

Accurate slow mover replenishment

The challenges

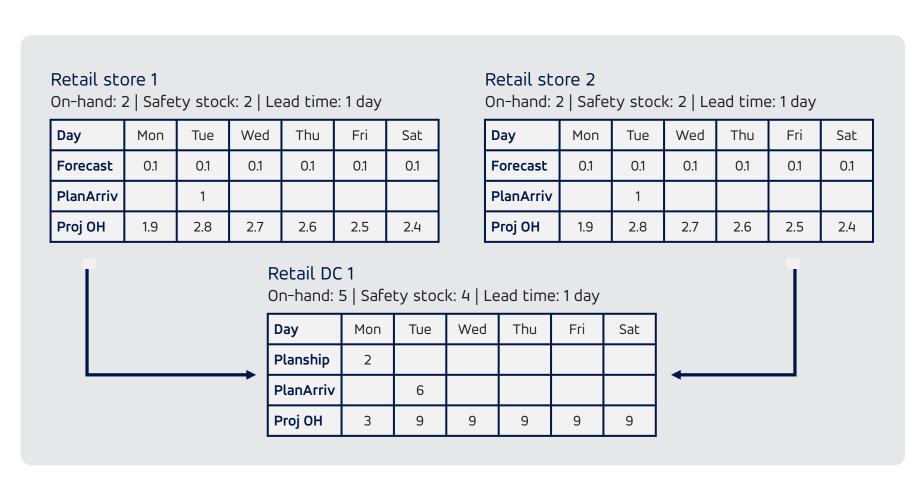
- For many retailers, wholesalers, and manufacturers, more than 70% of merchandise in stores are slow movers, meaning they sell fewer than 1 per week
- Traditional forecasting methods represent these forecasts as decimals (e.g. 0.1/day – see graph below)
- As an example, since a retail store will never sell a fraction of a product (they will either sell one or none) these decimal forecasts are always wrong, and always misrepresent the activity at the retail level





Past impact

- Assume safety stock in each of 100 stores or branch is 2; one on shelf, one in back room
- Decimal forecast for each store on Monday is 0.1 unit; on Tuesday is 0.1 unit, etc.
- This drops on-hand count in each store to fewer than the 2 safety stock, so replenishment is ordered
- DC receives orders for 100 items for replenishing all stores, even though most did not or will not actually sell the slow mover that day
- This is the "bunching" effect
- DC only carries 4 as its safety stock, it cannot satisfy the demand from the underlying stores or branch, so DC places replenishment order for 100 to supplier



The result Some stores or branches are likely to be overstocked with

- supply from the DC if the forecasted demand did not materialize Others may run out of stock since the DC had limited supply and
- couldn't ship to them potential lost sales DC placed vendor replenishment order when one wasn't needed,
- inflating total corporate inventory large overstock Inflated inventory incurs purchase costs, inventory carrying
- costs and the overstock may become unsaleable, obsolete or require steep markdowns to move
- DC will not have a continuous view of the demand from the stores cannot reasonably calculate DC safety stock with coverage Without demand projections, reasonable vendor to DC purchase

Sat

Tue

Shipments to stores or branches are based on the probability of a sale.

DC's safety stock and replenishment plans are based on more realistic.

Wed

Thu

Integers are spaced across stores to reflect actual demand

Translates decimal forecasts into integer forecast

The solution: Slow mover replenishment

Retail store 1 Retail store 2

Thu

On-hand: 2 | Safety stock: 2 | Lead time: 1 day

Tue

Mon

demand profile

Wed

order planning cannot be executed

	Forecast			1					Forecast				
	PlanArriv			1					PlanArriv				
2	Ргој ОН	2	2	2	2	2	2		Ргој ОН	2			
	Ī	Retail DC 1 On-hand: 5 Safety stock: 4 Lead time: 1 day											

Mon

Day

Planship

F	PlanArriv					6				
F	Proj OH	5	4	4	4	9	9			
 Integer-based forecasts better reflect actual sales at stores 										
 Replenishment plans are more realistic 										

Fri

On-hand: 2 | Safety stock: 2 | Lead time: 1 day

Tue

2

Sat

Mon

Wed

Thu

Fri

Sat

1

2

- The sum of the store or branch integer reorder forecasts matches the original total forecast

Appropriate representation

Integers Demand Forecast

100 5 0 10 15 20 25 30 35 40 45 The benefits of integer forecasting and replenishment



300

Better aligns DC

replenishments with

actual demand



Eliminates much of the

Supports collaboration with suppliers to reduce costs and improve service levels



Providing industry-leading solutions to drive performance and value with today's supply chain strategies

Brand **Awareness**

blueyonder.com

Omni-Channel

Customer Engagement

Brand Loyalty

Fulfillment

50