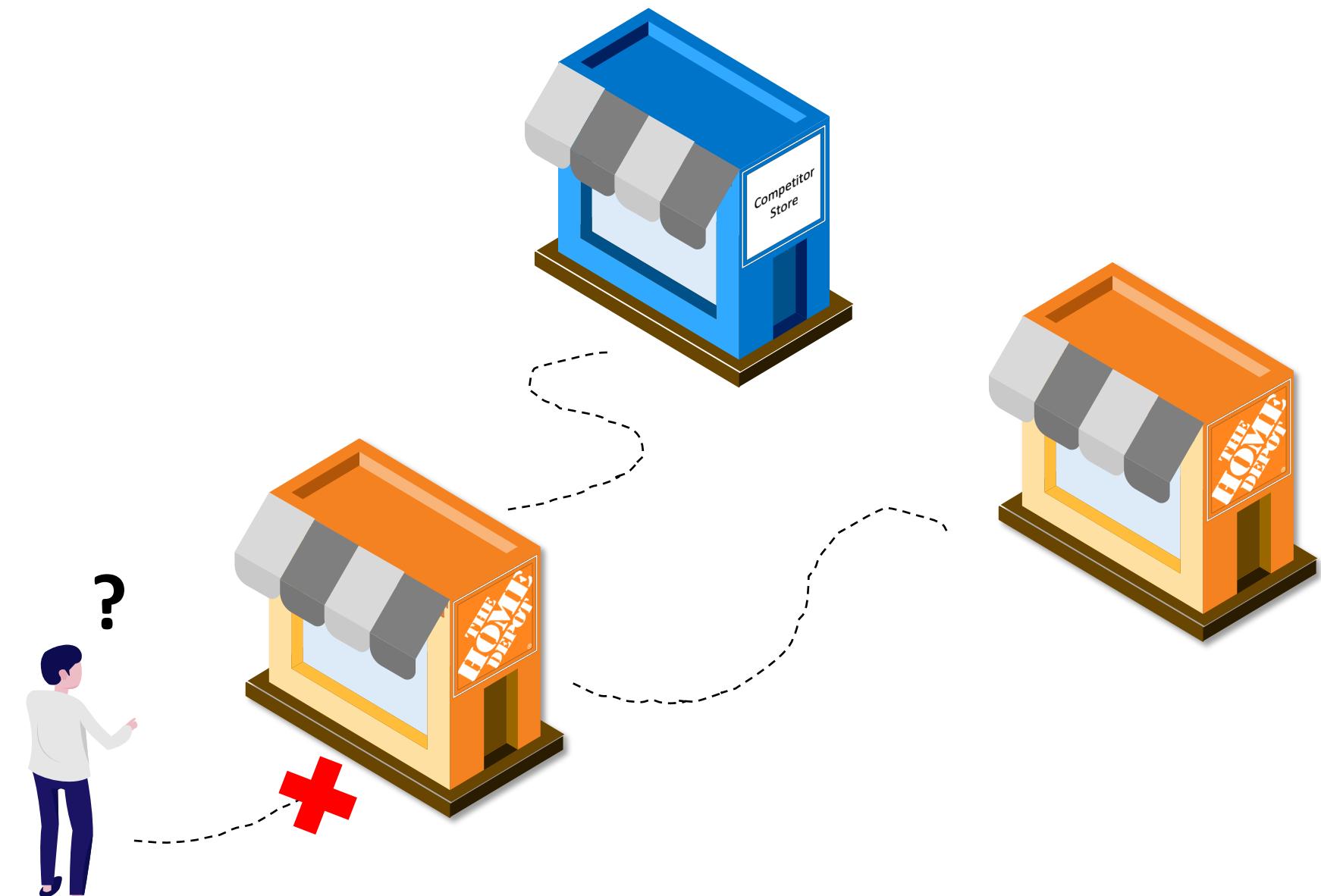


Hannah Chen | Joyce Kinsey | Sarah Lee | David Morrison | Matt Munns | Vince Nguyen | Suraj Sehgal | Alina Wendt

