you." You have to be very, very selective about what you're doing and what you're going after. So always kind of keep that in mind when you're kind of getting wowed out there. But these are the kinds of things that cause errors, and I don't care how automate the world is. You can have a beautiful A-frame sitting there knocking out 3,000 orders an hour and if somebody loads those channels wrong, you're going to have 3,000 orders go out the door incorrectly. So it's all about understanding what you're doing. These are all the kind of things we won't spend time going through.

So, how do you improve accuracy? Bring the goods to man. Traveling cost is ugly. If you look in most distribution centers, anywhere from 80% to 92% or 93% of picking time is travel and location time. That's where the impact is. That's where you see all these integrators out here and people have goods to man, because they're affecting that 90%. Validate locations, validate product as you process. Do not mix units of measure where possible. This is a big issue. I cannot tell you how many distribution companies I go in and they're shipping out cases when the customer order is one because it's one each and it's a case of six, and one says one box, one say one case, it says one on the document, they're in the same location and I've got little Johnny who started two days ago making \$9 an hour and he pulls a case for a piece. You'll never hear about that error on our metrics. That'll just come up in your cycle count later on.

Clearly mark shelves, products prepped for picking. If any of you are in the procurement side, I will always tell you be very careful about what kind of deal you get without knowing the impact of what's going on in the distribution center.

And then here's an interesting one. Right now, can you take somebody that's going to process orders off the street, train them in three hours, put them in a live environment to work to speed, up the accuracy? If you can't, your picking operation is much too complex. This is a fairly good standard to look at. Give yourself a day. If I train somebody for a day, can I turn them loose tomorrow, have them pick the speed, at accuracy rates, or will they make mistakes or will they slow down? That is a great indication that your environment has too many variables, it's too complex, it's not directed enough.

So, let's talk about labor. Single greatest cost in the distribution center, only followed by freight, which once again is a different conversation for a different day. Average non-union cost is hovering right around \$10 an hour. A 40% load, depending on market, could be as low as 25%, could be as high as 45%; well, let's just kind of say, "spitballing" here, we're at \$30,000 a year, ballpark, give or take. Highest turnover rate in the company by far, highest absenteeism rate – and you are paying for days off, whether it's with additional labor or overtime – and highest injury Worker's Comp rates in company.

I break labor up into two distinct entities; productive and nonproductive. Pickers, receivers and replenishment overstock, typically they're doing something. They're carrying something, they're processing an order, they're doing this, they're doing that. Now, but can it be more efficient? Yeah, maybe. What I don't like to see is lots of inspectors. Essentially, what you basically said, "I give up. I can't make my

picking operation any better, so I'm going to inspect the product. By the way, I'm going to pay them a lot more than I'm paying anybody else because they have to know the product, and I'm going to let them stand around and validate what somebody has already done all day long."

Packaging shipping. It's amazing to me how many people keep the packaging element out of the equation, whether it's stacking product into pallets going into trucks or small package orders going into cartons. It's amazing, when I go into a facility and the picking operation is running flawlessly, beautifully, smooth, and it runs in this giant wall called packaging, and I look around and there's three times more packagers than there are pickers, and I start thinking to myself, "There's something really, really wrong here."

And supervision. Supervision is not always non-productive, but it also is a product of an expanding labor force. As that labor force gets bigger, supervision goes up. Now I need an afternoon shift, supervision level goes up along with more supervisors. "Oh, now I've got to go into the nightshift. Now I've got to have a DC manager around the dayshift and the nightshift," a lot of things get impacted. Supervision is because the other things aren't working properly, so I want to limit the amount of supervision because I have systems in place that will drive and validate operations. I'm not walking around with my baseball bat trying to correct issues on the floor as they happen.

So, how do you minimize? We talked about this. Most pick is pick time and travel time, up to 90%. If you're in an operation where you can use goods to man, look at that. Look at that as a viable option. Everybody's different. Look at possibly picking the belt for large-scale case picking operations. Some people have really gone the other direction of picking the pallets and assembling orders. I would challenge you to really look at that from a cost perspective. Look at packaging as part of the order processing. Don't think packaging is a downstream end-of-the-line process. It starts at the beginning, from the receipt of product into what I'm picking into, into what goes out the door. It's an integrated system.

