Supply Chain 2020

Steve Banker ,

 CONTRIBUTOR

I cover logistics and supply chain management.

Oracle is working on an eBook preliminarily called *Supply Chain 2020: Top Influencers and Experts Reveal Their Secrets to Operational Success*. I'm one of the subject matter experts they asked to participate.

Below you can see the questions they asked me, and the answers I provided.

What are the top challenges supply chain leaders and practitioners are facing today? Are they primarily around the rising complexity of supply chain operations, keeping pace with consumer demands, or technology -- or a combination of all three; what about any other thoughts?

The answer to all is "yes." And all of them are related. The place where increasing complexity is most apparent is the rise of omni-channel, the attempt to reach customers across all channels in a uniform manner. This is most obvious in the retail sector, where the "brick and mortar" retailers have been losing market share steadily to ecommerce players. The retailers are attempting to turn their stores into resources by making them places where inventory can be shipped to customers, goods may be picked up, or returns made.

But it is not just retail, consumer goods companies are being asked to drop ship goods directly to consumers by their retail partners, but make the delivery appear like it came from a retailer. The growth sector of the third party logistics (3PL) industry is ecommerce warehousing. But these warehouses are more complex and costly to run. eCommerce also increases returns, which are also costly and difficult to handle.

eCommerce also increases both consumer and even business-to-business expectations for receiving goods quickly, for having good visibility into shipment statuses, and for handling returns promptly.

And finally engaging in omni-channel efficiently and profitably requires new technologies. The most costly one, the application that has been most difficult to implement, and the one companies seem least satisfied with, is distributed order management (DOM). A DOM must capture inventory statuses across the different inventory locations; allocate inventory to different customers, products, and channels based on a wide variety of rules; and then track the status of orders across their lifecycle. The biggest problem appears to be that many DOMs don't have sufficient flexibility and configurability to deal with the plethora of product flow paths to the customer.

But the other problem is getting good inventory accuracy at the store level; this inventory accuracy could be very high if companies implemented less complex Warehouse Management solutions to manage inventory in the stores. The implementation of a light warehouse management solution is not difficult. The cultural barriers are huge though. Store manager will always be more focused on customer facing activities than operational ones.

Are there any common flaws in supply chain operations that are ultimately plaguing organizations? How do these flaws span across people, processes and technology and how do they limit capabilities and the ability to transform the business operating model?

When supply chain management was created, and the term coined, the central concept was that optimizing the activities in one functional area, for example manufacturing, is suboptimal if it causes the business as a whole function sub-optimally. So long production runs cut costs in manufacturing, but can lead to very high inventory levels and inventory obsolescence. This problem has never gone away. Indeed, global supply chains and increased reliance on key partners, is making collaboration more difficult. Integrated business planning (IBP), also called sales & operations planning, was designed to help cure this ill, at least internally. But many companies still don't do IBP, and those that do are often at a low level of maturity.

What role do industry disruptors like Amazon play in changing the rules and realities of supply chain operations? How will IoT, drones, "flying warehouses" and other trends impact the future of supply chain?

Amazon is the key driver of all the omni-channel initiatives. Their impact is huge.

UBER, and whether UBER of freight solutions can disrupt the carrier industry the way it has disrupted the taxi industry is worth monitoring. I see an impact. But UBER of freight solutions are execution solutions; they don't offer all the optimization and savings opportunities a full blow transportation management system does. So I don't see a fundamental rearranging of the freight industry based on these emerging solutions.

IoT in logistics is nothing new. Warehouse management systems use scanners, a form of sensor information. The use of telematics and GPS to monitor transportation fleets is nothing new. But IoT investments are leading to innovations. IoT generates Big Data, and Big Data analytics, artificial intelligence, and machine learning technologies are advancing very quickly.

Drones and flying warehouses are "pie in the sky." I don't take them seriously.

Robotics I take very, very seriously. A new generation of [mobile robots](#) in the warehouse has arrived that is a form of flexible, scalable automation with a much better ROI than traditional high throughput, material handling. This technology could wipe out as many jobs as driverless trucks over the next 15 to 20 years.

In light of these looming trends, what can supply chain practitioners do to keep pace? Will the cloud help them get closer to being more agile and flexible so they can better future-proof their supply chains? What other technologies, tactics and best practices are imperative for success?

Future proofing your supply chain is not just about technology. It is about people, process, and technology. On the people front, companies need to hire and groom good leaders, people who embrace change. Top down, hierarchical management will not work with millennials.

From a process perspective, getting to higher levels of integrated business planning maturity is key. And thoughtful collaboration with key partners, whether that occurs within the IBP process or is external to it, also needs to be embraced.

From a technology perspective, the pace of change will not slow down. Flexible solutions, solutions that allow companies to change their processes on an ongoing basis, are critical. Customization of applications kills flexibility. Public cloud solutions do not permit customization. Providers of private cloud solutions that work hard to discourage customization, should also be embraced.

In conclusion, I'm looking forward to the publication of the book. I'm interested to see who else they asked to participate, and the answers that they provided.