



The Warehouse of the Future Powered by Unified Data (And a Full View of the Dominos)

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When stacking dominos in a row, the most important thing to keep in mind is that one mistake will quickly become a series of mistakes. If you've got 1,000 dominos lined up, you can't just accidentally knock one over.

When one falls, they all fall.

Running a warehouse is like that too, but it's not all lined up so visibly as a row of dominos. When something happens in material handling, it will affect labor. When customer service makes a decision about how quickly to ship a product, it will affect transportation management.

The problem with this is that these kinds of things happen all day long, and no one is really aware of the domino effect. That's because warehouse operations are not

inherently set up to make these effects so visible and obvious. And most people running their own departments are worried about what's in front of them – not what's in front of the other person.

But thankfully, technology is catching up. Indeed, with the right technology to manage and unify data, the warehouse of the future will not only be able to see the big picture of what's happening in real time, it will be able to anticipate and even simulate the likely outcomes of future moves.

This is critical. Because the warehouse of the future has to be a seamless operation in which all the parts pull in the same direction and complement each other. For a variety of reasons, it's hard to find warehouses that work like this today.

Every Silo for Itself

Consider the nature of the technologies that help manage a warehouse. As strange as it is to think that technology platforms could have their own territorial agendas, they actually can be quite parochial.

The transportation system has an agenda to limit the cost of transport, which means it will always try to ensure full truckloads whenever possible so each run maximizes cost-efficiency. That makes sense if transportation costs are all that matters.

The customer service system, on the other hand, is designed to maximize levels of customer service, which means getting items out the door and into the hands of customers as quickly as possible. Customer service doesn't care what each run costs. Customer service cares about smiling customers. If a truck has to make a delivery run with only one item in order to maximize customer satisfaction, the customer service system will have a built-in agenda to see that happen.

So transportation and customer service pull against each other.

But there's more.

The inventory management system is always trying to keep inventory levels as low as possible, because inventory is an inherent

cost. That, like the others, makes sense in isolation. But customer service would favor more inventory to ensure the items customers want are available.

So who's right?

Everyone. And no one.

If you hold more inventory, you can service customers better but it will cost you a ton of money.

If you maximize your transportation spend by waiting until you run full truckloads, you'll save money on transport but you'll hold up orders to the customer – which might prompt customers to seek different product with more efficient distribution services the next time around.

If you minimize inventory to the point where you're running a just-in-time shop, you can bask in the savings until the first time you have to explain to a customer why you don't have the item they want.

Each silo has legitimate objectives. But if they're all pursued in isolation, they don't advance the larger success of the warehouse operation because each one is grabbing its own success at the expense of the others.

In a [recent blog post](#), WiSys offered some other problems data silos present for warehouse operators:

When there is a silo, the executives of a business are barred from more accurate forecasting and planning. Instead, they have to gather and compare the information from all sources rather than seeing it all in one place.

Here are some of the ways a data silo can harm a business:



Incomplete data. Since silos keep data away from those without access to them, it means that any decisions and strategies you develop are based on incomplete data. This derails your efforts and can make a business move much more slowly.



Less collaboration between departments or locations. When data sets are isolated, there is less opportunity for sharing between departments. In turn, having people work together will be less efficient.



Inconsistencies in reports. When data silos exist, they are not updated alongside other systems. Thus, the quality of the data disintegrates, leaving you with less accurate reports and an increased potential for errors.



Duplicated processes and platforms. Since data silos often mean more than the necessary number of databases or services, it can make your IT services far more costly. Data silos also mean duplicated information present on Excel spreadsheets or in online tools.



Compliance and security issues. When data is stored in more than one place, it increases the data security risks. Also, since it will be difficult to tell which version of the data is most up to date or correct, this could make validation and compliance far more complicated.

WiSys is correct in assessing the problems but it doesn't go far enough in advocating the right solution. It encourages warehouse operators to invest in warehouse management systems, which offer many benefits but do not give you a way to see all your data in one place – and in an actionable manner.

Best of Breed technology platforms may not talk to each other very well but they do good work in isolation. The trick is to get the most out of those systems while still bringing the data together to present a single version of the truth – one that you can act on.

One Version of the Truth

Each silo's data may be accurate within its own context. But it's not entirely accurate because it's presented strictly in isolation. It doesn't take into account how the activity in its own section of the warehouse affects what happens everywhere else.

It acts as if one domino in a line can fall down while all the others keep standing.

The inventory system can tell you the state of the inventory.

The labor management system can tell you who's working where and on what.

The order-batching system can tell you the state of the orders.

The transportation management system can tell you which products have been shipped and which are in the queue.

The customer service system can tell you who's asking for what and how the system is responding.

But each of those dominos is tipping the others in ways that current Best of Breed platforms can't express because they don't inherently talk to each other.



