We aim to analyze the company’s supply chain affected by the project, evaluating impacts in costs and CO2.

**Motivation / Background**

- Nordstrom Ecommerce Network ships packages across 800+ Zip3 locations in the US.
- Business growth must be accompanied by an optimized delivery network, involving:
  - Logistics costs efficiency
  - High service level
  - Reduced CO2 emission
  - Operation feasibility

**Key Question / Hypothesis**

- It is profitable to determine some stores as pick up locations in strategic regions of the country.
- Having customers to pick up their orders in stores reduces the overall carbon dioxide emission.

**Relevant Literature**


**The Problem**

- Is the customer willing to pick up his/her order in store?
- Is this initiative applicable given retail business’ high competitiveness?
- How much more complexity will the initiative add to the operation?

**Methodology**

- Demand Data analysis
- MILP
- CO2 Estimation
- Economic Analysis
  - Initial screening
  - Stores selection
  - Company + Customer emission
  - Profitability

**Initial Results**

Data collected so far shows high variability in the distances between customers and stores.

**Expected Contribution**

It is profitable to determine some stores as pick up locations in strategic regions of the country.

Having customers to pick up their orders in stores reduces the overall carbon dioxide emission.