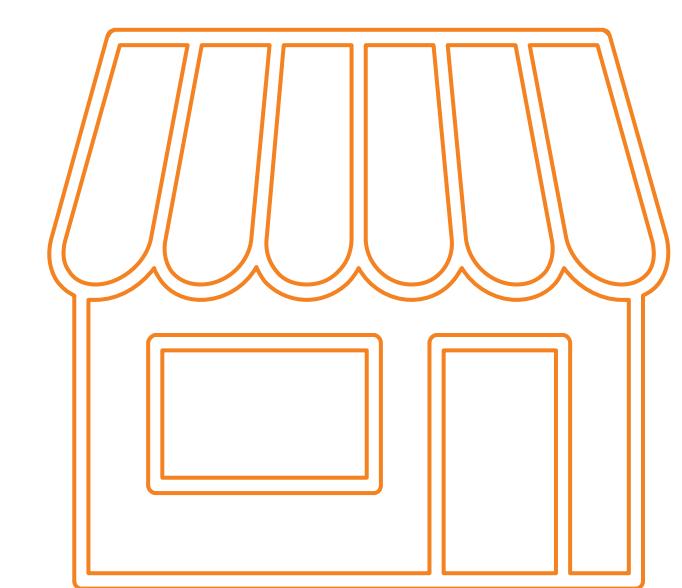
A Consumer's Dilemma



According to an internal study, 14% of consumers **could not find** the product they wanted

