

A NEW MODEL FOR RETAILER-SUPPLIER COLLABORATION

By Mike Doherty

Leveraging a profound truth and the power of silence to improve collaboration and supply chain performance.

In the mid-to-late 1990s, Walmart led the pioneering of collaborative planning, forecasting, and replenishment (CPFR), which allowed the retailer to improve forecast accuracy and eliminate uncertainty in purchasing and production plans, along with the costs created by these uncertainties. Walmart found that the more accurate its forecasts, the more accurate it could be at getting the right merchandise to the right store at the right time. It collaborated with specific suppliers by sharing promotion plans and changes in distribution to make forecasts even more accurate. In turn, it developed an agreed-upon forecast that the supplier could use to better fill expected orders.



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The first CPFR pilot started in 1996 when Walmart collaborated with Warner-Lambert, focusing on the Listerine category of products. In conducting the pilot, Walmart and Warner-Lambert independently calculated the demand they expected for a period of six months into the future. They exchanged forecast numbers over the Internet, using special software. If the numbers were different, they used the link to exchange more data and eventually converged on a single forecast.

The pilot proved to be very successful, helping to confirm the potential promise of improved collaboration. Listerine sales went up, in-stocks were much higher, fill rates were at acceptable levels, and ecosystem inventories were reduced.

While this early pilot helped cement the benefits of collaboration, over the next several years and decades, CPFR failed to scale and realize its potential despite several success stories. This was largely because of two issues that plagued the approach.

First, in the model, both the retailer and the supplier were deriving an independent forecast of essentially supplier orders. That often resulted in a large discrepancy between each entity's forecast. Then, as a result, considerable time and effort were required from both entities to reconcile the differences, reforecast, collaborate again, and eventually come to a consensus on a shared forecast of supplier orders.

However, as everyone knows in retail, things can change quickly based on the latest sales information and newly minted strategies and tactics that have been approved by the retail merchandising team to hopefully drive sales. As a result, the independent forecasts for the rolling period of six months

quickly were out of an acceptable tolerance and even more collaboration was needed to bring them in line.

Secondly, having two independent forecasts was too much work to manage—especially true when you consider that medium to large retailers have hundreds of key suppliers and thousands overall. As a result, CPFR could not scale and has, to date, stumbled to deliver on its promise.

CPFR did, however, lay the groundwork and ideas that collaboration between retailer and supplier was necessary to improve in-stocks, inventory performance and reduce costs. The underlying principle of working together endures to this day. What's needed is a better model for collaboration.

With that, we turn the clocks back and build on a decades-old profound truth about supply chain planning and leverage the power of silence to outline an improved, scalable collaborative model.

A profound truth

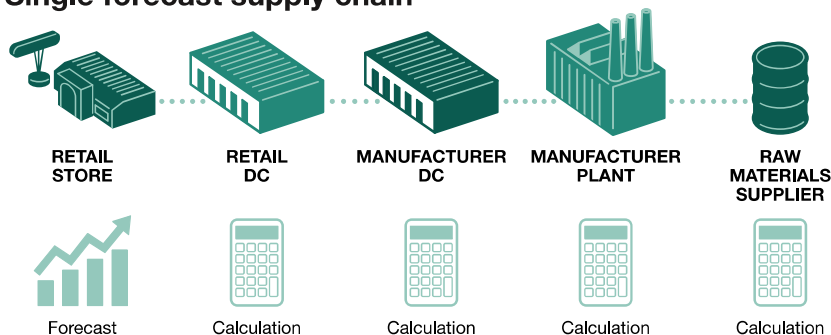
Almost 50 years ago, at the 1975 APICS conference in San Diego, Calif., Dr. Joseph Orlicky (the pioneer of MRP—material requirements planning) made a profound statement regarding supply chain planning. Having just learned of Andre Martin's idea to calculate factory demand from the distribution center requirements, he told Andre that his idea was good because you should “never forecast what you can calculate.”

Leveraging this profound truth is the key to improved collaboration, addressing the shortcomings of CPFR, and importantly, finally making a significant dent in stockouts, overstocks, and the bullwhip effect.

The retail/CPG supply chain should be driven only by a forecast of consumer demand—time-phased by item/selling location (e.g., store, web, etc.). The consumer demand forecast should then be used to calculate a series of integrated, time-phased inventory flow plans (for a 52+ week planning horizon) from the store to the supplier factory—often referred to as flowcasting—as depicted in Figure 1.

