RE-BALANCING INVENTORY ACROSS BUSINESS UNITS

Motivation / Background
- DSCSA (Drug Supply Chain Security Act) Serialization for visibility and traceability in highly complex drug distribution network from manufacturers to consumers
- Client’s businesses operating on different inventory management systems currently
- Opportunity to re-balance inventory with single window visibility of inventory across businesses

Key Question
- Quantification of Inventory management benefits with central repository of inventory information across businesses post drug serialization

Relevant Literature
- Inventory Models with Lateral Transshipments (Paterson, Kiesmüller, Teunter and Glazebrook, 2011)
- Lateral Transshipment for perishable inventory Management (Nakandala, Lau & Shum 2017)

Methodology
- Identify individual outlet’s inventory status
  - Convert current inventory in weeks of demand
  - Determine the excess quantity per outlet
- Redistribute excess inventory from outlets to the mail centers (2 locations)
  - Minimum transportation cost model based on the quantity and the distance

Initial Results
- Determined the overall excessive of SKUs at various outlets
- Tested the formulated optimization model and heuristic model at Area level

Expected Contribution
- Reduce inventory in the system with improved service levels
- Devise lateral transshipment model across retail chain

< An Inter Company Inventory Opportunity >

My snowbird customers have gone to Florida for the winter so I’m overstocked on a lot if items until spring!

Wow! We could use that inventory here at the mail center. Send it over!

OK, it’s on its way.

Thanks, this will keep us from reordering and manage inventory better across the enterprise

Distribution from Central Warehouse + Lateral Transshipments

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