## Supply Chain Setup

Infrastructure:

* ~2000 stores
* 18 Regional Distribution Centers (RDCs)
* 12 Stock Distribution Centers (SDCs)
* Transload distribution centers and
* Bulk Distribution Centers

Each RDC is mapped to about 100 stores, orders are placed by stores that are aggregated up to the RDC and orders are cut based on aggregated amount. After RDCs receive the order, an RDC allocation algorithm redistributes the stocks based on latest demand requirements.

About 50% Cost of Goods Sold (COGS) is shipped through RDC currently. Remaining is Direct to Store (DTS) and through SDCs.

SYNC – supply chain optimization is the latest imitative by the Supply chain team to further optimize the supply chain processes. See deck for more details.

EFS – Engineering Flow schedule where all the vendors and their constraints are databasized. Based on these constraints and the demand from stores, EFS cuts orders to vendors and provides a detailed schedule to RDCs on when and how many trucks to expect.

## Supply Chain Basics

Order Days = Number of order days for each store sku per week. This is generally between 1 and 5. Lowest volume SKUs have 1 order days (1 order per week), highest volume SKUs have 5 order days (5 orders per week). Generally, no orders are placed on weekends.

LT = Lead Time = time after an order is placed till the vendor ships and received by RDC, processed and finally received by store

RT = Review Time = Time lag between placing the orders. It can be computed as = 7/ (Order days). For example, If order days =2, review time = 3.5.

PT = Plan time = LT + RT. This is the planned “lag” for which cycle stock units need to be planned for.

MOHQ – Minimum On Hand Quantity – for presentation minimums. Includes Endcap display and all presentation requirements. There are various sub categories for tracking the type of presentation requirements. Note: MOHQ takes maximum of all the subcategories.

Committed stock – committed stock is a parameter than can be input, additionally to above LT units, RT units and MOHQ. There are various reasons for committed stock requirements – such as promotional events or store specific request and all the types are tracked through sub categories. Note: Committed stock is additive on all sub categories. For example – if there are 50 units for HOST orders and 40 units for events, then the total committed stock becomes 90 units.

OOQ – On order quantity

ASL = Advanced Service level = this is a target set by business for each store SKU.

SSU = Safety stock units. Safety stock units are determined by the ASL needed for the SKU. For example, a 99% service level means that we need to keep a safety stock of units that would serve customer demand 99% of the time.

OHQ = On-Hand Quantity = This is the on-hand quantity of the SKU

OUTL = order up to level = cycle stock (LT units + RT units) + max(safety stock, MOHQ) + other stock (committed stock for various reasons etc.). This is the order up to limit for each SKU.

Order quantity = OUTL – OHQ – OOQ. If the on-hand quantity and on order quantity drops below OUTL, next order will be placed for the difference between OUTL and OHQ and the most recent sales forecast available. However, there may be other practical considerations such as pack size that may impact order quantities.

OSL = Observed Service Level = New metric that we need to calculate

Turns = sales/inventory = generally collected at a yearly level. Currently, we are at 5. 218 target is 5.7. However, to continuously monitor turns, it is also estimated weekly: Annualize the sales based on the last four weeks of sales and divide it by current inventory on-hand, for each store-sku.

In-stock % = in-stock percentage is a very important metric that is tracked by business. This can be computed at RDC or store level. For example, at an RDC level, we can compute percentage of all the Store-Sku combinations with on-hand quantity greater than 0. This represents the number of store SKUs that are in-stock compared to overall number of actively replenished store sku combinations.

CAR – Central Auto Replenishment Engine. This is the engine that implements the basic supply chain logic. SYNC project has enhanced the logic of CAR engine in many ways including new logic for service levels, truck load rounding etc.

VOTC - Vendor On-time completion. This is a metric by which vendors are tracked on their on time completion. In general, each leg of supply chain is tracked with these “OTC” metrics.

Planogram – detailed store level plans of where to display each SKU.

SPI – automatically generates the parameters for presentation minimums by reading planograms.

JLQ = job lot quantity

## Non-statistical Orders

* SERS – Store exception orders, manual orders placed from the stores
  + Will Call SERS – Bulk orders from store, generally from a PRO asking for a bulk supply of a sku.
* Host Requests – Manual orders placed by IPR analyst (or few other stakeholders)
  + UHR – urgent host request

## Planned events

Solutions team is working on Inventory Event Management (IEM) tool that will handle planned events better. In general, there are three types of planned events:

* Printed Ads – Printed Ads about the SKU. Does not have to be at discounted prices.
* MAP (Merchandising Action Plan) – When a vendor and Home depot agree to make the Sku have an endcap or promotional pricing (NLP – new low price).
* CMAP Cross order Merchandising Action Plan
* ITEM\_CLASS\_ID – Item Class ID
* ITEM\_SC\_ID – Item Sub class ID