



# SOLVING THE OUT-OF-STOCK PROBLEM

A FMI/GMA Trading Partner Alliance Report





# Executive Overview

Despite many years of good-faith efforts by manufacturers and retailers, the out-of-stock rate remains a stubborn eight percent, on average, with out-of-stocks for promoted items often exceeding 10 percent<sup>1</sup>. That represents potential revenue loss of 8-10 percent or more in an industry already challenged with rising costs to serve the customer.

The problem is bigger than just lost revenue, however. Today's consumer-driven marketplace makes improving the user experience a high priority. Shoppers say product availability is a Top 3 reason for where they shop, yet on average, every time a shopper comes into a store, one out of every 12 items on her shopping list, and one out of every 10 or less for promoted items, is not on the shelf.

Not only does this harm user satisfaction and loyalty, data from the Grocery Manufacturers Association (GMA) and the Food Marketing Institute (FMI) Trading Partner Alliance shows a disturbing three-strikes-and-you're-out pattern. On the first occurrence of an out-of-stock, the typical shopper will substitute another item 70 percent of the time; on the second occurrence the shopper is equally likely to substitute, make no purchase, or go to another store; and on the third occurrence, 70 percent will go to another store. Thus, there is not only the potential for lost revenue from the out-of-stock item itself, but also from the greater loss of future revenue streams from lost brand and/or store loyalty.

The FMI/GMA Trading Partner Alliance began researching the out-of-stock problem in 2013 and presented a Good-Better-Best maturity model for improving on-shelf availability (OSA) at the 2014 FMI/GMA Supply Chain Conference. As a next step after the conference, the Alliance surveyed manufacturers and retailers to better understand how a wide range of practitioners are currently addressing out-of-stock issues, or more correctly, how they are pursuing on-shelf availability. The survey results were consistent with the Alliance's previous diagnosis and confirmed the gaps between current practices and future desired state proposed by the Alliance. An updated Good-Better-Best maturity model for how trading partners can transition to a collaborative OSA approach, known as "One Supply Chain," is discussed later in this report. The goal of the Alliance's work and the maturity model is to ultimately solve the out-of-stock problem.

The gap between current practices and desired performance is repeatedly demonstrated by the study in several critical areas, including metrics/data, process/practice, organizational issues and technology integration. Key findings include:

- **Metrics/Data**—There is no standard definition of OSA. While 86 percent of retailers measure OSA with physical audits at the shelf in-store, other metrics are also widely used. For instance, 43 percent report using the Zero on hand metric, 29 percent use Zero on hand with lost demand triggers

<sup>1</sup> GMA/FMI Supply Chain Ideation Conference, May 2013; and, *Retail Out-of-Stocks: A Worldwide Examination of Extent, Causes and Consumer Responses*, FMI/GMA, 2003



and 21 percent use minimum display values. Manufacturers similarly reported multiple metrics for their definition of OSA. Clearly, an important issue is that all parties are not working off of same numbers.

- **Process/Practice**—There is poor synchronization between retailers and manufacturers on event planning. While 58 percent of retailers say they lock down event plans four weeks or less before the event, 73 percent of manufacturers say they need at least five weeks or more to adjust their production to accommodate these plans. This lack of synchronization can be a major contributor to out-of-stock issues.
  - **Organizational Issues**—There is no clear owner of the inventory among retailers. An equal number of retail respondents said Supply Chain Planning owned inventory as those who said Category Managers or Buyers did, and almost as many said Merchandising owns it. And since respondents were allowed to select more than one answer, the total of responses was approximately 150 percent, indicating even within one retailer more than one group often has ownership. Without clear ownership, there is also no real accountability for solving the problem.
  - **Technology**—Despite the high percentage of retail and manufacturing respondents who claim they collaborate on event forecasts, over 78 percent of manufacturers say they don't use retailer forecasts for production and deployment planning, instead opting for their own forecasts which are primarily based on shipments from their DCs. Analysis indicates that part of the reason for this is a timing gap between when data is available versus when it is actually needed, but there is also a problem with the huge amounts of data that must be analyzed.
- Thus, the good intentions of retailers and manufacturers to collaborate will not be fully realized in OSA performance until these and other gaps identified in the research are addressed. The FMI/GMA Trading Partner Alliance is continuing its work on the Good-Better-Best framework to help companies incrementally reach this goal. Specific action items identified by the Alliance so far for the industry include:
- Move the industry toward a 'Zero on hand' baseline definition of OSA to facilitate better communication and standardization for data exchange
  - Agreement between retailers and suppliers on what demand signal is used for event forecasting
  - Collaboration between retailers and suppliers to better align timing between issuance of event forecasts and production scheduling requirements
  - Collaboration on high-side and low-side range contingency plans for events



# FMI/GMA Trading Partner Alliance On-Shelf Availability (OSA) Study

The OSA study was led by key retail and manufacturing executives from FMI/GMA Trading Partner Alliance member companies and the survey responses came from a wide selection of leading manufacturers and retailers. Survey questions were directed specifically to retailers or manufacturers to better understand each side's issues and as a means to compare and contrast the two sides' approach to the

problem. This was significant in identifying the gaps discussed in this report.

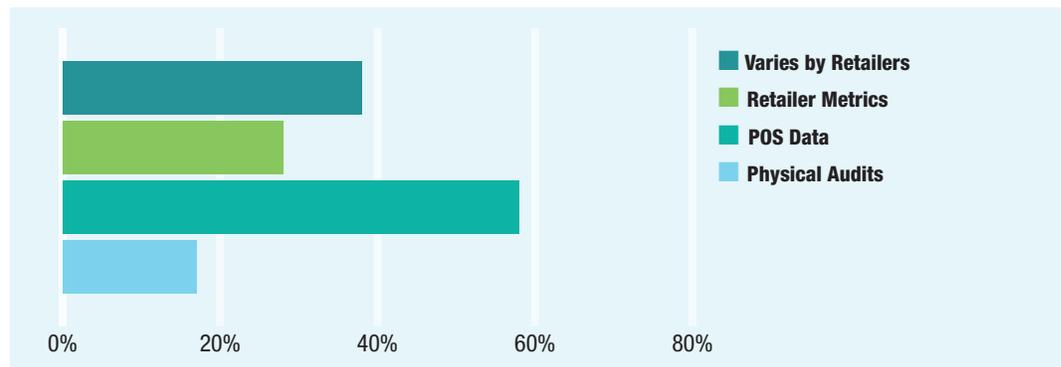
This report summarizes the findings of the survey around the four key gaps that must be overcome to reach OSA maturity. These are: metrics/data; process/practice; organizational issues; and technology. The report also provides Good-Better-Best recommendations under these same four topic areas.

