AgiSight

How a Unified Data Model Can Deliver an Optimized Distribution Network

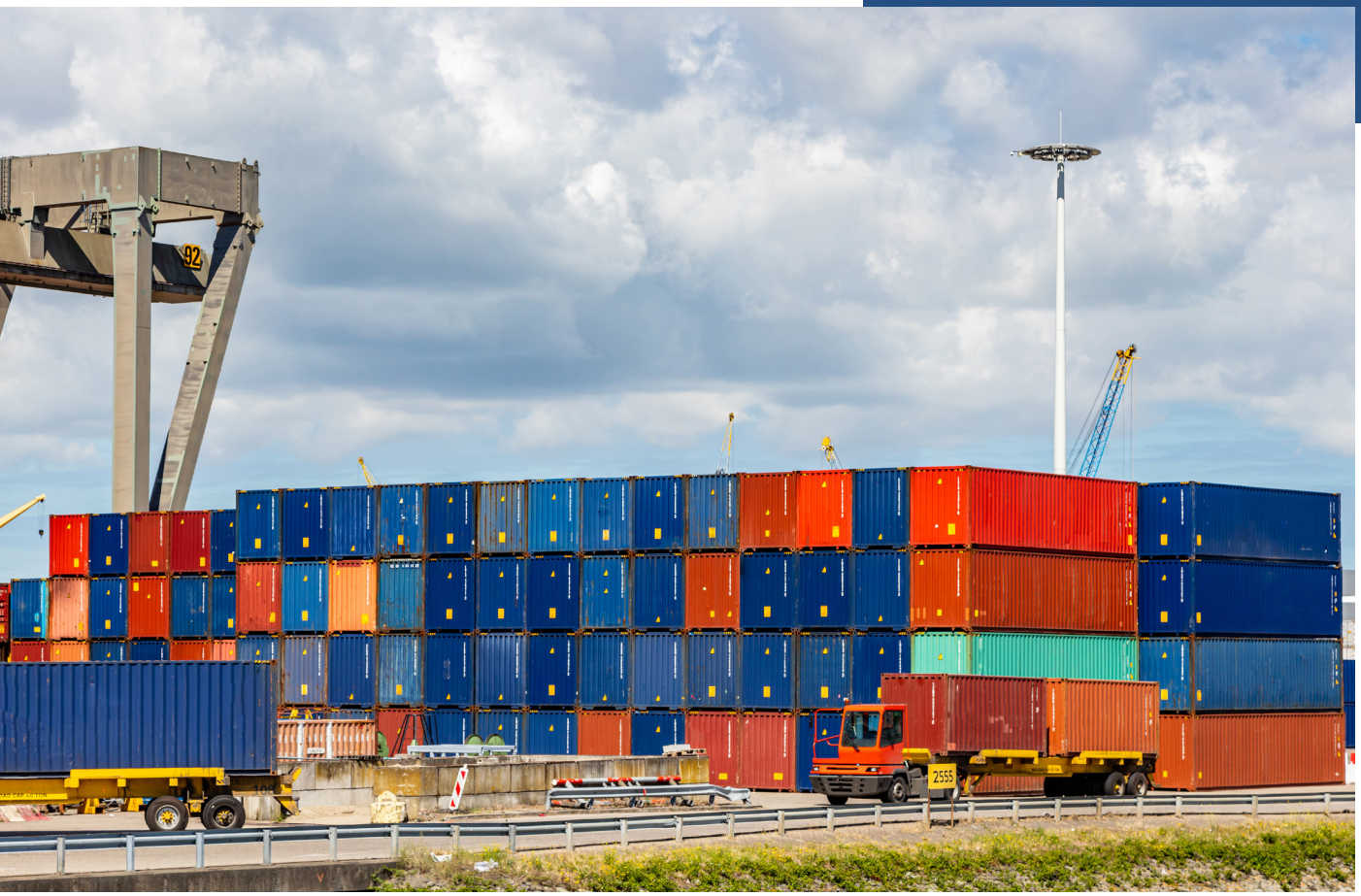
How a Unified Data Model Can Deliver an Optimized Distribution Network

You want to pull data from your various management systems to help you make decisions about how to deploy the resources in your distribution network. That's the right idea.