Automate simple functions. I walk into a facility, you know, they're doing 10,000-12,000 packages a day. They've got seven people manning manifestations, scanning and slapping on small parcel carrier labels. Okay, for a measly 30,000-40,000, you put a couple of Print and apply printers and a scale. You automate that process completely, eliminate that labor, and bring up the value of the entire operation.

Prep items for shipping in advance where possible. I'll go into an operation and I'll see people actually taking a bottle of shampoo and wrapping paper on the top so the shampoo doesn't leak before they put it in the box. I'll see people do all kinds of crazy things in the picking department. Remember, that was our labor cost. So, wouldn't it be better, where possible, to prep that in receiving in mass, whether it's bagging product, tagging product, laboring product, you can automate those processes. There are lots of packaging people out there that would love to help you.

Okay, so moving on, this kind of gives you a breakdown of how things happen in terms of percentages. And you can see, the blue would be the percentage roll of the manual operation, and this is fairly typical, and the green is the automation. And you can see, in the automated section over here, a vast majority of my time is spent actually picking. We're not walking around, we're not trying to figure out where we're going, we're just picking and processing.

Okay, so, order processing costs. What is your outbound labor cost per line order? Do you know that? Do you track that? This is why doubling your productivity can get your fired. "Hey, I did 'x' amount of more orders today." "Okay, what did that do for me? How many errors did we have today?" It's a deceiving type of concept because in distribution, we tend to think in terms of our statistics. We don't convert those to financial metrics, and we need to do that. Calculate your cost per order per line. And then, if you want to get more granular, once you get that overall number, then go to your different departments, receiving materials, handler, pickers, inspectors, blah blah blah, and give them a percentage so you can track those individuals on what their percentage of cost per line is, because now you can kind of definitively say "I'm going to make a change in receiving. Did my contribution to that cost of line go up or go down because of that?"

Step one: I get this asked a lot. I go into an environment and they say what do I do first, and the first thing I look at is their control system. WMS, WCS, ERP, whatever is controlling what's going on in the floor, I don't care what it is, but what does it do? Does it direct people? Does it enforce rules? Does it take what's in the supervisor's, the manager's, the VP's mind and say, "This is how I want my operation to run"? Does it enforce those rules so that people follow those? It is the first thing to evaluate, because if you don't have these basic tenants of operations, automation will just run you further into the ground faster, because the automation is going to dictate speed. Remember, automation is dumb. It's really fast, but it's very dumb. So it likes to do things very quickly over and over and over again. You throw a curveball at it, you better find a way around it.

So, the three things a system must do: Direct and enforce rules as defined by management. The second thing... validate what you're doing in real time, some way, some shape or form. Like I said, we can have a four-hour debate on pick-to-light versus scanning versus voice. There are pros and cons to all of them and they all have their place. And then maintain an audit trail. The last thing is paperless as possible. In really good DCs, I see two pieces of paper. One is my packing slip on the inbound inside and the other is my customer's document on the outbound side. I don't see anything else within the four walls of the DC. Everything else is driven by barcodes and different types of processes, where possible.

Space. Once again, doubling your productivity is not enough. When you walk up to the CEO and say, "I need to add 50,000 square feet because I cannot put all the stuff that you have in here." That conversation doesn't go over well. So define the problem. Are you out of space or are out of locations? Two different conversations. I walk into most DCs, they're not out of space. They're certainly out of locations. There's space everywhere. They just haven't figured it out how to get to it yet.

Evaluate excess and obsolete inventory. Now, are there any CFOs in the room? Okay, I'll speak bluntly. Just kidding. But obsolescence has a cost. Now, I'll talk to some CFOs and they'll say, "Well, we've already bought the product. There's really no cost to having it on the shelf." My first response, being a little sarcastic, "Then why am I here, because you called me in because you're out of space?"

But then we go down into the next step, which is how much obsolescence do you have? "Oh, yeah, well we have 'x' amount of our inventory, blah blah blah." Everybody's heard of the 80-20 rule, Pareto's law, blah blah blah, but remember, we're talking 80% of that volume doesn't do much of anything in terms of sales. When you get down to that bottom 30% to 40%, it probably doesn't get touched on a monthly basis, if not every several months. Now, the standard that most of the CFO's I've ever worked with and ever talked to use is between 20% and 25% of the value of the inventory year over year. That is a fairly standard number. So, basically you take of the cost of the inventory and say "Every year I keep that on my shelf, it costs me 20% of the value of that inventory," which means if I'm on a 25% margin, I'm pretty much hosed in year one. By year two, I'm better throwing it in the trash because I'm going down the tubes. That is a real number, and once again, when we're talking about productivity, yes, we want to be more productive, we want to expand the warehouse, we want to expand our SKU count. However, I've got this boat anchor called obsolescence. The problem is what we talk in terms of "Hey, we only pick this thing once a year, let's get rid of it." "Nah, we bought it." "Okay, let's agree to put a value on it." So we understand amongst all of us what