## The Metrics/Data Gap: Agreeing on the Facts

While a rose by any other name may smell as sweet, the fact that manufacturers and retailers can't agree on the basic definition of an out-of-stock is not so sweet. The industry needs a common definition of terminology and metrics before the metrics/data gaps in OSA can be addressed systematically. (See sidebar)

As shown in Figure 2, for instance, 59 percent of manufacturers said they based their out-of-stock calculations on retailer-provided POS data, while another 28 percent said it is based on other retailer-provided metrics. But 40 percent of all manufacturers, and 80 percent of those using retailer-provided metrics (based on a follow-on question), said those metrics vary by retailer, making standardization across the industry problematic.

**Figure 2 MANUFACTURERS' OSA MEASUREMENTS**





## FMI/GMA Trading Partner Alliance Recommended OSA Definition

Consistent with the Alliance’s Good-Better-Best approach to moving the industry toward standardization and best practices, the Alliance has created the following definition of OSA that companies should adopt to begin to bring a level of standardization to the OSA process. This will help retailers and manufacturers to better communicate, collaborate and integrate to reach the OSA goals.

At a minimum the Alliance recommends the industry move to “Zero on Hand,” as the new on shelf availability metric baseline. Retailers with CAO/CGO should be able to calculate this systematically. Retailers that do not have a CAO/CGO system can still participate as long as there is a daily Store practice to determine out-of-stocks on-shelf.

### GOOD:

- Zero On Hand – Number of instances when an authorized item’s perpetual inventory fell to zero or below / total store item combinations.

### BETTER:

- Lost Demand – When the perpetual inventory snapshot occurs and there is zero on hand, it triggers the system to determine what the item would have moved utilizing CAO/CGO forecasted movement.
- Lost Sales – Turns the anticipated lost demand into dollars (Lost Demand \* Retail Price)
- Below Minimum Presentation – Minimum presentation is the minimum amount of units that the retailer will accept for merchandising an item on-shelf. With this method Minimum Presentation is the hypothetical zero and anything below that agreed upon threshold is considered a failure/ out.

### BEST IN CLASS & FUTURE CONSIDERATIONS:

- Utilize forecasted movement (POS) and DC-to-store delivery schedules to proactively determine potential out-of-stocks (OOS) before they happen.
- Consider promoted vs. non- promoted items in the analysis, given additional forecast volatility in promoted SKUs.

- Leverage store technology or work process to understand inventory location (back room vs. shelf) in determining OSA and implementing proactive work processes/alerts to minimize OSA issues.
- Consider item profitability in the OSA analysis, as higher profit items may impact range of countermeasures or mitigating actions.
- Consider shopper equity data and substitution patterns in stratifying SKUs on service level goals as well as to plan for SKU forecast volatility due to switching. In the “three strikes model,” the first time shoppers are faced with OOS, they will substitute another item 70 percent of time when faced with OOS. But many departments and SKUs have much higher loyalty, where the shopper wants exactly what they want (i.e. - personal needs, baby, pet food).

The following example illustrates how these three levels impact results.

### EXAMPLE WORKING ASSUMPTIONS

- Items are authorized in 100 Stores
- Stores have comparable daily item movement for simplicity
- Perpetual inventory is accurate in all 100 Stores
- Zero on hand in 2 stores
- Below minimum presentation in 3 stores

| Items  | Forecasted Movement | Min Presentation | Sales \$ per unit |
|--------|---------------------|------------------|-------------------|
| Item A | 30                  | 12               | \$5.00            |
| Item B | 10                  | 6                | \$6.00            |
| Item C | 1                   | 3                | \$10.00           |

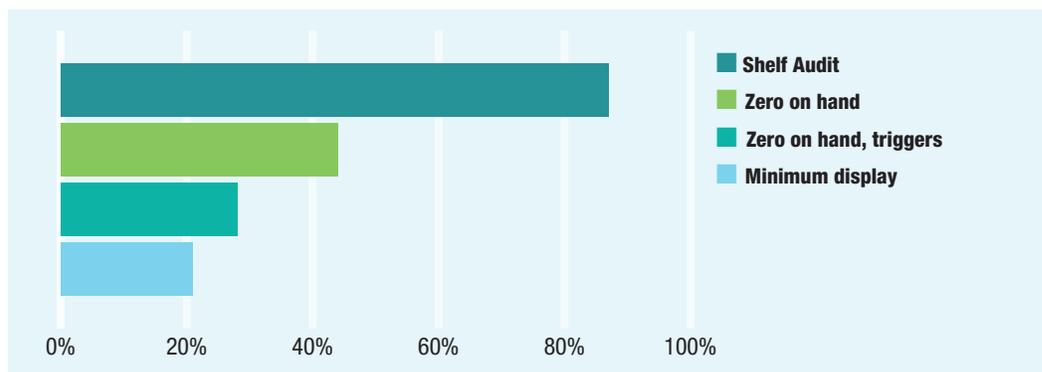
| OSA Methods | Zero On Hand | Lost Demand/ Sales | Below Min Presentation |
|-------------|--------------|--------------------|------------------------|
| Item A      | 98%          | 60 Units/ \$300    | 95%                    |
| Item B      | 98%          | 20 Units/ \$120    | 95%                    |
| Item C      | 98%          | 2 Units/ \$20      | 95%                    |



Meanwhile, 86 percent of retailers still measure out-of-stocks by physical audits at the shelf in-store, among other methods, a slow, manual process which is not sustainable in today's fast-moving retail environment, and is not conducive

to the agile, collaborative planning processes the market now requires. Greater use of Zero on hand is recommended by the Alliance going forward.

