The FMI-GMA Trading Partner Alliance began researching the out-of-stock problem in 2013. At the 2014 TPA Supply Chain Conference, it showcased a Good-Better-Best maturity model for improving On Shelf Availability (OSA). As part of the phase II of the journey to achieve 98+% OSA, the alliance surveyed Manufacturers and Retailers to better understand how a wide range of practitioners are currently addressing out of stock issues. The survey results were consistent with the alliance’s previous diagnosis and confirmed the gaps between current practices and future desired state. The white paper the alliance published at the 2015 Supply Chain conference included an updated “One Supply Chain” Good-Better-Best maturity model with definitions and recommendations on how to address the identified gaps in metrics/data, process/practice, organization and technology. In its phase III of the journey, the alliance validated several of the white paper recommendations via Retailer-Manufacturer learning pilots and collaborated to produce industry tools to both analyze and action against OSA opportunities.

The Best Practices Solutions to address On Shelf Availability document focuses on five root cause areas:

- Store Execution
- Ordering and Execution
- Forecasting
- Manufacturing
- Category Management and Merchandising
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**Root Cause Area**

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ROOT CAUSE AREA
STORE EXECUTION

ISSUE DESCRIPTION
Staffing

SOLUTIONS/BEST PRACTICES
Match schedule with replenishment timing and work load

OWNERS
Store Operations

ISSUE DESCRIPTION
Item Management

SOLUTIONS/BEST PRACTICES
Smart / Electronic shelf labels
Don’t hide product

OWNERS
Pricing, Merchandising, Shelf Management
Store Operations
ROOT CAUSE AREA

STORE EXECUTION

ISSUE DESCRIPTION

Inventory Accuracy

SOLUTIONS/BEST PRACTICES

- Improve PI accuracy and timing sync
- Review POS scanning practices
- Manage proper markdowns initiated by store
- Initiate 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 OSA within the stores.

OWNERS

- Store Operations, Buyers, Replenishment, Merchandising, IT
- Store Operations
- Store Operations, Buyers, Replenishment, Merchandising, IT
- Store Operations, Buyers, Replenishment, Merchandising, IT

ISSUE DESCRIPTION

Back Stock

SOLUTIONS/BEST PRACTICES

- Review and improve backstock / backroom to shelf process
- Improve backroom sorting process
- Notification of OOS
- Check for Shelf tag accuracy
- Timely working of backstock to fill shelves
- RFID can play a role to enhance backroom processes

OWNERS

- Store Operations, Buyers, Replenishment, Merchandising, IT
- Store Operations, Buyers, Replenishment, Merchandising, IT
- Store Operations, Buyers, Replenishment, Merchandising, IT
ROOT CAUSE AREA
ORDERING AND DISTRIBUTION

ISSUE DESCRIPTION
Ordering

SOLUTIONS/BEST PRACTICES
Evaluate 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.

• Adjust delivery cycle to meet most “stressed” items
• Monitor delivery frequency and timing

OWNERS
Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Consumer Insights, Pricing, Distribution and Transportation, Manufacturers, IT, Service Providers

• Enhance PI accuracy/timing sync and ensure discontinued items are not ordered on CAO/available for CAO ordering
• Follow CAO recommendation for safety stocks level
• Don’t hide product
• Use RFID to track cases and pallets

Store Operations, Buyers, Replenishment, Merchandising, Marketing, Pricing, Shelf Management, Consumer Insights, Distribution and Transportation, Manufacturers, IT

ISSUE DESCRIPTION
Distribution

SOLUTIONS/BEST PRACTICES

OWNERS
Store Operations, Buyers, Replenishment, Merchandising, Marketing, Pricing, Shelf Management, Consumer Insights, Distribution and Transportation, Manufacturers, IT, Service Providers

• Adjust delivery cycle to meet most “stressed” items
• Monitor delivery frequency and timing
SOLUTIONS/BEST PRACTICES

- Improve methods of sorting (off the truck). Triage sorting into immediate OOS, direct to shelf, direct to backroom. RFID can enhance sorting triage.

- Improve backroom sorting and backroom to shelf processes.