FIGURE 1

Single forecast supply chain



Source: Authors

The entire retail supply chain is resynchronized daily, based on yesterday's sales and inventory changes. As inventory at the store level increases or decreases above or below a set level, flowcasting automatically recommends the adjustment of the flow and level of inventory across the distribution centers (DCs) and factories that service the store. The result is a balanced trading network, the elimination of shortages, increased sales, reductions in supply chain operating costs, and increased inventory velocity.

TABLE 1
Flowcasting

ITEM	DESCRIPTION	PART #	SHIP TO	Planned shipments (units)				
				WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 52
12345	Item1	Part1	DC1			1000	500	1000
12346	Item2	Part2	DC1			250	250	250
12347	Item3	Part3	DC1		400		400	400
12348	Item4	Part4	DC1		500	500	500	500

Source: Authors

A new kind of visibility

This business process provides the retail/CPG supply chain with a new kind of visibility—a forward-looking, time-phased projection of demand, supply, and inventories by item/location for all partners, from factories to final points of sale. As a result, sales forecasting and all other forecasting activities are eliminated at every node of the retail supply chain except the only place where it matters: the final point of sale.

The result is the creation of a model of the business and a synchronized retail supply chain aligned daily to consumer sales. This process, upon reaching critical mass, enables manufacturers and their trading partners to transition from a make-to-stock environment to a make-to-order environment.

The implications for retail/CPG supply chains are significant. Flowcasting not only eliminates the need for suppliers to forecast their retail trading partners' needs, but it ensures that the entire retail supply chain will be refreshed and automatically resynchronized daily. Daily replanning and resynchronizing the entire supply chain is the key to being in stock.

In addition, the integrated supply chain based on sharing projected shipments from retailer to supplier allows for a new collaborative planning model. An approach that builds on concepts and principles that have been successfully deployed in manufacturing for decades.

Supplier scheduling

The concept of supplier scheduling has been standard

practice in manufacturing for decades—that is, sharing a projection of future required product needs to help a manufacturer's suppliers plan and deliver. Flowcasting allows retailers and their manufacturing partners to leverage the same concept, as outlined in Table 1.

The planned shipments are the demand plan for the supplier for this retail customer—indicating how many units of each product will need to be shipped, when and where—in this example to the retailer DC. Given the long-term horizon of the projections of planned shipments (i.e., supplier schedule) this eliminates the need for the supplier to forecast demand for this customer. The schedule also allows the retailer and supplier to establish sensible terms of trade, since suppliers always have an up-to-date, forward-looking view of future demand with which they can use to plan production.

The projected shipments have all retail, supply chain and inventory flow constraints/rules incorporated, specific to each retail customer. As an example, if the retailer was experiencing increased sales or had decided to change the shelf inventory requirements at a future date, the supplier schedule would reflect this in the planned shipment quantities.

The flowcasting model is based on a fundamental principle—a valid simulation of reality. If the retailer and trading partners know the future will be different than the past, say for an upcoming promotion as an example, then these insights are factored into the forecast and resulting inventory flow plans, culminating in the supplier schedule. As a result, no guessing is needed by the supplier and the bullwhip effect is tamed.

The power of silence

Sharing planned shipments allows the retailer to inform the supplier about future product flows required, by item and

shipping location, with all known constraints factored in. This allows the supplier to eliminate all efforts previously expended to attempt to forecast the retailer orders, along with eliminating the enormous efforts for both parties to attempt to reconcile and come to consensus on a shared forecast. The planned shipments replace all this effort—dramatically improving the supplier order plan and allowing the collaborative process to work using the profound power of silence.

“The retailer expects the supplier to be prepared to deliver to the up-to-date, forward-looking schedule and only when they cannot supply to the schedule and/or they don’t understand the projected schedule, is collaboration required.”

In the new collaborative model, because the planned shipments provide a long-term view of future required inventory flows, the expectation is that the retailer and supplier work to the principle of “silence is approval.” What that means is that the retailer expects the supplier to be prepared to deliver to the up-to-date, forward-looking schedule and only when they cannot supply to the schedule and/or they don’t understand the projected schedule, is collaboration required.

Then, working together and, importantly, by exception, they collaborate to revise the inputs to the plans that have caused the issues. Once agreed, the plans are recalculated from store to supplier, culminating in a revised and updated supplier schedule—which the supplier can now deliver to. The result is a continuous collaborative process that can more easily scale to all retailer/supplier trading relationships since collaboration, for replenishment and ordering, is largely by exception.

This new collaborative model also allows the supplier to “protect” supply for retailers that provide valid, complete, and reasonably stable supplier schedules. In essence, the retailer schedule can be planned essentially like future orders and if the supplier is low on stock or surprised by last-minute large orders from other customers, it can commit to providing

inventory to the retailers that have invested in providing valid schedules.