Client Background

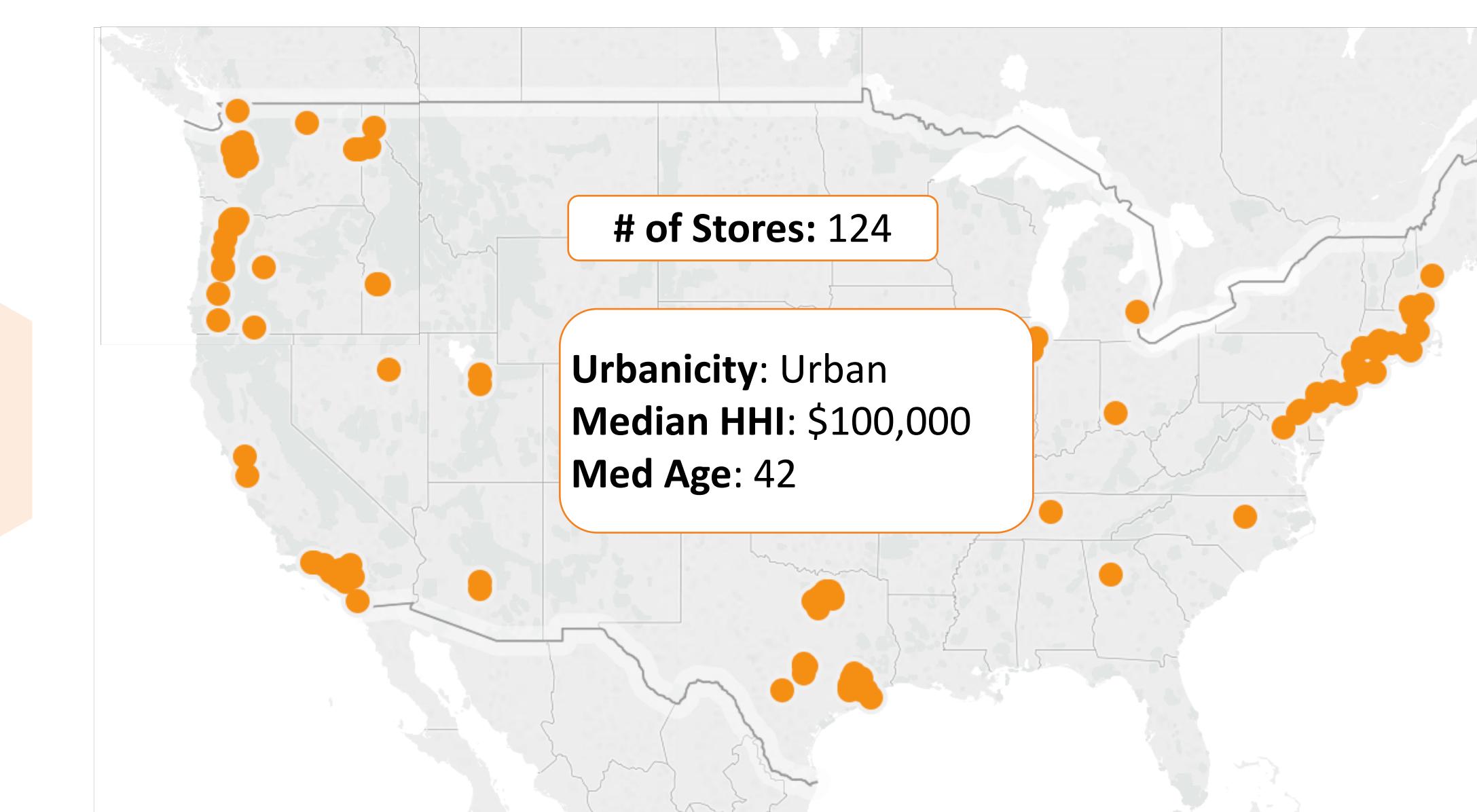