Then you start looking at the condition of your data, and you start to wonder if you'd be better off throwing darts at a dartboard to make the decisions.

It doesn't have to be that way. Solid data can provide you with the insights and decision-making support you need to optimize your network of distribution centers.

The key is a unified data model that's consistent, repeatable and easily accessed. The problem is that too many players in the supply chain industry don't have that and don't know how to get it.



The Careful Precision of the Ideal Distribution Network

Some companies believe there is no better approach than to rely on a central distribution center where everything is under tight controls. Then there are companies who believe that a series of smaller DCs that can ship quickly is the best way to go.

So how does a company decide where to put their primary distribution center? Do you focus on proximity to customers? Access to the best workforce? Relationships with the strongest transportation partners?

Where do you put your secondary centers? Do you look first at labor costs? Do you try to anticipate what the demands of your customers will be in the coming years?

If you're anticipating growth, how do you account for what's to come when you decide where to locate the centers, and how to make the best use of each one in your continued operations?

High Stakes

Network optimization isn't a single decision you make at one point in time. It's a continued series of moves, not only to determine where you should site your distribution centers, but how best to utilize each one for your ongoing needs.

A lot is at stake every time you make one of these choices. If you choose to ship from the wrong location to the wrong destination, or you miscalculate your truckloads, or you misallocate your labor resources, you could be hurting your profitability in a death-of-a-thousand-cuts sort of way.

In other words, no network is really optimized if you're not getting the decisions right. And the hardest part of network optimization is getting the right data and being able to apply it to help you make the best decisions.

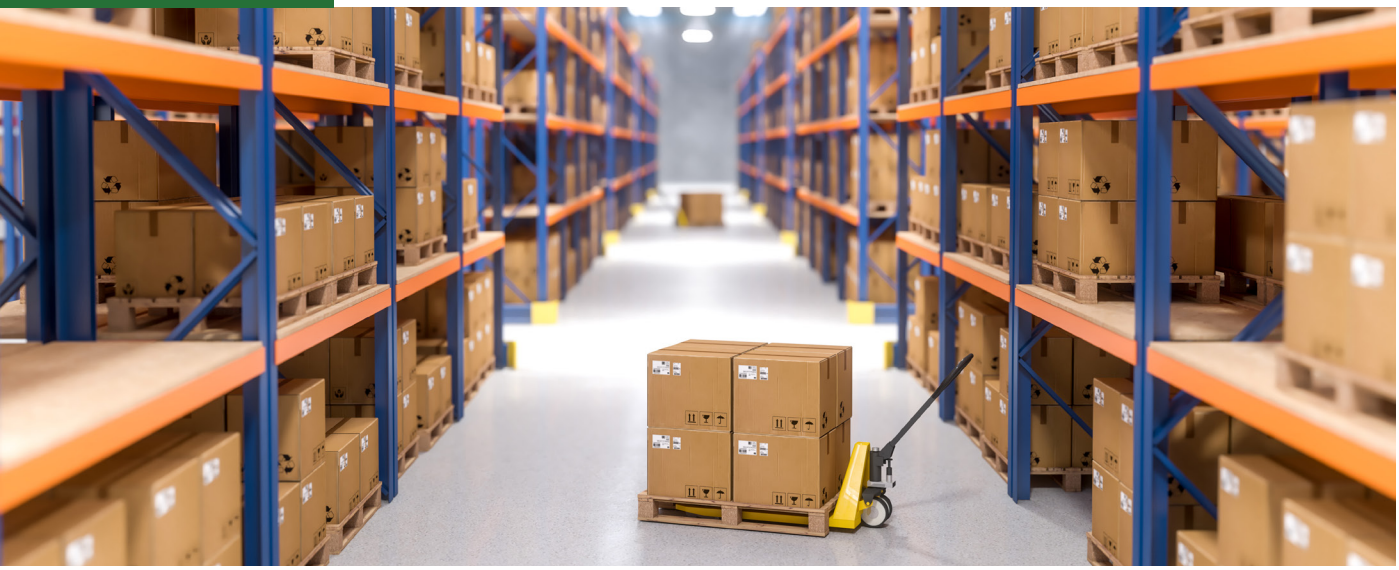
Consider the example of a major chain grocer that's been operating under a model that ships out high volumes of smaller shipments from a network of smaller warehouses. They ship cleaning supplies from one center, produce from another, beverages from another, and so on.