that is costing me every year to store it, to insure it, to heat it, to use the space, to cycle count it, whatever we're going to do, those are all real costs. So, my own estimate is most facilities are less than 60% utilized when they call us in for help, which is an amazing thing to me. It is like, "We're out of space. We're looking at expanding. We're looking at moving into a building. Can you come in and help us out?" There's space everywhere. It's just not thought of as space, because everything is about "What I'm picking, how I'm storing," they don't look above the docks, they don't look in the vertical cube, above shelving. It's just a myriad of issues.

So, what can you do? Vertical cube, I don't know - **vertical storage**, mezzanines, carousels. You've got goods-to-man unit loads out there. When you're looking at cost of automation, you have to put that against what else you're going to do. So if you're looking at an expensive system and you're possibly willing to automate, what is it you're going to do if you don't do that? Well, a \$3-million-to-\$4 million building buys me a little bit of automation.

Airspace. Walk into a DC that says they're out of space— and then look down one of the rows of rack and look at those loads, and you're going to see that about, yeah, and they average about two feet on every load aggregate is open, because somebody went in there and said, "We're going to put all our beams at four-foot heights and make it look beautiful and in an empty warehouse, it looks gorgeous," then you see the product in there, but it's not coming in four-foot heights; it's coming in one-foot heights, two-foot heights, seven-foot height, bump, bump, bump, but it's not modeled. There's no vendor compliance, so there's distribution center is saying, "I've got it. It's this big. It's going to go into this shelf, because that's all I got." That is legitimate space that you're just throwing out the window.

Another thing is the wrong shelving, incorrect racking, incorrect systems, whatever you want to call it. So I've got a product this big on a pallet rack three-feet deep, two feet not being used. I don't know how to get around that. It has to be an intelligent look across the inventory spectrum. So one of the things that I recommend all DCs is get your arms around your volumetrics if you can. Understand the cubing dimensions of your items, what space they're going to take and by golly, get some commitment from procurement about what they're going to do. The disassociation between purchasing and warehousing can be catastrophic, because purchasing is looking for deals, warehouse is looking for space. So those are diametrically opposed.

We're going to skip over a couple of things. So, talking about doubling your productivity... here's automation for you. It largely depends on your environment, your picks, your customers, your order profiles, your items. I could spend a half hour with each one of you and I still wouldn't get through the room in a couple of days. By the time we've kind of define all of that, it's too much of a blanket. However, we do know that in the right environments, we're talking four-to-six times the throughput rates of a manual system. There's no magic here. Remember the 90% number. If we're just looking on the face of it, if it takes me 10 seconds to walk to a shelf and find a product that I can bring it to myself in one second and do that over and over again, there's your increase. All that really great automation out there, most of it, all it does is say, "I'll prevent you from walking. I'll bring it to you. Tell me what to pick?" It's pretty simple, but the dynamics are huge. So when I look at people that they say, "Well, we're going to rearrange our SKU base," great idea. "Faster SKUs upfront, we've gotten rid of the procurement guy in the DC and we're no longer stocking by manufacturer. We're actually going to do velocity-based stocking." "Great." "And we're going to get 40% more throughput." "That's wonderful." "Your competition has just automated, and by the way, they're doing three to four times." Now, your CFO, CEO, if somebody finds out about this and say, "Why aren't you doing that? Why are we making incremental gains when our lunch is getting eaten by the competition?" Because this technology is out there.

What does automation offer? We can pick up, in some environments, six times the rate of manual systems. For example, on a manual system, like a unit-type system, you might get 70 lines per hour, you may even get 100 lines per hour in a very good manual system. Pretty well organized. I've seen environments, depending on pick profiles, get up to 120. We can accomplish that same thing in 500 picks an hour or greater with the right kind of automation and the right environment. That is a sea change in the distribution operation, because now I can go back and say "Here's the profitability I am bringing back to the company, to that bottom line." You can reclaim vast amounts of warehouse space, because now, my reach as a human being is not my limiting factor, which is a big deal.