**Figure 3 RETAILERS' OSA MEASUREMENTS**

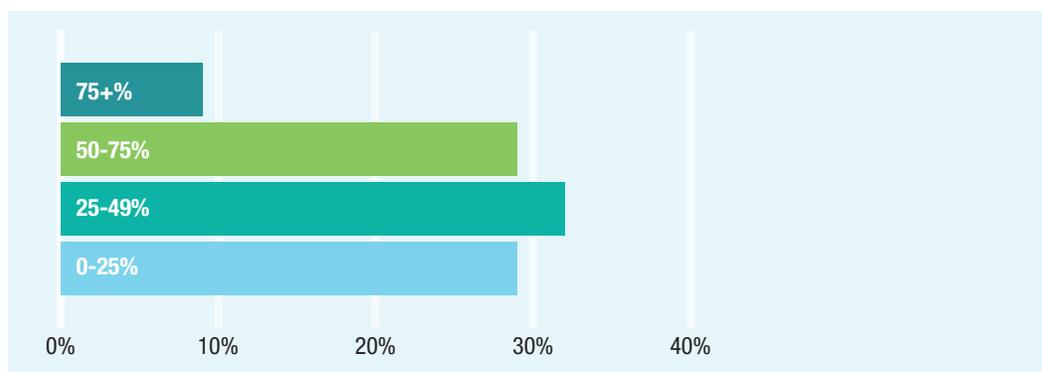


Clearly, the lack of a standard definition of what constitutes an out-of-stock is the first stumbling block for attacking this problem. See the OSA definition sidebar for the Alliance's proposal for standardization of this important metric.

There is also the issue of the completeness of data measurement. As Figure 4 shows, only about 9 percent of manufacturers measure OSA for more than 75 percent of their volume. More telling is that over 29 percent of the manufacturers measure 25 percent or less

of their volume. And in answer to a separate question, 24 percent of manufacturers say they don't measure OSA at all. This data suggests two things: first, that the lack of standardization, and thus trust in the data, has led manufacturers to put less emphasis on OSA issues than their retail counterparts; and second, that manufacturers are therefore currently tracking OSA for only a few of their largest customers. But this lack of complete and reliable tracking of OSA data is a limiting factor in solving the broader OSA problem.

**Figure 4 PERCENTAGE OF MANUFACTURERS' CUSTOMER VOLUME WHERE OSA IS TRACKED**



Therefore, not only is there currently a lack of agreement on the definition of the OSA problem, there also seems to be a lack of urgency in approaching the issue in a more comprehensive

manner. This will have to be overcome if the industry as a whole is to successfully solve the OSA problem and reap the resulting substantial rewards.



## Making Effective Use the Data

Another stumbling block for manufacturers and retailers effectively collaborating on OSA is the sheer size and variability of the data sets being communicated to suppliers. The survey suggests this may be an issue since both groups fall back on using traditional in-house DC shipment data for forecasting even when more accurate POS data is available and shared.

To start with, 17 percent of retailers say they don't share POS data with their suppliers at all. But even though 83 percent do share this data, only 57 percent of manufacturers say they are able to use this data in their demand and production forecasts. Anecdotal evidence suggests that the disparity in data formats provided by retailers increases the complexity for suppliers trying to integrate this data into their planning processes. Add to this the tremendous volumes involved in item within store-level POS data being share and the magnitude of the challenge facing suppliers starts to become obvious.

This data volume issue may also be a legacy of the limitations of the demand forecasting technology manufacturers have traditionally used which does not have the scalability to handle the huge volume of SKU-level store POS data. In addition, when measuring forecast accuracy, 100 percent of manufacturing respondents said they base their measurement on their own shipments to retailers, further suggesting manufacturers are struggling to effectively use retailer provided data.

Surprisingly, given retailers have access to their POS data, 75 percent of retailers also use aggregated shipment data from their DCs rather than their own POS data as the demand signal for their automated forecasting and replenishment systems— perhaps also a volume and technology limitation issue.

Another factor the survey results demonstrate is that retailers and manufacturers continue to work in silos. Each has their own language, their own data and their own ways of doing things that have been built up over decades of doing business as separate entities. Therefore, sharing POS data, while well intentioned, is only a first step in this difficult process of getting everyone on the same page. That is why collaborative efforts—people talking to people and working out differences—will be critical to establish standards for data sharing and the associated communication processes.

Thus, simply sharing data between retailers and manufacturers will not be enough to solve the OSA problem until all partners agree on data standards, communication formats and timing so they can put the data to use to agilely adjust production, distribution, replenishment and merchandising plans down to the shelf level.

### Top 10 Reasons Why Retailers Should Share POS Data with Suppliers

10. Your mother always taught you to share your things
9. It's what friends and partners should do
8. It builds trust and strengthens partnerships
7. It helps suppliers better meet retailers' needs
6. It helps suppliers quickly adjust to new product introduction sales trends
5. It helps suppliers better understand promotion effectiveness
4. It helps suppliers understand local demand patterns
3. It helps suppliers better understand the effects of seasonality by region
2. It enables retailers and manufacturers to more effectively collaborate on OSA
1. You can't effectively solve the OSA problem without accurate, timely POS data



## The Process/Practice Gap: Synchronizing Efforts

Analyzing the data from the survey uncovered several areas where current processes are counterproductive to solving the OSA problem. These processing gaps include internal operational issues, timing issues between retailers and manufacturers, and other synchronization issues across the supply chain.

The basic building block of OSA is visibility to what inventory is actually in each store at any point in time. Often referred to as a perpetual inventory process, this inventory visibility is the foundation of an effective computer-aided ordering (CAO) system (sometimes also called computer generated ordering or CGO). Retailers cannot hope to effectively solve the OSA problem without a perpetual inventory process and CAO in place.

However, having a CAO solution in place does not necessarily mean a retailer has either enterprise-wide visibility to in-store inventory or that internal policies and practices support an accurate perpetual inventory process. For example, although half of the retailers report using some form of CAO, most of those that do use CAO allow stores to override or influence the CAO order. While there are legitimate reasons to allow store overrides, such as local weather emergencies or special local events, the fact that 40 percent also allow stores to override CAO system settings suggests that there is a lack of standardization across the enterprise, making it very difficult to implement effective corporate OSA programs. By extension, if corporate OSA programs are not effective, collaboration with suppliers will be severely hampered.

This is not to say that CAO overrides are necessarily bad. Anecdotal evidence from Alliance members suggests overrides of up to five percent of store items are normal. The reasons for these overrides include variations in local demand, adjustments for shrinkage or spoilage, and other non-predictable in-store occurrences.

However, the bigger fear is that CAO overrides are the result of poor in-store practices. For example, not training, and enforcing, that cashiers must scan all items at checkout rather than scanning the first item and hitting the quantity button for items that are not, in fact, identical. Or taking items from store shelves to use in other departments, such as the deli, bakery or prepared foods, without recording inventory adjustments. Or failing to properly scan or record all items in replenishment shipments. Without accurate accounting of all inventory in the store, perpetual inventory counts are inaccurate and CAO effectiveness will be impaired.