Then management starts wondering: Would it make more sense to utilize one large warehouse, receive all goods at that central location, and then ship from there to the retail stores?

Would it result in more efficiency? Lower costs? Higher margins? Better customer satisfaction?

These are the right questions. And it's critical that the company answer them with reliable data that won't become irrelevant over time.

This is where a lot of companies get in trouble.



Cobbled Together
From Everywhere

If you have a platform like our AgiSight (not that there are other platforms like it), you've got all your data in one place, unified and harmonized, and able to be plugged into simulation models that will be reliable and consistent over time.

If you don't have AgiSight, you likely have your data in 10 or more silos that don't connect to each other, don't talk to each other and don't account for each other. You've got a lot of work ahead of you just to bring all that data together and understand what it means – let alone deploy it to help you make decisions about something like network optimization.

When data models come from a starting point like this, they can be very haphazard. Here's what often happens:

First, someone has to pull the data from as many different sources as the system presents. Most likely, there is disparate data sitting in the warehouse management system, the transportation management system, the labor management system, the inventory system, the order-batching system and the customer service platform. You might also have an ERP system that's got entirely separate data of its own.

The poor soul whose job it is to pull all this together will find a lot of clashes. Not all of the platforms hosting the data use the same terms – even if they mean the same things. Not all of it is updated to the same dates and times. Different kinds of measurements might be used.

And yet somehow, out of all this, someone has to pull together the best information. This quickly becomes an ad hoc process. Instead of depending on the database, the project manager will get an estimate on fixed costs from someone in finance. That estimate will get plugged into the model.

Several opinions from warehouse managers will become the basis for an estimate of labor needs and costs.

Transportation costs? A quick review of a few weeks' worth of reports turns into a data model that's supposed to cover the next 10 years. Material handling costs? Ask Gus in the warehouse. He knows about stuff like that. Bob from marketing says it's $5 per piece to ship this particular product out of the facility. Bob's pretty sharp. Let's go with that.

Give credit to the project manager who's pulling all this together. He or she is looking to the best people in the company – people who deal with this information day in and day out – and assembling a report by investing as much thought and sweat equity as possible.

Slowly but surely, the project manager does the impossible and cobbles together a report that management hopes it can use to make the decision on whether to alter the makeup of the distribution network.

And maybe, just maybe, against all odds, the model might be halfway decent.

But there's still a very large problem, even if you leave aside the time and effort it took to pull this one together.

Let's say two years go by. The company has made its decision and now it wants to compare the data from two years ago to its current performance and see if the goals are being met. Was this a good decision or not? Comparing the numbers should tell you.

But you can't do that.

Why? Because the project manager who cobbled together the original model has left the company. No one else has the slightest idea how the original model was constructed. (And truth be told, even if the original project manager was still there, he or she probably wouldn't remember exactly how it was done.)

So what options does the company have?

It can study the original data model and try its best to ascertain how it was put together, then assign some new project manager to do everything possible to replicate the original. That means more hours spent pulling data from various silos, harmonizing the numbers and the terminology, and then filling in the gaps by asking people in the trenches.

It also means trying to work out as best you can which questions the original data model was trying to answer.

What you can't do is what you really need to do: Repeat the same process using the same exact data from the same source, under the same parameters, analyzed in the same way, to see how today compares to two years ago. No matter what you do this time around, you really can't be sure the results are comparable.

So despite your best efforts, you really can't conclude anything from what you're about to do.