- Sorting
- Notification of OOS
- Shelf tags

OWNERS

- Store Operations, Buyers, Replenishment, Merchandising, Marketing, Pricing, Shelf Management, Consumer Insights, Pricing, Distribution and Transportation, Manufacturers, IT, Service Providers

- Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Distribution and Transportation, Manufacturers

- Store Operations, Buyers, Replenishment, Merchandising, Marketing, Pricing, Shelf Management, Distribution and Transportation, Manufacturers, IT
ROOT CAUSE AREA
FORECASTING

ISSUE DESCRIPTION
Demand Forecasting Accuracy

SOLUTIONS/BEST PRACTICES

Joint business planning discipline with POS data

Use POS data as one demand signal to drive all forecasts (never forecast what you can calculate)
- eliminate bullwhip effects and errors, integrate technology and leverage consumer insights for better forecasting. Consider initiating a joint high side contingency planning process as a first step in breaking down the silos and begin working from a single, shared forecast

Add back measure of lost sales
• Due to OOS in the estimate
• Due to poor execution
• Due to Data Synch errors

Real time notification of OOS so cycle is not missed (should be few instances due to constant demand nature)

Make demand forecasting a range rather than a number and develop joint high-side and low-side contingency plans to reduce the impact of varations.

OWNERS

Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Manufacturers, IT

Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Manufacturers, IT, Service Providers

Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Manufacturers, IT, Service Providers

Store Operations

Store Operations, Buyers, Replenishment, Merchandising, Consumer Insights, Manufacturers
### Root Cause Area

#### Forecasting

### Issue Description

**Demand Forecasting Accuracy (continued)**

### Solutions/Best Practices

<table>
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<th>Solutions/Best Practices</th>
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<tr>
<td>Align rewards and incentives to the OSA strategies. This should be extended to trading partner incentives as the program matures.</td>
<td>Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Manufacturers</td>
</tr>
<tr>
<td>Technology must be integrated across departments and functions internally, and must be integrated to trading partners’ technology - from raw materials to the shelf is all one integrated process, and the technology that supports this process must function as one.</td>
<td>Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Manufacturers, IT, Service Providers</td>
</tr>
<tr>
<td>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 Distribution and Transportation and store inventory distribution and execution plans so that you realize the benefits of your efforts.</td>
<td>Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Manufacturers, IT, Service Providers</td>
</tr>
<tr>
<td>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, the ultimate solution for OSA going forward.</td>
<td>Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Manufacturers, IT, Service Providers</td>
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</tbody>
</table>
ROOT CAUSE AREA

FORECASTING

ISSUE DESCRIPTION

Timing

SOLUTIONS/BEST PRACTICES

Make demand forecasting a process rather than a date

Collaborate early and continue to adjust through execution

Remove event “lock date”

OWNERS

Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Manufacturers

Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Manufacturers

Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Manufacturers
## ROOT CAUSE AREA

### MANUFACTURING

## ISSUE DESCRIPTION

**Item/Product Management**

## SOLUTIONS/BEST PRACTICES

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<td>Fix product data through data synch</td>
<td>Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Consumer Insights, Pricing, Distribution and Transportation, Manufacturers, IT, Service Providers</td>
</tr>
<tr>
<td>Mis-management of seasonal/temporary products</td>
<td>Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Consumer Insights, Pricing, Distribution and Transportation, Manufacturers, IT, Service Providers</td>
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<tr>
<td>Production scheduling</td>
<td>Store Operations, Buyers, Replenishment, Merchandising, Manufacturers</td>
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<tr>
<td>Down counting</td>
<td>Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, IT, Manufacturers</td>
</tr>
<tr>
<td>UPC/GTIN code mis-management</td>
<td>Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, IT, Manufacturers</td>
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<tr>
<td>Allocation</td>
<td>Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Manufacturers</td>
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<tr>
<td>Raw materials</td>
<td>Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Manufacturers</td>
</tr>
<tr>
<td>Packaging: no shelf ready packaging</td>
<td>Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Manufacturers</td>
</tr>
</tbody>
</table>
Allow four-eight weeks forecast lead time for supplier before event kick-off date

- Adjust delivery cycle to meet most “stressed” items
- Monitor delivery frequency and timing

OWNERS
- Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Distribution and Transportation, IT, Manufacturers
- Store Operations, Buyers, Replenishment, Merchandising, Marketing, Shelf Management, Consumer Insights, Pricing, Distribution and Transportation, Manufacturers, IT, Service Providers
ROOT CAUSE AREA

CATEGORY MANAGEMENT/MERCHANDISING

ISSUE DESCRIPTION

Data Accuracy

SOLUTIONS/BEST PRACTICES

Fix product data through data synch

Diligent management of item master file, item database and master data for promoted and alternate products

Ongoing data management including merging databases / systems

OWNERS

Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Distribution and Transportation, Manufacturers, IT, Service Providers

Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Distribution and Transportation, Manufacturers, IT, Service Providers

Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Distribution and Transportation, Manufacturers, IT, Service Providers
### Best Practices Solutions to Address On Shelf Availability