A complicating factor for the use of CAO/CGO is that neither demand nor merchandising plans are constants. While a certain baseline of products exhibit fairly smooth demand and sales numbers, and are therefore easy to forecast and generate orders for, demand for other products is more volatile. Promotions, special events, new product introductions and unforeseen events such as snowstorms or natural disasters can all significantly impact demand and/or supply. Procedures for adjusting CAO/CGO must therefore be part of the overall OSA plan. Ultimately, the goal is to improve the CAO process to the point that overrides are not necessary.

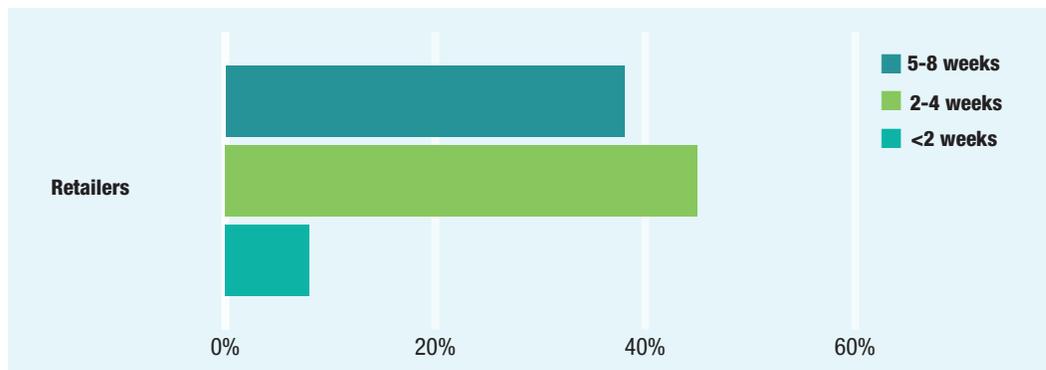


## Timing is Everything

Another obvious process gap shown in the survey results is the timing on event forecasting. Although 79 percent of retailers say they include vendors in their event forecast planning process, a mismatch in timing may be undoing these good intentions. As shown in Figure 5,

for example, 50 percent of retailers lock down their event forecasts, and can thus provide meaningful forecasts to their vendors, only 2-4 weeks before an event, with an additional eight percent locking the forecast down less than two weeks prior to the event.

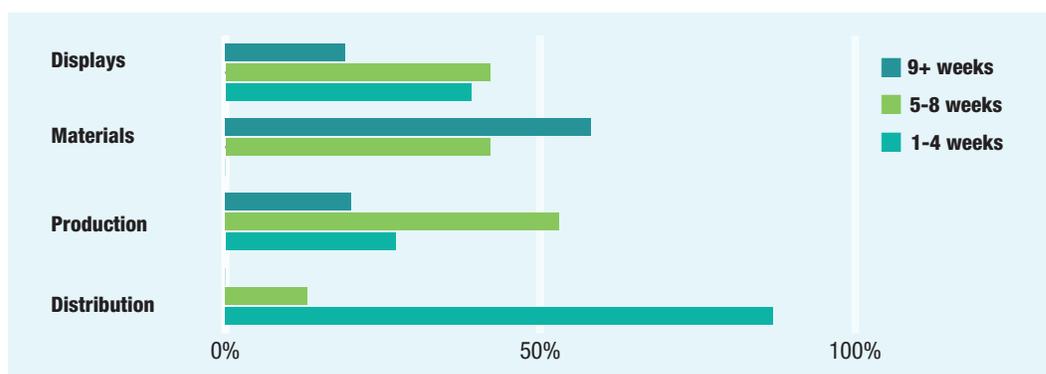
**Figure 5 RETAILER LOCKDOWN TIMING ON EVENT FORECASTS**



In contrast, manufacturers generally need more time to properly plan production and deployment than what retailers are providing. As figure 6 shows, a change to a distribution plan requiring additional amounts typically covered by safety stock, or where it is just a matter of redirecting existing inventory, is the only area where manufacturers' timelines seem likely to accommodate retailers' four week or less forecast lockdown schedule. However,

if the forecast deviation requires additional production, the need to order more raw materials or changes to special display plans, most manufacturers need more time, and in some cases significantly more time, to react. Thus, if manufacturers need more time than the retailers are giving them to produce the goods retailers are forecasting for events, out-of-stock conditions are inevitable. (see the Forecast Timing sidebar for more on this issue)

**Figure 6 MANUFACTURER LEAD TIME REQUIREMENTS FOR SIGNIFICANT (>25%) CHANGES TO RETAILER PLANS**





However, the problem goes beyond lockdown timing. For whatever reasons, the majority of retailers make changes to their forecasts after the lockdown date. As shown in figure 7, a whopping 92 percent of respondents reported

making changes to their forecasts of three percent or greater after lockdown, with 25 percent saying they make these changes over 20 percent of the time.

## Forecast Timing

The survey data shows an obvious mismatch between the timing of when retailers say they generally provide event forecasts to manufacturers and the amount of time manufacturers say they need for production and deployment planning and execution. Overall, 58 percent of retailers provide these forecasts four weeks or less before the event kick-off date. Manufacturers, however, generally need four to eight weeks of foreknowledge of retailer requirements in order to provide the merchandise. This gap is an excellent candidate for collaboration.

The Alliance has two recommendations that should help overcome this timing issue. First, eliminate the concept of an event “lockdown” date. Since 92 percent of retailers admit they make some degree of changes after this date anyway, its usefulness is questionable. Second, to replace this concept, retailers and manufacturers should begin collaborating on forecasts early in the event planning process and continue to adjust plans as warranted throughout the planning and execution of the event.

As part of the event planning collaboration, participants should not be locked into “a number” for the forecast, but rather, should be developing a range of expected demand. This will allow joint creation of appropriate high-side and low-side contingency plans that cushion the impact of variance in demand. By focusing on demand forecasting as a process rather than a date and as a range rather than a number, the timing issue can be narrowed, if not eliminated, and contingency plans can help reduce the impact of any variations.

