

Volume 4

TRANSVOYANT

# Digital Supply Chain Education Series



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## How Digital Supply Chains Enhance the Customer Experience

Have you ever had an urgent deliverable or complex task on deadline that required an input from someone else to complete? There's nothing more nerve racking than waiting for an input and having no idea when it will get to you. Of course, this is the same feeling your customers have while waiting for your shipments to reach them.

Is the shipment going to arrive on time? Is it going to contain all the line items ordered? Will there be any damage? Is it the right size or color?

Digital supply chains alleviate much of this anxiety, and win you major points in the eyes of your customers. Digital supply chains provide customers with real-time visibility of their order status and location. Real-time visibility not just from the point at which orders get on a truck, railcar, ocean vessel or airplane bound

for your customer, but into your warehouse, manufacturing facility or even supplier location.

Historically, this has been a near impossibility because most manufacturers, distributors and brands haven't had a central, global, real-time view of their inventory, let alone a means to continually match their dynamic supply to dynamic orders and expose real-time insights to customers. A view that includes both their inventory and inventory they don't own.

I can feel the collective cringe from supply chain professionals at the notion of providing customers real-time visibility of their orders all the way back to components at suppliers, work-in-process in manufacturing, or inventory within a warehouse.

How can a make-to-order manufacturer provide its customers real-time visibility of their orders, all the way back to components inbound from suppliers? How can a make-to-stock manufacturer provide real-time visibility of orders back to stock within their warehouse?

Truly digital supply chains provide real-time visibility of every component part, raw material, work-in-process, and finished good, no matter where it is within an organization's extended supply chain. This visibility extends back to orders placed on suppliers, components in transit across various transportation modes, within dock yards and at airports, in manufacturing facilities as WIP and finished goods, and in-transit to customers.

This visibility is made possible by ingesting and analyzing live data. In some cases, the data comes from sensors. Sensors are as diverse as satellite or terrestrial network enabled devices placed in boxes or on a palette, process control devices on a manufacturing line, a radar installation tracking aircraft, a telematics device in a truck, a barcode scanner or a human counting foot and railcar traffic on their smart phone.

In other cases, the live data comes from ERP or planning systems. It includes orders placed on suppliers, orders placed by customers, inventory within warehouses, manufacturing plans, demand plans, etc.

Data even comes by inference or is derived from behavior models and machine learning algorithms. An example includes the learned behavior of suppliers, carriers, ports, borders and manufacturing facilities under varying conditions,

inclusive of throughput, lead times, quality and variability.

By merging and analyzing all these data inputs, digital supply chains not only provide customers with real-time visibility of their orders in process, but also predicted times of completion at each stage, node and pulse point within the supply chain...all the way through to predicted times of arrival at delivery. That is the ultimate value of a digital supply chain. It's not the visibility per-se, it's reducing variability and improving predictability.

Why does the notion of exposing the inner-workings of your supply chain to customers drive fear into the hearts of many supply chain professionals? Because in some cases, it's exposing dirty laundry.

If I expose the real-time performance and behavior of my supply chain to my customers, they'll see when my suppliers can't fulfil my component orders on time; they'll see when their orders are sitting in the dock yard for days, waiting to be picked up; they'll see my manufacturing delays; they'll know that my shipment will be two days late arriving at their door a week before it happens!

To those fears, I cry, yes...indeed! And why are those bad outcomes? Doesn't your customer want to know when their shipment will be late a week in advance? Isn't that providing them a higher level of service than having them find out their order isn't going to arrive on time the day it doesn't show up as promised? Isn't it better for them to know exactly when it will arrive, if even two days after it was originally promised, then to be wondering?

Wondering frequently leads to ghost demand signals where customers or trading partners put up "extra" orders and ask for "expediting" across the entire supply chain "just in case". Not giving live supply chain visibility, status and performance to your customers and partners makes your problems exponentially worse by adding more demand and supply variability across the entire network!

Isn't it better to pull the blanket back from your own supply chain and discover exactly where things are going wrong and why? This is what digital supply chains do. They expose the truth. And what's more, they do something about it.

By watching and modeling the behavior of your supply chain, machine learning algorithms and artificial intelligence begin to prescribe corrective actions. When a digital supply chain solution sees that certain carriers, routes or suppliers within your supply chain are consistently outperforming others, it recommends the best alternatives. Digital supply chains calculate dynamic lead times and throughput which informs predicted times of arrival and inventory levels.

While it may be scary to expose the inner workings of your supply chains to your customers, it's a fear we all must overcome. It's a notion that is coming quickly, and can't be avoided. Embrace it. Don't stand by while your competitors become fully transparent with their customers, their trading partners and themselves. These competitors are already displacing those who cannot, or will not, embrace the digital supply chain.

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