This strengthens the trading relationship and can be leveraged by the supplier to encourage their larger retail customers to provide valid, stable supplier schedules—over time, as more retail customers provide these schedules allowing the supplier to transition to a make-to-order planning philosophy and reap all the benefits of doing so.

Collaborating on inputs, not outputs

Collaboration based on a shared view of planned shipments (i.e., the supplier schedule) allows for the collaborative model to become more strategic and value added. In this new approach retailers and suppliers will collaborate on strategies to drive sales and potentially inventory plans—in essence, the inputs to drive joint business plans. Flowcasting then translates these collaborations into the various languages of the business.

That’s a complete reversal of the CPFR model where each entity developed its own independent forecasts and then spent considerable time and effort to reconcile these plans. In the new approach, the collaboration mostly focuses on a common language: sales to the end consumer. And, again, it’s largely done by exception. There is no need to collaborate on the plethora of retail forecasts and planned shipments/orders since these have been automatically translated into the requirements, product flows, and various languages of the business (e.g., dollars, cube, capacity, resource needs) for all trading partners.

In the new model, collaboration becomes more important—it’s just that it will be more strategic and, as a result, there will be less of it. Because all stakeholders can see what’s planned the new mantra of collaboration is “silence is approval”—as a trading partner, unless you indicate otherwise, your ability to deliver is assumed.

Leading retailers and their suppliers will collaborate where they believe it is worthy of each partner’s time and largely on strategies (i.e., inputs to the joint plans) that drive growth. That could be on promotional forecasts, new items, and ideas and concepts about product flows, to name a few. Both partners understand that the planned shipments resulting from these strategies are calculated, so collaboration on these shared projections is only needed if supply is at risk.

Broader collaboration—using a single set of numbers

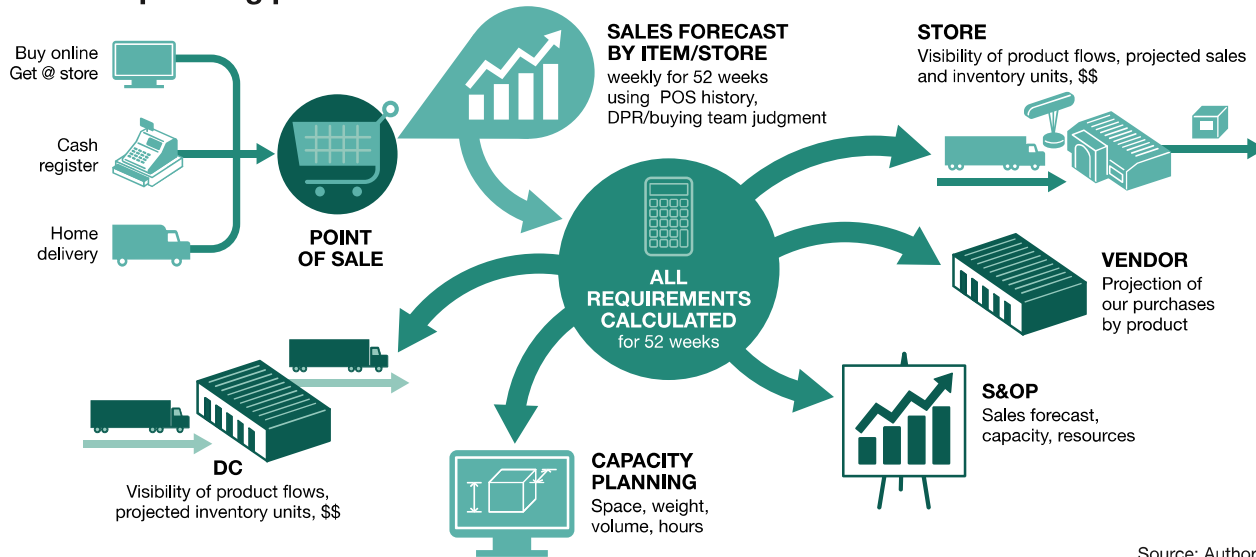
The flowcasting planning process develops up-to-date consumer-driven, integrated plans that are valid across the entire value chain—including plans that span multiple organizations. Retailers and their trading partners now have, for the first time, a complete model of their business—that is, a future-dated digital twin

As an example, if the teams working in distribution see a serious capacity issue well in advance, then there is time to alter the inputs to the plans, reforecast, and replan, and for everyone to see the results of the revised plans, avoiding a potential issue before it happens.

