

How A Postponement Strategy Can Reduce Cost and Lead Time for Pharma Supply Chains

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Motivation / Background

Pharma companies are trying to optimize their supply chains to respond to industry changes caused by external factors while simultaneously meeting patients', customers', and shareholders' expectations

1. External Factors

- Industry specific constraints (e.g. cold chain)
- Sustainable Responsibility (e.g. waste reduction)

2. Patients and Customers

- On-time delivery
- Item fill rate > X%

3. Shareholders

- Increased share price



Key Question / Hypothesis

> How can the company leverage different supply chain strategies to reduce total finished goods inventory while maintaining customer lead time?

> Can a postponement strategy for medium to low volume SKUs help the company meet its' patients', customers', and shareholders' expectations?

Relevant Literature

- *Supply chain configuration: Concepts, solutions, and applications.* Chandra, C., & Grabis, J. (2016).
- *Evaluation of postponement in the Drug Product supply chain.* Sazdanoff, N. (2015).
- *Postponement strategies in supply chain management.* Cheng, T. C. E. (2010).



Figure 1: [Digital image]. (2017). Retrieved 2020, from <https://www.wdprx.com/contract-packaging-operations-at-the-center-of-transition-to-serialization/>

The Problem

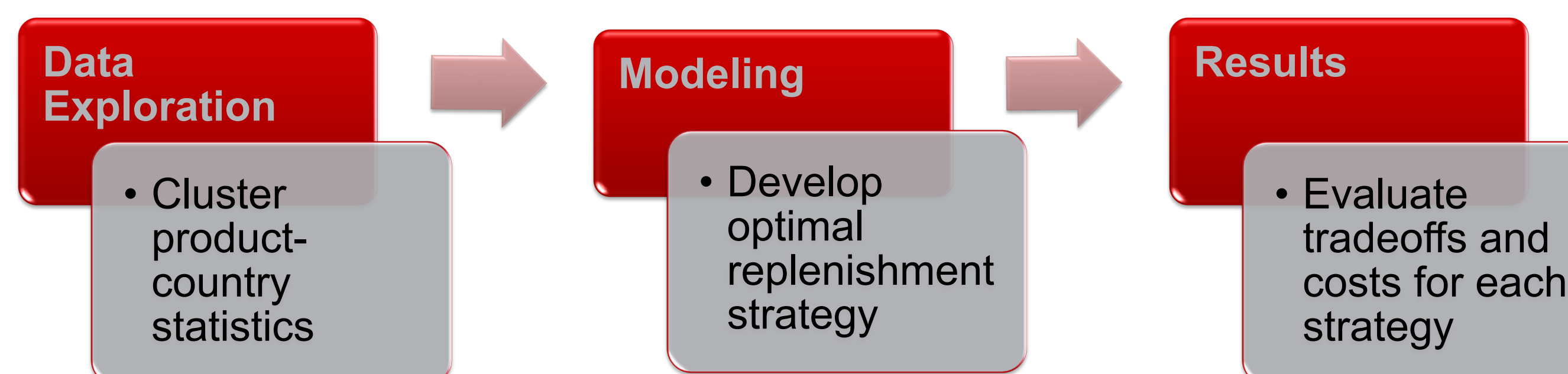
Nature of the Pharma industry and life-saving medicines:

- Expensive products with long lead-times
- Current agility built on high inventory levels for finished goods

Opportunities:

- Maintain same responsiveness while optimizing most cost-effective solution
- Focus on a make-to-order/postponement strategy

Methodology



Initial Results

Groupings and corresponding replenishment strategies:

1. High Total Order Quantity (>100K order qty)
 - Reevaluate safety stock strategy and quantify potential inventory impact using the optimal safety stock quantity
2. Low Total Order Quantity – Medium/High Frequency (> 20 orders and < 100K order qty)
 - Postponement Replenishment Approach
 - Option 1: Store vial and print labels at the 3PL
 - Option 2: Store vial and preprinted labels at the 3PL
3. Low Total Order Quantity – Low Frequency
 - Make-to-Order Replenishment Approach

Expected Contribution

Develop approach to determine the best methodology to achieve company's key objective of providing patients and customers with life-saving medicines while minimizing cost, lead-time, and inefficiencies along the way.

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