Clearly, event forecasting is one area where retailers and manufacturers can make significant

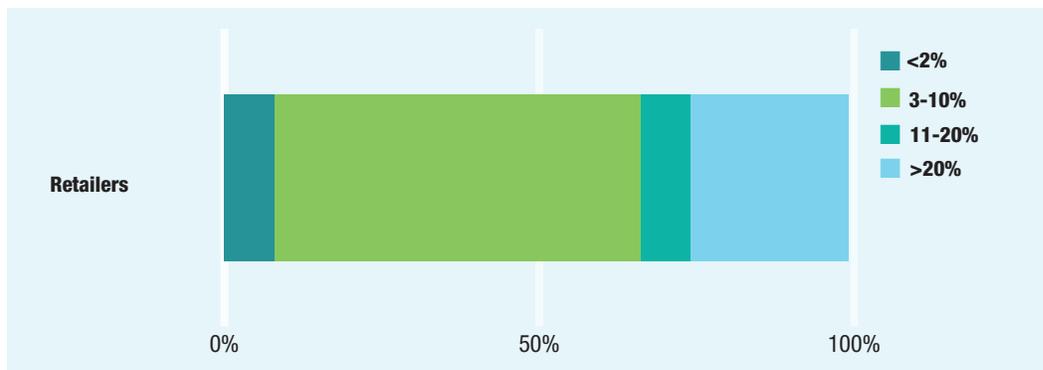
progress on OSA through better collaboration. As a starting point, the FMI/GMA Trading Partner Alliance recommends that manufacturers and retailers collaborate on high-side and low-side contingency planning as a first step in resolving the issues caused by the event forecast timing mismatch. (See sidebar on Forecast Timing) Under this process, retailers and manufacturers would agree on a single demand forecast along with a range of demand uplift for each event or promotion rather than work to a single number. The range would be based on a joint list of assumptions and potential risks, and would include what reactions each party will take if the variance to plan occurs. For example, if a promotion creates significantly greater demand than anticipated, the high side contingency may be that the manufacturer agrees to provide additional inventory in a specified timeframe and the retailer agrees to accept full case shipments rather than shelf-ready displays.

Unfortunately, no respondents indicated they have such a program in place today. Instead, manufacturers either allocated extra inventory over forecast only to strategic customers (with potential impact spread among other customers) or allocated extra inventory only if it would not impact other customers. Neither alternative gets at the root of the problem.

By collaborating on a high-side and low-side contingency plans early in the process, manufacturers can adjust production plans and work with their materials suppliers to ensure sufficient inventory will be available to cover forecast variations and changes after lockdown while retailers are flexible in how the additional inventory may be delivered or priced.



**Figure 7 HOW OFTEN RETAILERS MAKE CHANGES TO FORECASTS AFTER THE LOCKDOWN DATE**



## The Organizational Gap: Owning Change

Once you get past the data sharing and process issues, the next question is whether there is organizational readiness to support OSA initiatives. On the manufacturing side, the fact that 24 percent do not even track OSA, and on the retail side, the fact that 17 percent don't share POS data with suppliers, suggests there may be resistance.

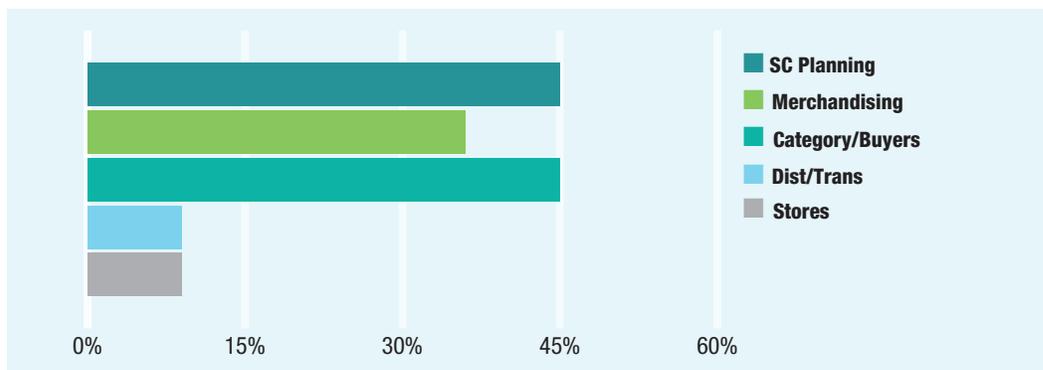
Even among those companies that track OSA, there seems to be a lack of commitment across their organizations and supply chains. For example, although 71 percent of manufacturers say OSA is a top business priority, only 53 percent say it is a key focus for their end-to-end supply chains, and that number drops further to 43 percent who say it is a focus area or metric for measuring their sales force. Since OSA is a total supply chain issue, not simply a manufacturing or retail issue, all parties must be involved in the solution. Not only will this require collaboration up and down the supply chain,

it will also require a commitment to change from the people inside each organization. But just who those people are is uncertain. Survey responses from both retailers and manufacturers indicate there are no clear owners of the inventory or forecast decisions. An equal number of retail respondents said Supply Chain Planning owned inventory as those who said Category or Buyers did, and almost as many said Merchandising owns it.

And since respondents were allowed to select more than one answer, the total of responses was approximately 150 percent, indicating even within one retailer more than one group often has ownership of inventory. Without clear ownership, and thus responsibility, for managing inventory levels and developing forecasts, there is no accountability for results. This organization alignment issue will be one step in helping to improve OSA.



**Figure 8 WHO OWNS RETAIL INVENTORY**



These ownership issues cause several problems for effective OSA programs. First, the variance in which department owns the inventory makes it hard for manufacturers to know who they should be dealing with from retailer to retailer in setting up collaborative OSA processes. Interesting, although only nine percent of retailers say their stores have ownership of the inventory, and less than eight percent say stores are responsible for event forecasts, the majority of retailers allow

stores to override CAO forecasts, a potential accountability issue.

Second, for those retailers where there is more than one owner of inventory, effectively there is no owner, and thus, no accountability. Without accountability, there is little incentive to improve OSA, so implementing effective programs is unlikely. These issues spill over into the forecasting process.

## Who's in the Driver's Seat?

While there has been much written about who is driving the relationship—the brand manufacturer or the retailer, and whether that has changed over the years—the real issue might be who is setting the forecasts on which OSA depends.

For instance, according to the survey, 79 percent of retail respondents say that they forecast event demand collaboratively with their suppliers, while only 63 percent of manufacturers say that's how they perceive it is done. Similarly, 85 percent of retailers say that internally their category managers/ buyers are responsible for the event forecast, but only 30 percent of manufacturers perceive this to be the case. In contrast, 60 percent of manufacturers think that their sales or supply chain reps are responsible. If there is no agreement on who is responsible for the forecast, or whether the

parties are even collaborating or not, how can effective programs be put in place to address the many issues impacting OSA?