#### Root Cause Area

**Category Management/Merchandising**

#### Issue Description

Shelf Allocation, Planogram Compliance and Item Management

#### Solutions/Best Practices

<table>
<thead>
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<td>Use demand-based planograms</td>
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<tr>
<td>Ensure adequate safety stocks</td>
<td>Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Distribution and Transportation, Manufacturers, IT, Service Providers</td>
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<tr>
<td>Improve packout practices</td>
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<tr>
<td>Adjust case pack sizes</td>
<td>Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Distribution and Transportation, Manufacturers, IT, Service Providers</td>
</tr>
<tr>
<td>Enhance planogram compliance</td>
<td>Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Distribution and Transportation, Manufacturers, IT, Service Providers</td>
</tr>
<tr>
<td>Multiple of case pack required in shelf capacity for efficient operations that avoids partial cases not fitting in the dedicated shelf space. Good packout should avoid product being hidden behind adjacent product or in the backroom. Packout can be poorly planogrammed or maintained in the perpetual inventory system.</td>
<td>Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Distribution and Transportation, Manufacturers, IT, Service Providers</td>
</tr>
<tr>
<td>Address high-demand OOS through safety stocks on these items, enhancing backroom to shelf processes and use of demand-based Planograms (POGs).</td>
<td>Store Operations, Buyers, Replenishment, Shelf Management, Merchandising, Consumer Insights, Manufacturers, IT, Service Providers</td>
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**ROOT CAUSE AREA**

**CATEGORY MANAGEMENT/MERCHANDISING**

**ISSUE DESCRIPTION**

Promotions

**SOLUTIONS/BEST PRACTICES**

- Optimum number of features based on sell through rates

- Define as “expected lift of ___ percent by the promotion” (typically defined as 4-6 x average daily movement)
  - Primary emphasis is to reduce the duration of OOS of temporary high-demand items. These cannot be completely avoided, but the retailers can control the damage by shortening the duration.
    - Can be reduced with improved backroom sorting and backroom to shelf processes;
    - Can be reduced by improved notification of low or OOS levels or unanticipated demand, and by reduced ordering/delivery cycle time; and
    - Can be reduced by re-forecasting demand for the week based on the first day of sales.
  - Secondary emphasis is to eliminate OOS on temporary high-demand items.
    - Can be eliminated by carrying backroom safety stock;
    - Can be eliminated by including feedback of OOS duration and estimated lost sales from previous promotions when estimating promotional demand; and
    - Can be eliminated by coordinated ad/price reduction decisions with ordering cycles.

**OWNERS**

- Store Operations, Buyers, Replenishment, Merchandising, Shelf Management, Distribution and Transportation, Manufacturers

- Store Operations, Buyers, Replenishment, Merchandising, Marketing, Pricing, Shelf Management, Consumer Insights, Pricing, Distribution and Transportation, Manufacturers, IT, Service Providers
ROOT CAUSE AREA | ISSUES DESCRIPTION | SOLUTIONS/BEST PRACTICES | CHALLENGES
--- | --- | --- | ---
Inventory Accuracy | Store Operation Data Inaccuracy | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Ordering | Inventory Accuracy | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Back stock | Ensure proper back stock levels. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Pricing | Ensure proper pricing at point of sale to optimize profits. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Receiving | Ensure proper inventory management at the point of sale. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Distribution | Ensure proper transportation and handling of inventory. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Retail Execution | Ensure proper execution of store operations. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Manufacturing | Ensure proper manufacturing processes. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Forecasting | Ensure proper forecasting to optimize inventory. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Inventory Accuracy | Ensure proper inventory accuracy at the point of sale. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Ordering and Distribution | Ensure proper ordering and distribution processes. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Forecasting Accuracy | Ensure proper forecasting accuracy. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Tailing | Ensure proper tailing processes. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Product Management | Ensure proper product management processes. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Data Accuracy | Ensure proper data accuracy. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Shelf Education: Personalization and Best Management | Ensure proper shelf education and personalization. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers
Collaborative Management/Marketing | Ensure proper collaborative management and marketing processes. | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT | Store Operations, Buyers, Replenishment, Merchandising, Manufacturers, IT, Service Providers

**Best Practices Solutions to Address On-Shelf Availability: A FMI/GMA Trading Partner Alliance Report**
Acknowledgments

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

- The Clorox Company
- The Coca-Cola Company
- Delhaize America
- Food Marketing Institute
- GENCO
- Grocery Manufacturers Association
- H-E-B
- Inmar, Inc.
- JDA Software Group, Inc.
- McCormick & Company, Inc.
- Meijer, Inc.
- Mondelez International
- Nestlé USA, Inc.
- The Procter & Gamble Distributing Company
- Rite Aid Corporation
- Wegmans Food Markets, Inc.

Additional Information

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