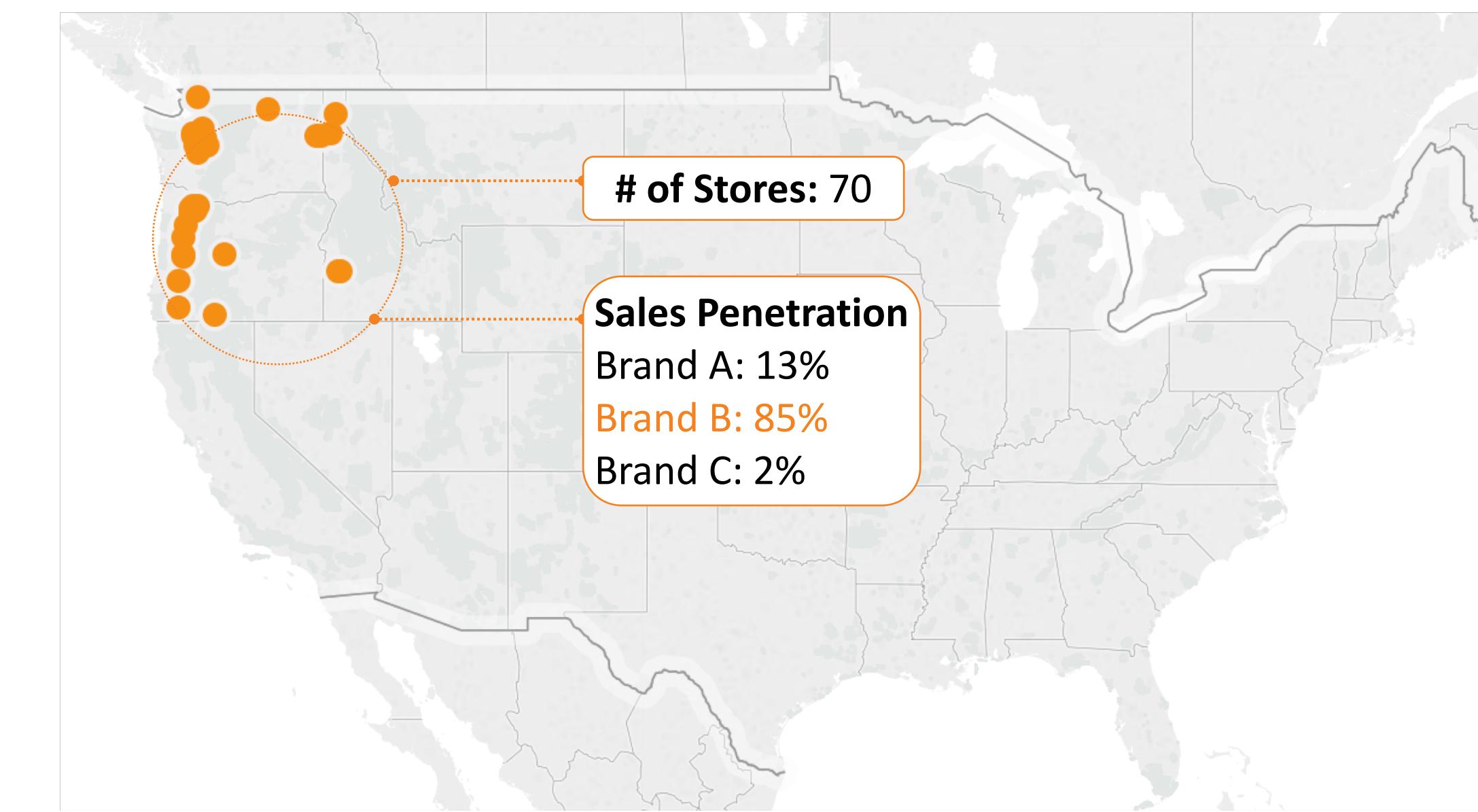
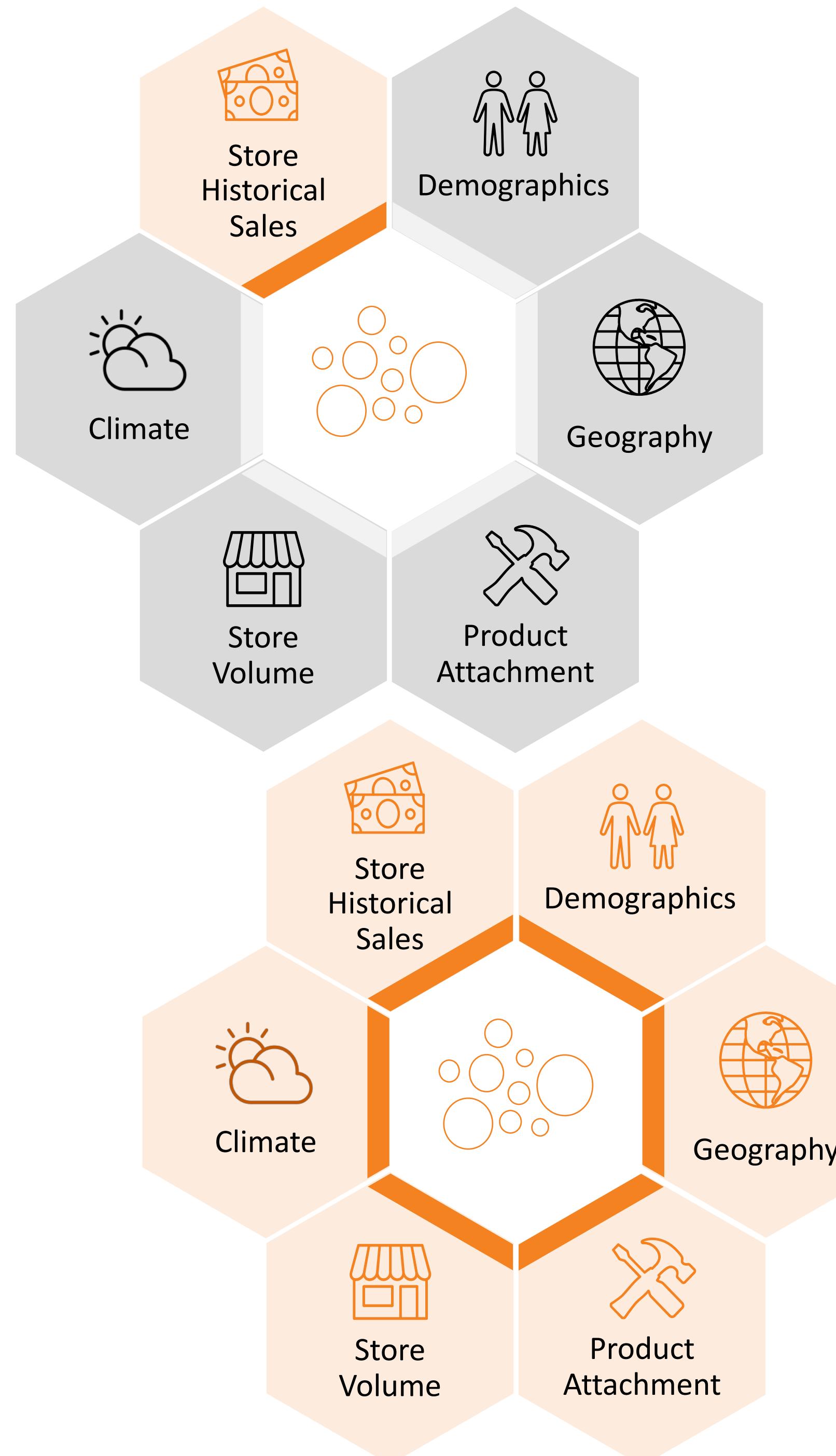
- 1,988 U.S. Stores
- ~40,000 SKUs per store
- 1M+ SKUs across stores and online