In this light, it is not surprising that less than 13 percent of manufacturers said they were Very Satisfied with the accuracy of the forecasts and could use them for direct adjustments to their production or deployment plans. Furthermore, when manufacturers were asked what they do when faced with forecasts from the retailer different from their own, less than 19 percent say they collaborate with the retailer to reconcile the differences, as opposed to 79 percent who said they primarily use their own forecast. This also harps back to the issue of trust in the data.

Thus, part of the cultural change needed to facilitate the collaboration that will drive improvement in OSA involves decisions on



ownership, roles and who makes decisions regarding the many issues impacting OSA. There must be clear roles and accountability within organizations as well as open communication of those roles and responsibilities between the

trading partners. Without these well understood guidelines, establishing effective OSA processes and programs will be unlikely, nor will they be sustainable even if put in place.

## The Technology Gap: Is Automated Collaboration Possible?

The survey data implies several gaps in the technology used by retailers and manufacturers in the critical steps of forecasting demand and subsequent planning for OSA. As noted earlier, although 79 percent of retailers say they share POS data with their suppliers, few manufacturers or retailers seem to be using this data in their forecasting and planning processes.

There is no question that the potential data volumes involved in the use of store level POS data are huge. In the past, this volume prohibited many forecasting and replenishment systems from using the more accurate store-level POS data. Recent advancements in technology have removed that limitation.

However, even if the technology is in place to address the large volume of data to produce accurate SKU-level forecasts by store or store cluster, the question remains of whether it will get used. As mentioned earlier, there are data format and communication issues that hinder the use of the POS data sets as well. The industry must work to standardize what, when and how it shares data, the communication processes and protocols used, and how that information will be put to use for agreed upon forecasts.

This points out a larger problem—the silos that exist in many companies, and between trading partners, that prevent effective data sharing and usage. These silos are often organizational, but can also be due to technology. As a result, each department and each company creates their own forecast with their own built-in assumptions and perceived risks, creating an ever-increasing bullwhip effect that multiplies forecast error. Why not use one shared forecast and let all other calculations flow from there?

Integration of in-house systems to use a single set of available data in a timely way is the first technology building block for solving the OSA problem. The more difficult issue to overcome is the lack of standardization and integration between trading partner technologies. This disconnect will render OSA efforts moot unless retailer and manufacturing partners develop a collaborative process, and the necessary systems interfaces, to share a single POS-based forecast (a single version of the truth) and base all subsequent supply chain calculations off of that one forecast. This is foundational to developing One Supply Chain.

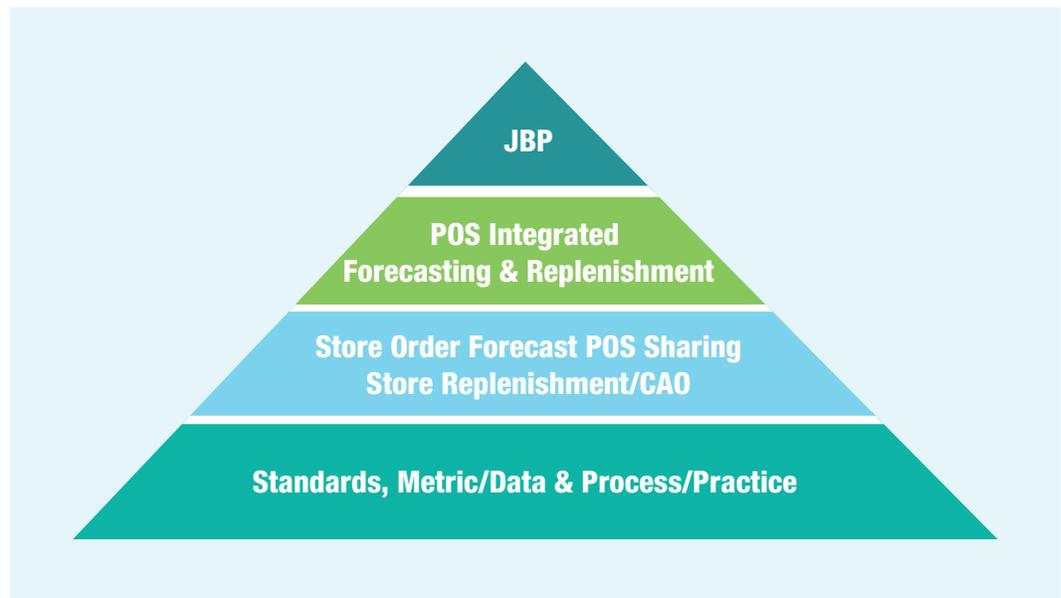


# The Good-Better-Best Framework for Solving the OSA Problem

Given all of the challenges discussed in this report and the data, process, organization and technology gaps defined by this research study, it should be clear that there is no easy solution to the OSA problem facing retailers and manufacturers. The FMI/GMA Trading Partner Alliance recognizes this fact and has created a Good-Better-Best (GBB) framework for addressing the issues and challenges incrementally, as well as some recommendations for an improved future state of collaboration and OSA mastery.

The GBB framework focuses on a step-by-step approach for closing the data, process, organization and technology gaps identified. The framework provides target actions for improving metric/data quality and sharing, organizational improvement, and process/practice standardization supported by POS integrated forecasting and replenishment. The framework is represented by the Effectiveness Pyramid shown in figure 9. The ultimate goal is to arrive at a fully collaborative state where joint business planning (JBP) can be done interactively between trading partners so that the relationship is really supporting **One Supply Chain**.