Figure 3 depicts the paradigm shift in collaborative planning between retailers and their merchandise suppliers—collaborating primarily on the inputs to the

FIGURE 2

The new planning process



Source: Authors

of the supply chain—containing all projected product flows from factory to front door for an extended planning horizon of 52 or more weeks. The result is that they have improved control over their business.

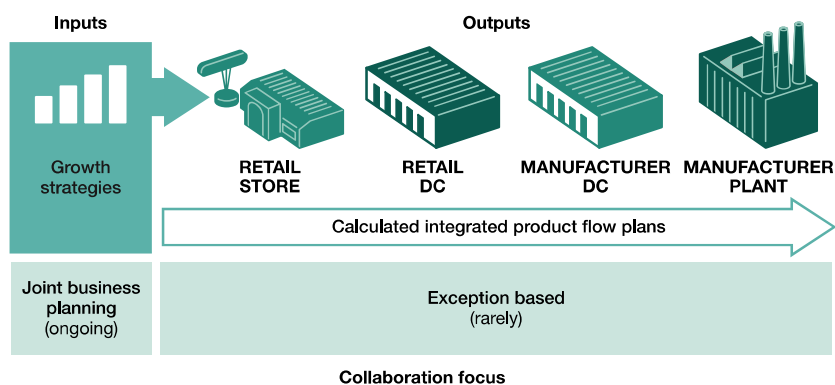
The integrated supply chain can be managed to a single set of numbers whereby all teams, including suppliers, are driven only by an up-to-date forecast of consumer demand and each team's plans are the translated version of this forecast into actionable information with which to plan, deliver and improve service, cost, and productivity, as depicted in Figure 2.

This enables improved collaboration throughout the entire ecosystem, not just between retailer and supplier.

joint business plans, and only by exception if any issues or opportunities arise based on the resultant operational product flow plans.

FIGURE 3

Collaborative planning



Source: Authors

The collaborative model in action

Princess Auto Limited (PAL) is a national, Canadian, hard goods retailer with more than 50 stores located from coast to coast, selling a wide variety of products targeted to help their customers—the “figure-it-outers”—do, fix, tinker and make things. The stores and online portal offer their predominately male customers approximately 15,000 products, sourced from more than 450 merchandise vendors located around the globe, flowing through a network of three distribution centers.

In 2016 they became an early adopter of the flowcasting process and supplier scheduling. They are managing inventory from a time-phased forecast of consumer demand, by item, by store (and web store). The consumer demand forecast is used to calculate integrated, time-phased inventory flow plans (for a 52-week planning horizon) from the store to the DC and then to the supplier. The projections of product purchases are shared with their merchandise vendors in the form of a supplier schedule, so the vendors have visibility to see future requirements and plan accordingly.

One of the merchandise suppliers that use the supplier schedule and collaborate on the inputs that drive the schedule is Watson Gloves.

More than 100 years ago, John Watson and Wayne

Stanley started Watson Gloves by selling hand-crafted gloves to dock workers in Vancouver. Today, Watson Gloves has grown to become one of Canada’s largest manufacturers and distributors of quality gloves. It now sells products internationally with over 2,000 styles to choose from—the iconic Watson Gloves tag is recognizable on gloves serving customers’ needs from construction, to motorcycling, gardening, and more.

Watson Gloves has been the primary supplier of gloves to PAL for several decades and has established a long and mutually beneficial working relationship based on trust and collectively doing what’s right for the customer and their respective businesses.

Every week, PAL provides Watson Gloves with an up-to-date supplier schedule based on the latest forecasts, inventories and marketing and merchandising plans. As outlined above, the schedule indicates, for every product, how many units are needed to be shipped, to where, and by week for a forward-looking 52 weeks. An example of the actual supplier schedule is depicted, showing the next four months of planned shipments—how many units and when each product needs to ship from Watson Gloves to the Princess Auto distribution center (see Table 2).