It doesn't need to be this way. And you can't afford to have it be this way when you're trying to work out something as high-stakes as your distribution network configuration. Indeed, the prospect of getting those decisions wrong because you trusted unreliable data is a nightmare for any company that relies on its supply chain.

AgiSight

A Better Way to Go

In order to access the data that will lead you to the right decision, you need:

Data that's all from one source and covers every question you need to answer

Data that's easy to plug into a question or a scenario

Data that's accurate in real time

Data that will update over time, using the same form and patterns, so you can compare apples to apples

Data you can use to compare different strategic directions

Having one data source that works the same way all the time eliminates the need to pull data together from various silos. It eliminates the need to harmonize data that uses divergent terms, formats and assumptions.

And of course, it eliminates the need to remember how you cobbled together that painstaking report two years ago. Or 20 years ago for that matter.

Just think what you could do with something like this, by which we mean, AgiSight – since it is the only something like this.

Consider a company that has 100,000 SKUs within 10 product families. The company is considering having some product families flow out of one distribution center, while others flow out of another. But company executives can't see the difference between certain product groups, and they're not sure how to do the aggregation to give them that full picture.

AgiSight brings all the data together in a data lake, and we can tell the data lake to aggregate it any way we want. We can start with 10 product groups, and if that doesn't produce the insight the company wants, we can expand it to 50 product groups. We can change the model any number of ways to see which approach is producing value and which ones are not.

We can do all that with the push of a button, which tells everything to recalculate.

Plug-In Scenarios

Let's say the company wants to implement a particular warehouse/distribution strategy, and it wants to see how that strategy would perform if the company grows 10 percent over that time. But that's just the start. Company executives also want to know how the strategy would hold over 15 percent growth. And over 20 percent growth.

With a unified data model that harmonizes all the inputs, you can run those scenarios and AgiSight will tell you the results to expect. You can then go back and ask the same questions using different assumptions. What if, instead of five distribution centers, you use 10? How would the company fare then under the 10 percent, 15 percent and 20 percent growth scenarios? AgiSight will have no trouble telling you.

Then, if you implement that strategy, you can go back to AgiSight at some point after implementation is complete and find out if the numbers you're producing are consistent with what the original model expected.

Now let's consider a different question: You've got a primary distribution center in Dallas, and you're considering starting a second one somewhere. But where?

What if you were to model scenarios in which you made this decision using only one criterion? First you model it using only labor costs. Then you run the model again using only transportation costs. Then you run it a third time using only inventory costs.

You can break it down further. AgiSight will tell you which of your employees are performing well and which ones aren't. You can apply an analysis of that information to see what type of worker performance you would need in the new DC.

So what happens if the labor-cost model suggests you go to Indianapolis, while the transportation-cost model says you should go to Chicago and the inventory cost model argues for Detroit?

Now you could run another scenario combining all three, to see which one produces the best outcome overall. Maybe this makes your choice clear. Or maybe it tells you other things you didn't even expect, like that you should move some inventory to a different site.

Of course, you're the one who's going to decide your highest priority. So in the end, the data analysis only helps you understand the likely outcomes of the various decisions you could make.

Any way you look at it, a unified data model puts you in the best possible position to optimize your distribution network.

AgiSight

Better Data,
A Healthier Supply Chain Industry

Unified data is critical in the supply chain industry. It's the most powerful tool supply chain companies can deploy to help them design optimal distribution networks.

But far too many companies are making critical decisions like these without unified data models, and without the ability to apply these same models consistently over time.

That gets us wondering: How much stronger would the entire supply chain industry be if the AgiSight model became the standard method of unifying, analyzing and applying data to high-stakes business decisions?

We created AgiSight because we knew what a difference it would make for the companies who decided to deploy it. We're already seeing that in spades with our current clients.

When we think about an entire supply chain industry taking advantage of a tool this powerful, and what that would mean for the performance of the industry as a whole, it gets us excited.

If it gets you just as excited, contact us using the information below.

AgiSight

Contact Details

Reed Stepleman
VP, Solutions

(843) 781-2985

rstepleman@agillitics.com

Tim Judge
CEO

(678) 469-1460

tjudge@agillitics.com