- | | | |
|---|--|--|
| Purpose | Focus | Methods |
| <ul style="list-style-type: none"> ▪ Right product ▪ Right store ▪ Right price | Assortment Planning serves as the starting point for PLR decisions | <ul style="list-style-type: none"> ▪ Store Clustering ▪ SKU Assignment |

Impact

Through **leveraging additional information**, the new methodology is able to recommend where products can be **expanded successfully**.



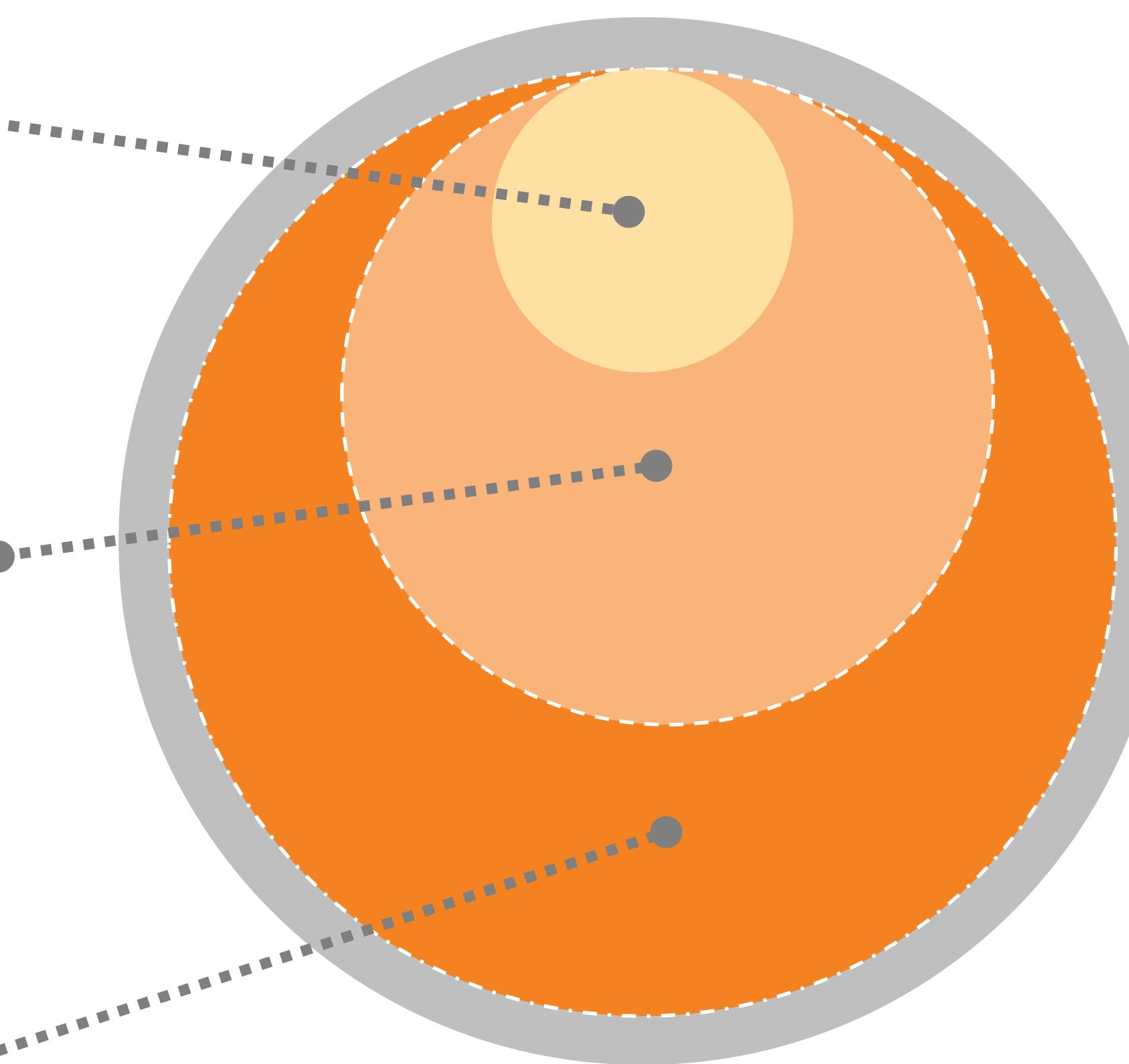
Objective

Increase projected sales by **leveraging additional information** about stores to accommodate new products with limited market information.

Methodology: Clustering 2.0

Initial Clustering

- Cluster on historical sales
- Current client approach



Second Clustering

- Identify significant store traits
- Re-cluster on those traits and historical sales

Final Clustering

- Calculate predicted sales for unsold SKUs
- Re-cluster on predicted and historical sales

Value

3%

Additional increase in projected sales

Impact specific to the pilot category

Net Sales Gain

$$\sum_{\text{store}} \sum_{\text{SKU}} \text{APSW}_{\text{store}, \text{SKU}} * y$$

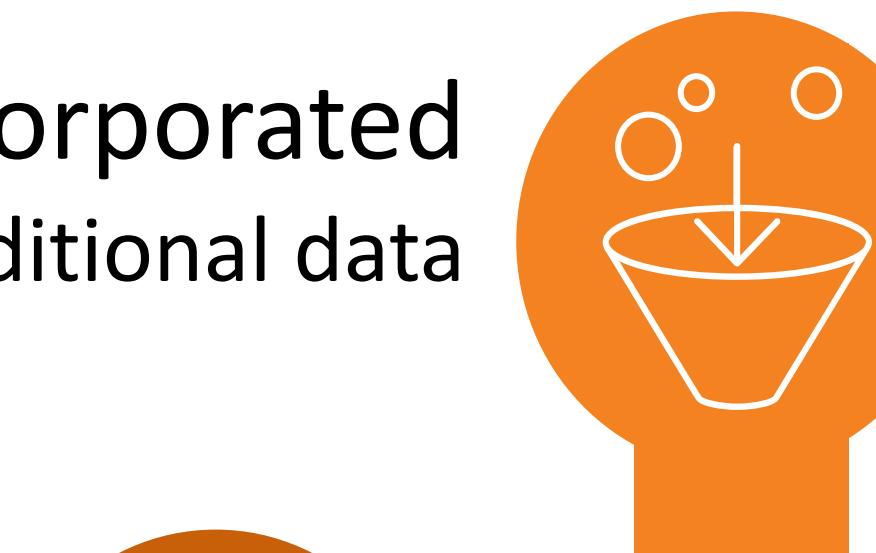
$$y = \begin{cases} 1 & \text{if SKU is expanded to store} \\ -1 & \text{if SKU is dropped from store} \end{cases}$$

Improved Customer experience

Standardized Cluster methodology



Incorporated Additional data



Accommodate New Products

