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Sponsor: Uber Freight

To Drop or Not to Drop:

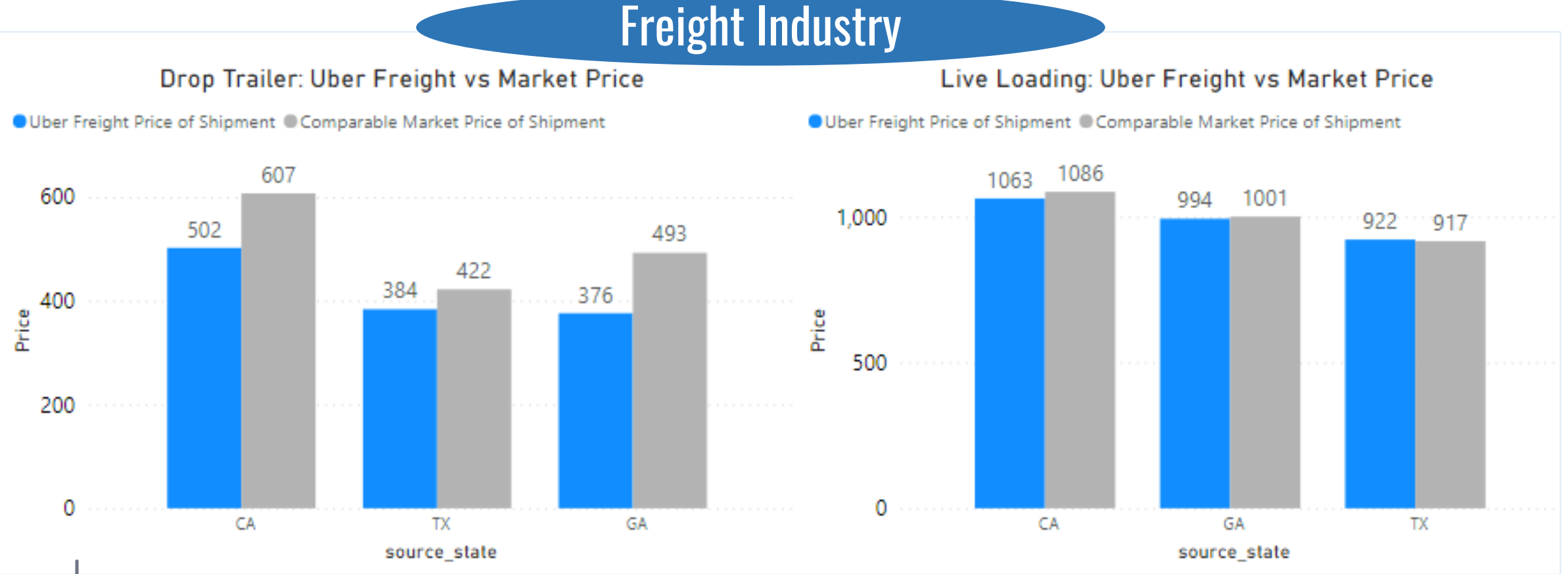
How to choose between Live Loading and Drop Trailer?

Scan Here for 2-Minute Executive Summary



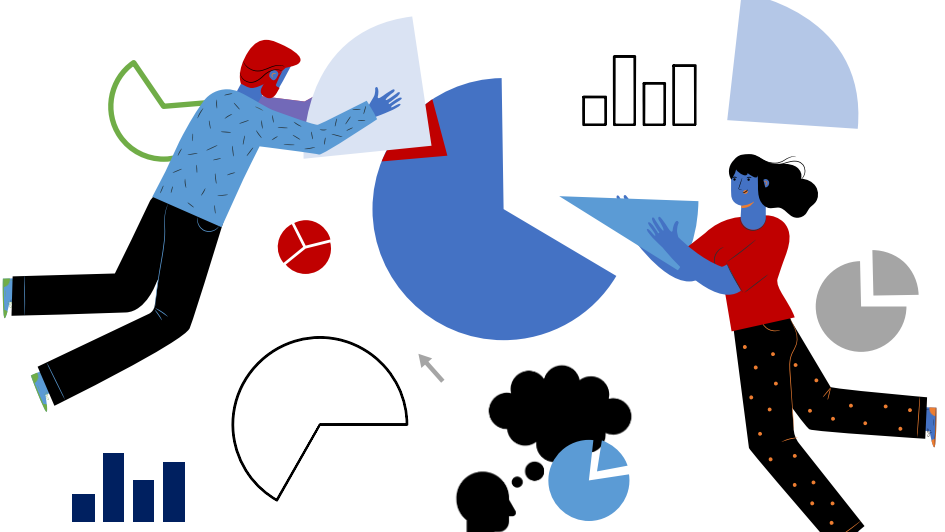
Motivation / Background

- 1 The trucking industry hauled 72.5% of all freight transported in the US in 2019, with an industry value of nearly 800 billion.
- 2 Drop Trailer offerings have proven to reduce the delivery **detention time** and cost and relieve **driver shortage** for most carriers and shippers.
- 3 Uber Freight's Drop Trailer offering under Powerloop is more nascent compared to with several **strategic questions** yet unanswered



Key Question / Hypothesis

Under which conditions should Uber Freight be operating and offering a Drop service offering to customers?