That's why we created AgiSight. It's an end-to-end aggregation of the data that not only shows you everything that's happening in the warehouse, it also shows you how everything is affecting everything else.

The result is one central dashboard that not only shows you the big picture, but also shows you the entire lifecycle of each order as it moves through the warehouse.

Consider what a step forward this is from current standards.

If your order management system doesn't show you the complete lifecycle of all orders that impact your workforce, you don't have enough information to make good decisions on how, where and when to deploy your people.

The warehouse management system only knows what it can see, but the orders can be fully or partially picked from an automated storage and retrieval system (or ASRS) or autonomous robots. Orders are black-boxed until they're picked and retrieved, and the operator is almost certainly having to deal with multiple systems just to track one order – let alone several at one time.

It's just as inefficient when it comes to the workforce.

If the labor management system is tracking people's activities while the order management system is tracking the movement of the goods, and they're not talking to each other, how is an operator supposed to understand whether the two are working in harmony and producing the best outcomes?

AgiSight presents all of this data in one place, with every impact of any given system accounted for with respect to all the others.

Users of our system have told us they saw things within the first few days of using AgiSight that truly opened their eyes to the full workings of their warehouse operations. It's not that they didn't know what was going on. They're experienced professionals and they understand how things work in a warehouse.

But when you can watch in real time as A impacts B, which nudges C, which alters the situation with D, E and F . . . you really get a new perspective on things.

Service levels, cost and inventory are all inherently different goals that need to be managed by a single decision-maker, each with the impacts of the other in mind.

AgiSight puts that control in the hands of every warehouse operator in the industry.



What's Next? Simulated Decision Tests

Actionable Data

Future upgrades to AgiSight will do even more than show you all the data in a clear, unified manner. It will also give you the opportunity to use the data in running simulations to see how decisions under consideration might play out. This is good news.

This is the next step in actionable data.

Let's say you're considering the automation of your picking system and you want to know what kind of ROI to expect in terms of velocity, accuracy and redeployment of labor. Let's say you'd also like to know how the ROI level might

change depending on the level of investment you make in the automation.

We're getting close to a new phase of AgiSight that will allow you to run those simulations so you can see the likely impacts.

This is critical because, just like with that row of dominos, everything that happens in a warehouse affects everything else. It's not just a matter of having a robot do the work a human used to do and then comparing the cost of the robot to the cost of the human. It sets so many things in motion, including:



Upticks in accuracy

A large warehouse operator recently told us that automation had increased picking accuracy from 98.5 percent to 99.9999 percent. That may not sound like much until you realize it's a matter of 30 million items that are no longer being sent out with errors.



Greater worker flexibility

When Worker A doesn't have to sit in Location Z all day long, warehouse operators have much more flexibility to deploy people in the most efficient ways. What is the reward from that?



Improved safety

Another warehouse operator recently told us that, after making a significant investment in robotics technology for picking, their facility has gone 780 days without a safety incident. How much will that save the company? And how much will it benefit the company by increasing employee retention when work is safer and less physically taxing?



Savings on other equipment costs

More automation means less need for forklifts and other material handling equipment. What is the savings from that?

AgiSight shows you the data on all this today.

When you can run simulations to calculate what will happen in these areas as a result of investments under consideration, it will empower warehouse operators to obtain a clear and detailed sense of what to expect from decisions they are pondering.

Best of all, none of these data points will be presented in isolation. AgiSight knows that everything affects everything else and takes all of it into account when presenting you with data – and soon, with simulations.

Data Everywhere, And Now Finally Talking

As technology gets more advanced, it always produces more data, which is both a blessing and a problem.

A plethora of data can actually be more trouble than it's worth if you can't bring it all together and manage your way through it to see what it all means.

Imagine being a student in school and being told to write a 300-word essay, then being handed 15 different books and told to reference them. Where would you even start? What if the books contain chapter after chapter of information that has nothing to do with the assignment, but the only way you can know that for sure is to read all of them?

This doesn't sound like a very efficient way to do a report. But many warehouse operators face challenges like that if they have any hope of getting the most value out of their data. And most don't even bother.

But your data is inherently valuable if you have a way to manage it with the fullness of your warehouse operation in mind. That's why we created AgiSight, so warehouse operators would have a technology tool that brings it all together for them.



The Dominos Tumble

We live in an interconnected world, and everything in some way affects everything else. It's true in nature. It's true in economics. It's true in sports. It's true in relationships.

And it's certainly true in a warehouse. Any capable warehouse operator understands the interconnectivity between the various functions of the center.

Until now, no one has given warehouse operators a way to see it so clearly, so completely, in real-time, and in an actionable form.

Even when your warehouse operation is working exactly as it should, everything still affects everything else. The domino principle still applies. And when you can see the whole thing all at once – clearly and accurately – it's amazing and empowering. Are you ready for a full view of this like you've never had before?

Let's talk about that today. Our contact information is below.





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