Increased processing capacity. I would love to go to my VP of Sales and say, "You know what? We've just reduced our labor by 30%, and by the way, we can handle another 40% volume. Go sell your buns off. And by the way, I want some credit for that, because you could've never done that without me."

So these are the kinds of things that we look for in terms of getting the most from automation. When you're out here and you're seeing all this great technology and every salesperson out there says, "I've got this system for you," understand that it's really based around your specific inventory and order profiles. Don't get caught

up in the hype that the big jungle company does this, so that means it's good for everybody, because it's not true. Volumes are specific. Items are specific. Sizing, orders profiles are very, very specific to that automation. You have to know that. Go into this with your eyes open. Understand your order profiles, your cube analysis. Understand your 80-20, and within the 80-20, the 80-20 within the 80-20. Understand what's the difference between the D and an E. This is a big one. Develop your strategic long-term goal. In other words, sit down with a white sheet of paper in your distribution center and say, "This is what I want my future to be across the board." Drop it in. No price tag. Just "This is what I would do if it were me and I was starting with a blank sheet of paper," and then start phasing the processes in. This will prevent you from making mistakes, building systems, having to tear them down later, to move them, to bring something else in. It's a strategic vision of where you want to go. It also highlights which things can work best as a phased implementation.

I understand that Big Bang is very sexy in a Greenfield site, that's kind of a nice way to go, most of us will never have that opportunity or when it comes, it's a once-in-a-lifetime thing. In the meantime, we're retrofitting real live distribution centers that don't have a month to shut down. So your strategic vision has to be very clear.

Some real-world examples. London Drugs, pharmaceutical distributor, basic carousel operation. 400% increase in productivity. Doubled their SKU count. Because they're picking to light, improved accuracy, and reduced shipping cost because of all the multiple shipments they were having. So if you're going to say you doubled your productivity, you're going against somebody like this, 400% productivity increase. Doubling your productivity can get you fired every time.

Perfume and Cosmetics. 300% productivity increase, saved 80% of their floor space in vertical cube. They actually have a distribution center that they built for 250,000 square feet. They're using less than 125,000 square feet of it. ROI in labor in 18 months. They took two distribution centers and merged them to one, two disparate centers.

Here's a Lear assembly facility. 1,000 seats per day, 300% productivity increase, 100% accuracy, 100% on-time delivery, under two hours, and anybody that has dealt with automotive knows that it costs a lot of money to shut an automotive plant down.

CAT Distribution Parts. 344% productivity increase, business grew 32% within that existing facility, and their accuracy was increased to over 99%. I would love to find out what that point was. Remember our original slides.

So remember, simply ramping up your productivity is not enough. You are falling behind by making incremental gains. You must start really thinking in terms of what is possible within your environment. Strive for remarkable results. Don't think that 50% labor reduction is outlandish or that increasing my order volume within the same facility by 100% is outlandish. It's there. You just need to understand what rocks to turn over. Think of "what terms of what profit have I added to the bottom line." That will get you to move into larger projects. The more you can justify in terms of financial terms what profitability is – I stood up in front of board of directors. When I start talking profitability to investors from a DC, that's a whole different conversation than saying, "Well, we increased the accuracy by 0.2%." "No, I made you \$100 million. I'm a hero."

Understand what is truly possible and don't get complacent and let simple productivity gains go. I'm not saying bypass those, but have a vision. Understand what is possible. Become educated. Partner with somebody that understands the industry if you need the help, but understand what is possible and where to get to, because just doubling your productivity will get your fired in light of your competition.

About the Presenter:

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Bob has decades of experience having been VP of warehousing, operations and distribution for multiple major organizations in his career prior to working for ISD.

Integrated Systems Design - ISD is a leading consultant, designer, manufacturer and integrator for order picking, order packaging, order shipping and manufacturing assembly operations for warehousing, manufacturing, distributing and retailing organizations in North America.

ISD systems are renowned for their tremendous value, reliability and ease of maintenance. Systems are designed using technologies from the leading material handling manufacturers of the world. Solutions designed by ISD focus on

providing space savings, increased productivity, reduced labor, enhanced accuracy and system flexibility to change as an operation's activities change over time. For more information contact ISD at 248-668-8260 or email info@isddd.com.