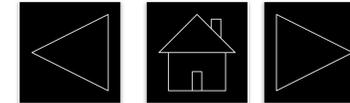
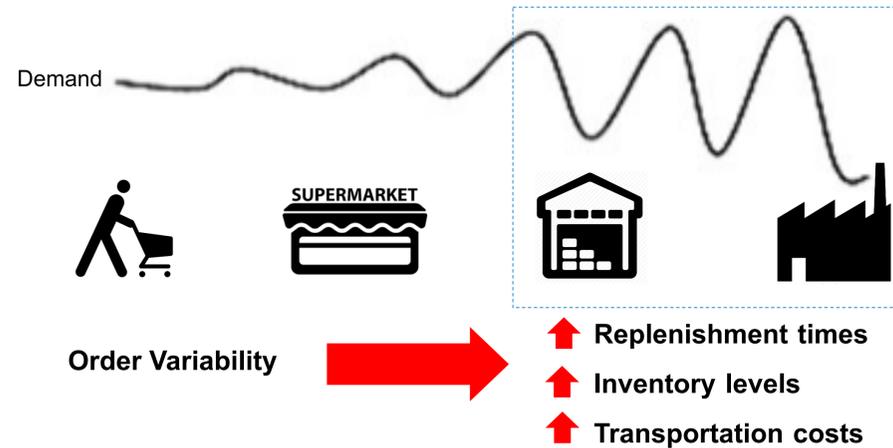


Synchro-Mania: A Multi-Modal Design Innovation



Motivation

Bullwhip effect



Big Data availability

- > Increased visibility across the supply chain
- > Ease of tracking changes in data

Transportation Mode / Method selection



Cost



Level of Service



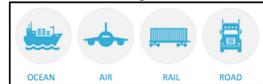
Hypothesis

Traditional Silo Optimization

Step 1



Step 2



Synchronized Optimization



The Problem



Contract Innovation

- > Term length / type?
- > Term or spot?
- > Term contract with variable notification period?



Manufacturing
Plant



DC / Warehouse

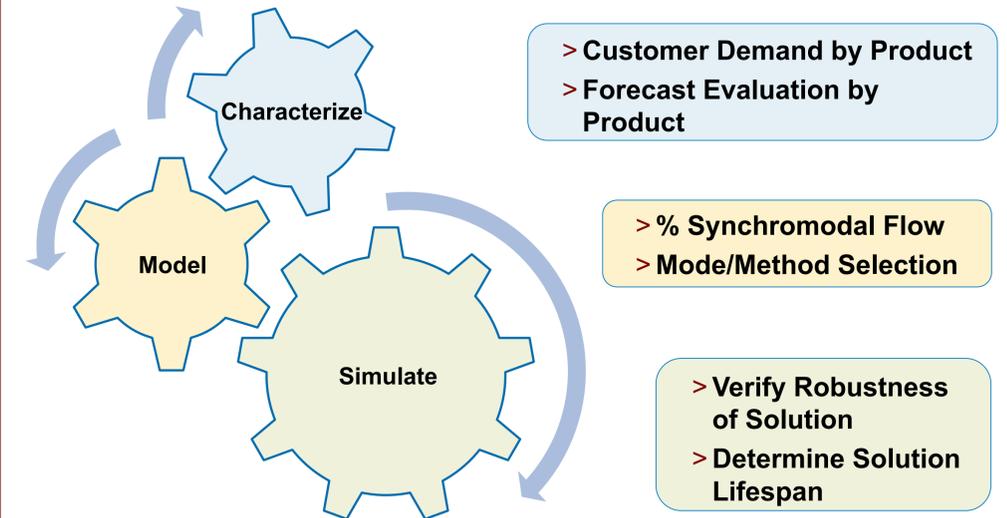
"Synchromodal" Flow

- > Can there be a regular "fixed" product flow?
- > What SKUs should be "fixed"?
- > How often should we re-calculate this quantity?

Downstream Processes

- How to optimize for
- > Potential cross-dock opportunities?
 - > Replenishment cycle times of SKUs?
 - > Impact on vehicle fill?

Methodology



Expected Contribution



Transportation
Cost Reduction



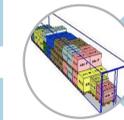
Replenishment Cycle
Time Reduction



Inventory Reduction



Increase in Cross-dock
Productivity



Increase in
Vehicle Fill

About Us



Priya Andleigh
Prior Employer: Aspen Technology
Position: Business Consultant
Undergraduate: Chemical Engineering (Nanyang Technological University, Singapore)



Jeff Bullock
Prior Employer: Ryder System, Inc.
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