**Figure 9 THE OSA EFFECTIVENESS PYRAMID**





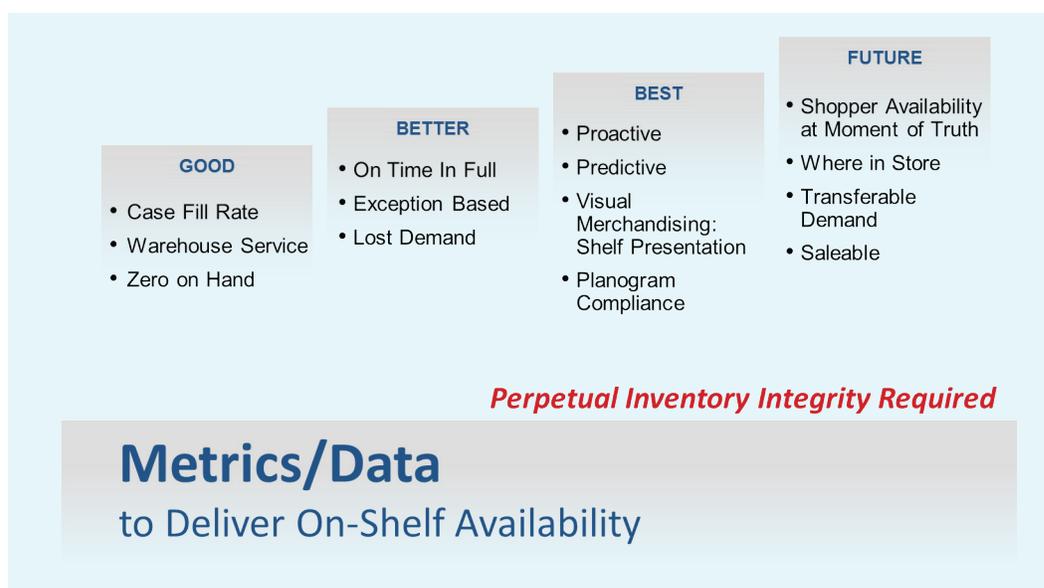
## Good-Better-Best Metrics/Data

The foundation of the OSA Effectiveness Pyramid, and the starting point for companies looking to improve their OSA performance, is standardizing their metrics and data. At a minimum, this will require retailers to implement a perpetual inventory program to provide accurate visibility to inventory at each store and across the enterprise. This accurate inventory visibility must be combined with an agreed upon standard definition between trading partners of what constitutes an out-of-stock condition.

The FMI/GMA Trading Partner Alliance recommends that the industry move to “Zero

on Hand” as the new OSA metric baseline. Retailers with CAO/CGO capability should be able to calculate this systematically. Retailers that do not have a CAO/ CGO system can still participate as long as there is a daily store practice to determine out-of-stocks. If you are using and sharing OSA methods, be clear as to which method(s) you are using or sharing to support apples-to-apples peer comparisons. Next, determine where you are currently versus where you want to be for OSA metrics. Leverage the hierarchy of the Good- Better-Best framework to help you and the industry eventually achieve the desired future state.

**Figure 10 GOOD-BETTER-BEST METRICS/DATA**



## Good-Better-Best Process/Practice

Best practice processes will need to be developed and implemented both internally and between trading partners in order for data to be shared securely and in a timely manner, as well as to ensure collaborative processes are in place to affect OSA outcomes. It starts with getting your internal house in order through initiating standard operating procedures for

OSA within the stores. This will include proper training for cashiers, stocking personnel, and everyone else that handles, uses or otherwise deals with inventory.

Next there will have to be an evaluation of the CAO processes—do you have a CAO/CGO process and system in place; how and why will



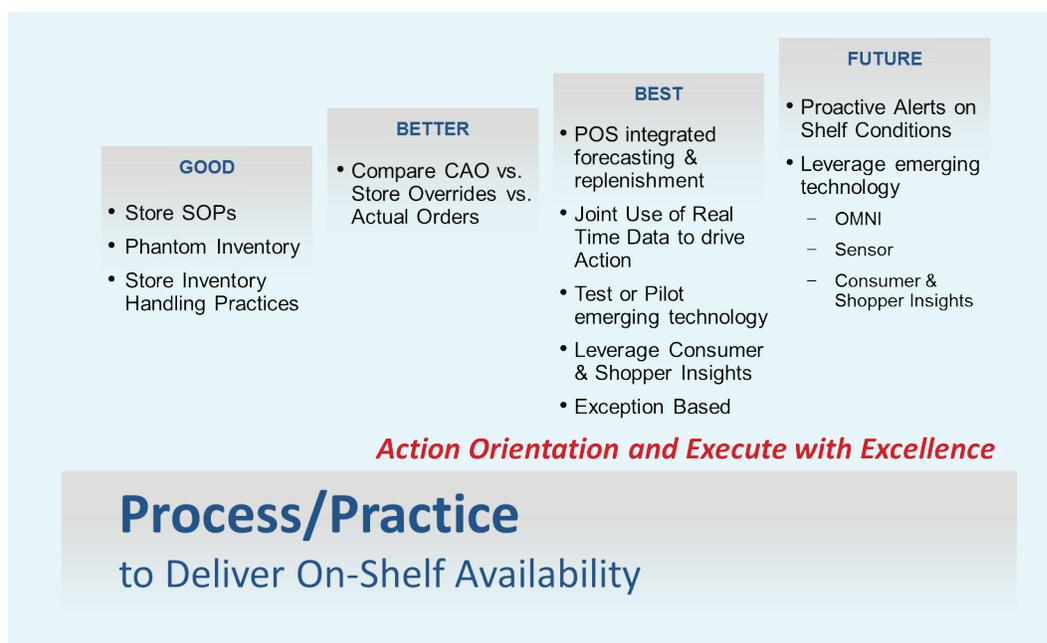
overrides be used; and what is the impact on actual orders and OSA? Consider running a pilot study in a few stores covering a selected category and set of products to work out details and evaluate the impact of changes.

As you are getting your own house in order, start to engage suppliers for collaborative ways to use POS data, integrate technology and leverage consumer insights for better forecasting. Consider initiating a joint high side contingency planning process, as discussed

earlier, as a first step in breaking down the silos and begin working from a single, shared forecast.

Again, pilot programs with limited participants and objectives can help to smooth the way for wider adoption of OSA programs later on. Remember, this is a journey, not a quick fix. But over time, participants should see substantial revenue lift and cost savings from performing as One Supply Chain.

**Figure 11 GOOD-BETTER-BEST PROCESS/PRACTICE**



## Good-Better-Best Organizational Improvement

As with the process area, organizational improvements must start internally. Initiating an integrated business planning process is one way to start breaking down the internal silos and get people and departments talking and planning together. But rewards and incentives must also be aligned. Too many corporate strategies get blindsided by incentive programs that reward staff for goals within the silos that are counterproductive to the organization as a whole. Aligning incentive compensation is

critical for OSA program success.

The lack of alignment between OSA strategies and rewards was evident in the survey results. Although 71 percent of manufacturers say OSA is a top business priority, only nine percent include OSA as a factor in incentives or rewards. Given the current very primitive state of cross-organizational and trading partner collaboration on OSA, this low percentage is to be expected since too many factors are currently beyond



the control of individuals or departments. Still, one of the goals of implementing an effective and collaborative OSA program should be to eventually get better alignment between OSA

effectiveness and related incentives. This should be extended to trading partner incentives as the program matures.