For many of the products, Watson and PAL agree on

TABLE 2

PAL/Watson Gloves supplier schedule

PRODUCT ID	DESCRIPTION	MFG CODE	SOURCE	DEST	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12
Product 1	Description 1	Mfg Code 1	VendLoc	DC	0	0	0	0	0	330	0	380	0	300	0	320
Product 2	Description 2	Mfg Code 2	VendLoc	DC	0	0	0	0	0	0	0	0	216	0	0	0
Product 3	Description 3	Mfg Code 3	VendLoc	DC	0	0	0	0	0	0	0	0	180	0	0	0
Product 4	Description 4	Mfg Code 4	VendLoc	DC	0	0	0	0	0	0	0	120	0	0	0	0
Product 5	Description 5	Mfg Code 5	VendLoc	DC	0	0	0	0	0	0	180	0	756	0	828	0
Product 6	Description 6	Mfg Code 6	VendLoc	DC	0	0	0	0	0	936	0	0	288	0	288	0
Product 7	Description 7	Mfg Code 7	VendLoc	DC	0	0	0	0	0	216	0	0	0	216	0	0
Product 8	Description 8	Mfg Code 8	VendLoc	DC	0	0	0	0	0	0	0	288	0	288	0	288
Product 9	Description 9	Mfg Code 9	VendLoc	DC	0	0	0	0	0	0	0	0	0	144	0	0
Product 10	Description 10	Mfg Code 10	VendLoc	DC	0	0	0	0	0	430	470	0	0	420	470	0
Product 11	Description 11	Mfg Code 11	VendLoc	DC	0	0	0	0	0	670	480	0	0	490	0	410
Product 12	Description 12	Mfg Code 12	VendLoc	DC	0	0	0	0	0	0	330	0	180	0	210	0
Product 13	Description 13	Mfg Code 13	VendLoc	DC	0	0	0	0	0	240	0	0	360	0	360	0
Product 14	Description 14	Mfg Code 14	VendLoc	DC	0	0	0	0	0	960	0	0	720	0	0	0
Product 15	Description 15	Mfg Code 15	VendLoc	DC	0	0	0	0	0	0	120	0	0	0	120	0

Source: Authors

national promotions where the product is offered at a discount to their retail customers. In these cases, the consumer demand forecast at store level is increased during the period of the event to reflect anticipated sales. For some products on promotion, future store inventory levels could also be adjusted to guard against potentially higher-than-forecasted sales.

Promotions are planned well in advance and then the supplier schedule is calculated based on the impacts of these promotional decisions. The key is that the planned shipments for the upcoming promotion would be reflected in the supplier schedule and provide visibility for all teams to assist them in planning, helping them make better, more productive decisions.

Watson Gloves uses these projections to plan production and distribution and adhere to the concept of “silence is approval.” That is, if it sees something in its schedule that looks odd, it contacts the respective Princess Auto replenishment analyst, otherwise, it is expected to supply. Based on comments from the PAL analyst, seldom does Watson question the supplier schedule—instead, it uses the long-term projection of planned shipments to improve product availability, fill rates and on-time deliveries.

Collaborating on inputs. In keeping with the spirit of the new collaborative model, roughly every quarter, the joint teams collaborate on ongoing activities to drive sales and brand awareness, like promotions and in-store marketing campaigns. They are future strategies and tactics that, once agreed to and incorporated in the flowcasting plans, impact is reflected in the sales forecasts and the resulting integrated replenishment plans, culminating in their supplier schedule. The focus of collaboration had shifted to collaborating on the inputs that drive the plans, rather than the outputs, because these are essentially the calculated requirements based on the inputs.

Benefits. The new collaborative process has provided significant benefits to both Princess Auto and Watson Gloves.

First, and most importantly, by continuous planning to a joint plan and resulting projections, daily in-stocks for customers at store level have improved to 98% for all

products, even during promotional periods. In addition, given the process is constantly recalibrating, inventory has become more productive for both partners. And finally, by shifting the focus to collaborating on the inputs rather than the outputs, both businesses can more easily plan for strategies and tactics to grow both respective businesses. They understand that the planning process will automatically translate these strategies and tactics into planned shipments, the supplier schedule, and various languages of the business (money, capacity, resources, etc.). As a result, both companies feel more confident in their joint abilities to execute new programs and grow their respective businesses.

Conclusion

The global pandemic, recent supply chain disruptions, and the evolving and changing buying patterns of consumers require an even greater need for improved collaboration between retailers and their supplier trading partners. Building on the foundations of CPFR, this new collaborative planning model combines the best of customer-driven, integrated planning and translates the shared view of the consumer demand forecast with suppliers and all stakeholders—translated into the various languages of the business, including financial and resource requirements. The new approach is founded on three key principles, which enable it to scale.

- 1. Never forecast what you can calculate.** All plans are calculated from a forecast of consumer demand, thereby eliminating non-value added and bullwhip-enhancing forecasting.
- 2. Collaborate on inputs, not outputs.** Retailers and their supplier partners collaborate on the inputs to the joint plans to drive growth.
- 3. Silence is approval.** Given all partners can see the projected requirements of the replenishment plans, collaboration should only be by exception—when the joint plans need to change and/or supply is at risk.

Embracing and instilling a new collaborative model within the retail and supplier community takes time and effort. It also has been helped significantly by early adopters, like Princess Auto Ltd, Watson Gloves, and other progressive companies working to improve collaboration and supply chain performance. •