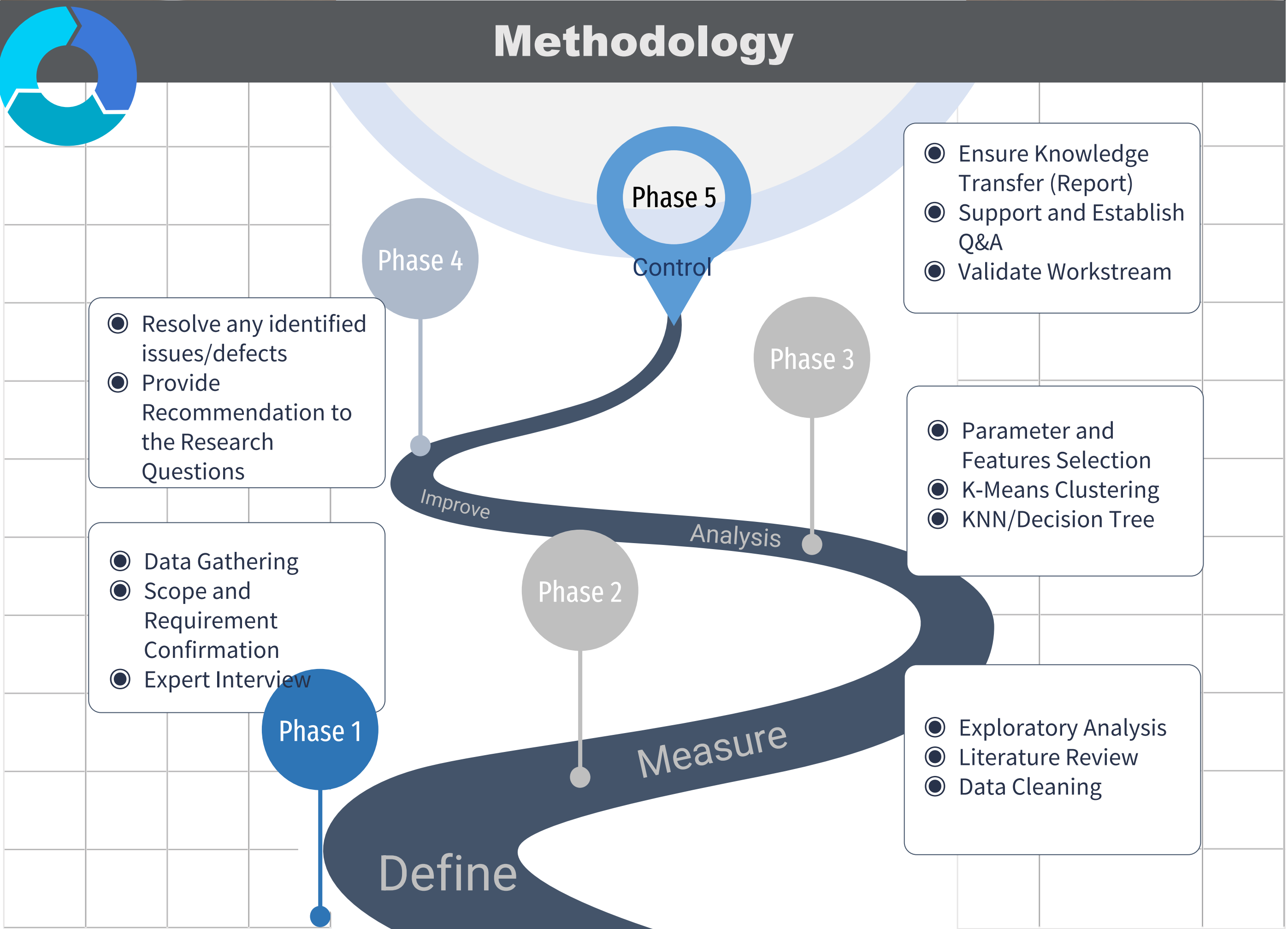
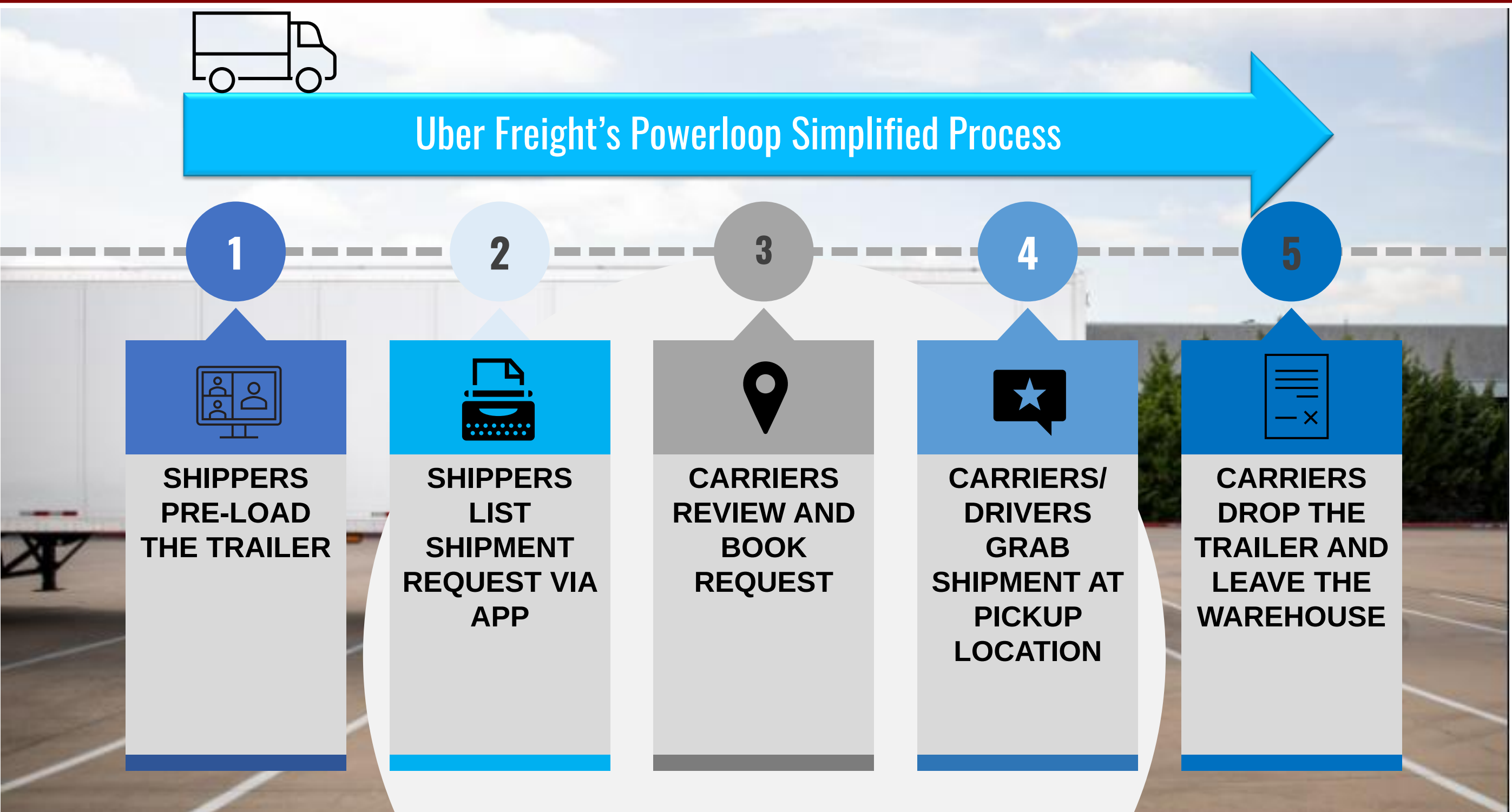