**Figure 12 GOOD-BETTER-BEST ORGANIZATIONAL IMPROVEMENT**



## Technology Integration

We live in an integrated world today. The Internet made that possible; omni-channel retail is making it an everyday imperative. The old siloed ways of doing business cannot hope to support this new paradigm. Likewise, the technology we use to support this integrated world can no longer live in silos. Technology must be integrated across departments and functions internally, and must be integrated to trading partners' technology. As figure 13 depicts, from raw materials to the shelf is all one integrated process, and the technology that supports this process must function as one.

Continuing on the Good-Better-Best theme, there is no need to attempt this all at once. Start by integrating internal systems so there is visibility to store-level inventory and sales across the enterprise. Use store-level POS data

as the driver for forecasting demand. Integrate this demand data, along with seasonality, new product introductions and promotions, into replenishment planning. Integrate replenishment plans with DC and store inventory distribution and execution plans so that you realize the benefits of your efforts.

As internal systems are being integrated, work with trading partners to integrate inter-company processes and systems. The goal should be to have a single POS-driven forecast driving all production, materials, distribution and replenishment calculations. The concept is to never forecast what you can calculate so you eliminate forecast error and the bullwhip effect. This will be the basis of the One Supply Chain model (see Figure 14) the Alliance recommends as the ultimate solution for OSA going forward.



Figure 13 TECHNOLOGY INTEGRATION





# Insights to Action

Information and insights have little value unless they are used to spur meaningful action. Thus, the Alliance is using the insights gained from this study together with their previous work to

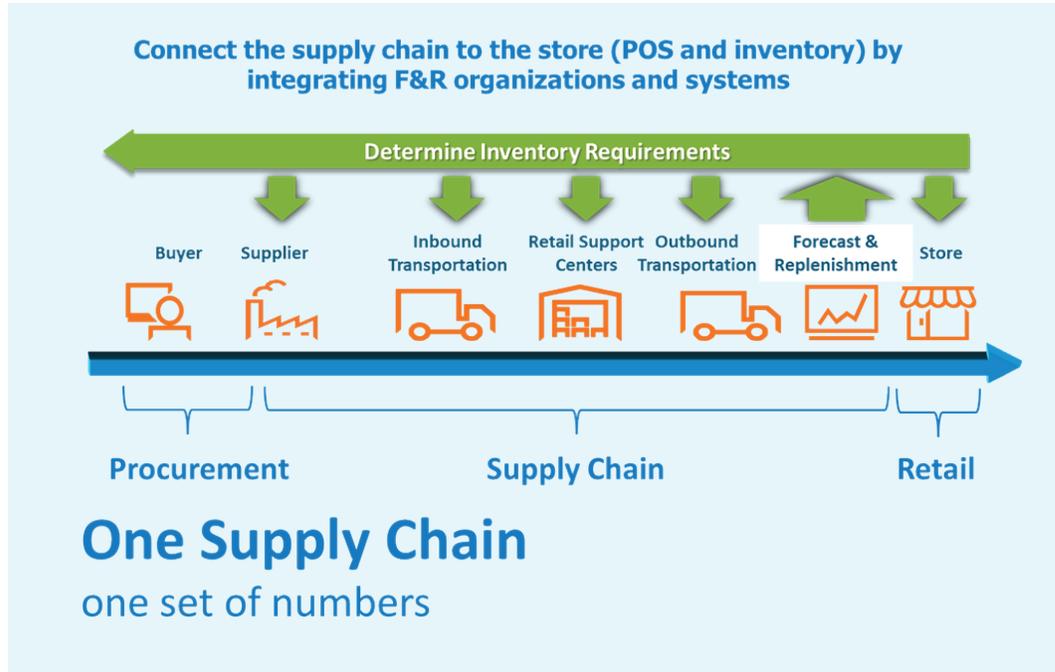
create specific action steps for companies to take to address the OSA challenge. This begins with One Supply Chain.

## One Supply Chain

For at least a decade now supply chain professionals have understood that in today's global, hyper-connected world it is no longer my company against your company—it is my supply chain against your supply chain. No retailer or manufacturer by themselves can solve the persistent out-of-stock problem that is costing businesses billions of dollars each year. All members of the supply chain

must work together collaboratively if on-shelf availability is to improve. The FMI/GMA Trading Partner Alliance has worked hard over the past 18 months to lay the groundwork for this collaboration. The survey on which this report is based demonstrates that manufacturers and retailers are generally in agreement with the gaps and solutions the Alliance presented at the 2014 Supply Chain Conference.

Figure 14 ONE SUPPLY CHAIN



The result of the Alliance's work and the survey is a maturity model that can incrementally move companies and the industry toward a more collaborative approach to OSA which

the Alliance has dubbed **One Supply Chain**. As figure 14 shows, there are many moving parts to **One Supply Chain** processes carried out by multiple players. But if all participants



collaborate on a shared view of POS data and inventory for a single definition of demand at the store level, and base all subsequent supply chain calculations from that single forecast, OSA will inevitably be significantly improved

to the benefit of all. Therefore, the Alliance strongly recommends that all FMI/GMA member companies and their trading partners adopt the **One Supply Chain** approach for OSA excellence.

## Insights to Action – The Way Forward

---

The Alliance has identified four next steps the industry should take to move toward more collaborative and successful OSA process.

These are:

- Adopt a 'Zero on hand' baseline definition of OSA to facilitate better communication and standardization for data exchange
- Agreement between retailers and suppliers on what demand signal is used for event forecasting
- Collaboration between retailers and suppliers to better align timing between issuance of event forecasts and production scheduling requirements
- Collaboration on high-side and low-side range contingency plans for events

As with all business processes, improving on-shelf availability is an on-going journey, not a destination. This report and the Alliance's presentation at the 2015 FMI/GMA Supply Chain Conference conclude Phase 2 of the Alliance's Charter and set the stage for Phase 3, which is to formulate and help the industry to execute a five-year plan to bring OSA to 98 percent. To learn more and become part of this important journey, contact your FMI or GMA representative.

FMI: Pat Walsh – [pwalsh@fmi.org](mailto:pwalsh@fmi.org)

GMA: Daniel Triot – [dtriot@gmaonline.org](mailto:dtriot@gmaonline.org)



# Appendix

The FMI/GMA Trading Partner Alliance OSA Sub-Committee includes representatives from the following companies:

- Food Marketing Institute
- Grocery Manufacturers Association
- Clorox
- Delhaize
- GENCO
- HEB
- Inmar
- JDA Software
- McCormick
- Meijer
- Mondelēz International
- Nestlé USA
- Procter & Gamble
- Walgreens

There were a total of 77 retail and manufacturer/distributor respondents to the survey.