Cost Effectiveness?
Carrier/Shipper Density?
Turnaround Efficiency?
Demand-Supply Balance?

Relevant Literature

Fankhauser, E., & Li, G. (2019). Decoupled Capacity with Powerloop. 1-51.

Moskvichev, O., Moskvicheva, E., & Bulatov, A. (2021). Clustering Methods for Determination of Optimal Locations of Container Storage and Distribution Centers. Transportation Research Procedia, 54, 461–469. <https://doi.org/10.1016/j.trpro.2021.02.096>



Final Results/Insights

Top Recommended States for Drop Trailer Implementation

State	Count of Markets Pair
IL	10
IN	5
FL	3

2 Market Conditions

of drop trailer implementation based on the number of shipments are formed with their strategic consideration.

3 States

out of 8 Shortlisted States have been further prioritized for Uber Freight to implement Drop Trailer

4 Features

for a viable drop trailer services are: 1) Number of Shipment, 2) Travel Distance, 3) Market Price and 4) Carrier to Shipment

There is a length of haul (≥ 414 miles) at which turnaround efficiencies gained from drop solutions are less relevant.

Carrier density is more important than shipper density to drive network efficiencies, where the carrier to shipment's ratio at destination market should be 1 to 6.

DROP TRAILER OPPORTUNITIES ARE ENDLESS!

Contributions

- 1 Discover Optimal Design Parameters and Features that drive the adoption of Powerloop service
- 2 Provide Market Expansion Strategy recommendations on potential markets Powerloop could enter into
- 3 Form the basis for future researches about Different types of Drop Implementations
- 4 Build a Decision Tree to define threshold criteria for Drop Trailer network design



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